



**Department of  
Design and  
Construction**

**CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
VOLUME 1 – BID BOOKLET**

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## **Introduction**

This Bid Booklet is intended to provide general information necessary for bidding on a DDC public works project and is part of the Contract Documents, as per Article 1.1 of the Standard Construction Contract.

As this contract is solicited via the PASSPort system, the bidder will be required to complete all of the PASSPort forms and questionnaires. These forms and questionnaires, along with the bidder's responses, will become part of the Bid Booklet.

Additional information on the PASSPort system can be found at the following website:

<https://www1.nyc.gov/site/mocs/systems/passport-user-materials.page>

# **Bid Submission Requirements**

THE FOLLOWING MUST BE COMPLETED AND SUBMITTED FOR THE BID TO BE CONSIDERED RESPONSIVE:

1. Completed electronic bid submission in PASSPort;
  - a. All required fields in PASSPort must be completed.
2. One-page signed Bid Submission Form delivered in person to DDC before the bid due date; and
3. Bid security, if required.
  - a. If Bid security is in a form of a bid bond, bidders must include it with their electronic PASSPort submission.
  - b. If Bid security is in a form of a certified check, bidders must deliver the certified check with the signed Bid Submission Form.

**BIDDERS ARE ADVISED THAT PAPER BID SUBMISSIONS WILL BE DEEMED NON-RESPONSIVE. BIDDERS MUST SUBMIT THEIR BIDS ELECTRONICALLY IN PASSPORT, PROVIDE THE BID SECURITY, AND DELIVER TO DDC THE ONE-PAGE SIGNED BID SUBMISSION FOR THE BID TO BE CONSIDERED RESPONSIVE.**

THE FOLLOWING MAY RESULT IN THE BID BEING FOUND NON-RESPONSIVE:

1. Any discrepancy between the total bid price listed on the Bid Submission Form and the bid information submitted in PASSPort.
2. Failure to upload required files or documents as part of a mandatory PASSPort Questionnaire response.
3. Uploading an incorrect file as part of a mandatory PASSPort Questionnaire response.

## **Notices to Bidders**

### **Pre Bid Questions (PBQs)**

Please be advised that PBQs should be submitted to the Agency Contact Person ([CSB\\_projectinquiries@ddc.nyc.gov](mailto:CSB_projectinquiries@ddc.nyc.gov)) at least five (5) business days (by 5:00 PM EST) prior to the bid opening date as indicated in the PASSPort procurement.

All PBQs must reference the Project ID. If a bidder has multiple PBQs for the same Project ID, the PBQs must be numbered sequentially, even if they are submitted separately.

While the PASSPort system has a facility for submitting inquiries, bidders are directed to send PBQs as directed above instead of using the PASSPort inquiry system.

**Inquiries sent using the PASSPort inquiry system will not be considered PBQs.**

### **NYC Contract Financing Loan Fund**

If your business is working as a prime or subcontractor on a project with a City agency or City-funded entity, you may be eligible for a Contract Financing Loan from a participating lender coordinated with the NYC Department of Small Business Services (SBS). Loan repayment terms align with the contract payment schedule.

For more information: Call 311 or visit <https://www1.nyc.gov/nycbusiness/article/contract-financing-loan-fund>

# **M/WBE Notice to Prospective Contractors**

## **PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT (9/2020 version)**

### **ARTICLE I. M/WBE PROGRAM**

Section 6-129 of the Administrative Code of the City of New York (“Section 6-129”) establishes the program for participation in City procurement (“M/WBE Program”) by minority-owned business enterprises (“MBEs”) and women-owned business enterprises (“WBEs”), certified in accordance with Section 1304 of the New York City Charter. As stated in Section 6-129, the intent of the program is to address the impact of discrimination on the City’s procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are pursuant to Section 6-129, and the rules of the Department of Small Business Services (“DSBS”) promulgated thereunder.

**If this Contract is subject to the M/WBE Program established by Section 6-129, the specific requirements of MBE and/or WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the “M/WBE Utilization Plan”) and are detailed below. Contracts solicited through the Procurement and Sourcing Solutions Portal (PASSPort) will contain a Schedule B in the format outlined in the Schedule B – M/WBE Utilization Plan & PASSPort rider. The provisions of this notice will apply to contracts subject to the M/WBE Program established by Section 6-129 regardless of solicitation source.**

**The Contractor must comply with all applicable MBE and WBE requirements for this Contract.**

All provisions of Section 6-129 are hereby incorporated in the Contract by reference and all terms used herein that are not defined herein shall have the meanings given such terms in Section 6-129.

References to MBEs or WBEs shall also include such businesses certified pursuant to the executive law where credit is required by section 311 of the New York City Charter or other provision of law.

Article I, Part A, below, sets forth provisions related to the participation goals for construction, standard and professional services contracts.

Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE Program.

### **PART A**

#### **PARTICIPATION GOALS FOR CONSTRUCTION, STANDARD**

#### **AND PROFESSIONAL SERVICES CONTRACTS OR TASK ORDERS**

1. The **MBE and/or WBE Participation Goals** established for this Contract or Task Orders issued pursuant to this Contract, (“**Participation Goals**”), as applicable, are set forth on Schedule B, Part 1 to this Contract (see Page 1, Line 1 Total Participation Goals) or will be set forth on Schedule B, Part 1 to Task Orders issued pursuant to this Contract, as applicable.

The **Participation Goals** represent a percentage of the total dollar value of the Contract or Task Order, as applicable, that may be achieved by awarding subcontracts to firms certified with DSBS as MBEs and/or WBEs, and/or by crediting the participation of prime contractors and/or qualified joint ventures as provided in Section 3 below, unless the goals have been waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

2. If **Participation Goals** have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be subject to the **Participation Goals**, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

3. If **Participation Goals** have been established for this Contract or Task Order issued pursuant to this Contract, a Contractor that is an MBE and/or WBE shall be permitted to count its own participation toward fulfillment of the relevant **Participation Goal**, provided that in accordance with Section 6-129 the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that the Contractor pays to direct subcontractors (as defined in Section 6-129(c)(13)), and provided further that a Contractor that is certified as both an MBE and a WBE may count its own participation either toward the goal for MBEs or the goal for WBEs, but not both.

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant **Participation Goal**. In accordance with Section 6-129, the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

4. A. If **Participation Goals** have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Utilization Plan, Part 2 (see Pages 1-2) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end; as well as the name, addresses, and telephone numbers of the M/WBE subcontractors if required by the solicitation; and (d) the prospective contractor's required certification and affirmations. In the event that this M/WBE Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals**, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the **Participation Goals** in accordance with Section 6-129 and Part A, Section 10 below.

B. (i) If this Contract is for a master services agreement or other requirements type contract that will result in the issuance of Task Orders that will be individually registered ("Master Services Agreement") and is subject to M/WBE **Participation Goals**, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Participation Requirements for Master Services Agreements That Will Require Individually Registered Task Orders, Part 2 (page 2) indicating the prospective contractor's certification and required affirmations to make all reasonable good faith efforts to meet participation goals established on each individual Task Order issued pursuant to this Contract, or if a partial waiver is obtained or such goals are modified by the Agency, to meet the modified **Participation Goals** by soliciting and obtaining the participation of certified MBE and/or WBE firms. In the event that the Schedule B indicates that the bidder or proposer, as applicable, does not intend to meet the **Participation Goals** that may be established on Task Orders issued pursuant to this Contract, the bid or proposal, as applicable, shall be deemed non-responsive.

(ii) **Participation Goals** on a Master Services Agreement will be established for individual Task Orders issued after the Master Services Agreement is awarded. If **Participation Goals** have been established on a Task Order, a contractor shall be required to submit a Schedule B – M/WBE Utilization Plan For Independently Registered Task Orders That Are Issued Pursuant to Master Services Agreements, Part 2 (see Pages 1-2) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end; as well as the name, addresses, and telephone numbers of the M/WBE subcontractors if required by the solicitation; and (d) the prospective contractor's required certification and affirmations. The contractor must engage in good faith efforts to meet the **Participation Goals** as established for the Task Order unless Agency has granted the contractor a pre-award waiver of the **Participation Goals** in accordance with Section 6-129 and Part A, Section 10 below.

**C. THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART 2). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART 3). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.**

5. Where an **M/WBE** Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multi-year contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)). **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work.** In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the **Participation Goals**. Such certification must occur prior to the firms' commencement of work. A list of city-certified MBE and WBE firms may be obtained from the DSBS

website at [www.nyc.gov/buycertified](http://www.nyc.gov/buycertified), by emailing DSBS at [buyer@sbs.nyc.gov](mailto:buyer@sbs.nyc.gov), by calling (212) 513-6451, or by visiting or writing DSBS at One Liberty Plaza, New York, New York, 10006, 11<sup>th</sup> floor. Eligible firms that have not yet been certified may contact DSBS in order to seek certification by visiting [www.nyc.gov/getcertified](http://www.nyc.gov/getcertified), emailing [MWBE@sbs.nyc.gov](mailto:MWBE@sbs.nyc.gov), or calling the DSBS certification helpline at (212) 513-6311. A firm that is certified as both an MBE and a WBE may be counted either toward the goal for MBEs or the goal for WBEs, but not both. No credit shall be given for participation by a graduate MBE or graduate WBE, as defined in Section 6-129(c)(20).

7. Where an **M/WBE** Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to, the total amount the Contractor paid to its direct subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount direct subcontractors paid to indirect subcontractors; the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor by the Contractor, and, where applicable, hired by any of the Contractor's direct subcontractors; and the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment: the total amount it paid to subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount its direct subcontractors paid directly to their indirect subcontractors; and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's **M/WBE** Utilization Plan, Agency shall take appropriate action, in accordance with Section 6-129 and Article II below, unless the Contractor has obtained a modification of its **M/WBE** Utilization Plan in accordance with Section 6-129 and Part A, Section 11 below.

9. Where an **M/WBE** Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds the greater of 10 percent of the Contract or Task Order, as applicable, or \$500,000, Agency shall review the scope of work for the Contract or Task Order, as applicable, and the scale and types of work involved in the change order, and determine whether the **Participation Goals** should be modified.

10. Pre-award waiver of the **Participation Goals**.

(a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the Participation Goals in accordance with Section 6-129, which requests that Agency change one or more **Participation Goals** on the grounds that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

(b) To apply for a full or partial waiver of the **Participation Goals**, a bidder, proposer, or contractor, as applicable, must complete Part 3 of Schedule B and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing to the Agency by email at [MWBEModification@ddc.nyc.gov](mailto:MWBEModification@ddc.nyc.gov). Full or partial waiver requests that are received later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due may be rejected as untimely. Bidders, proposers, or contractors, as applicable, who have submitted timely requests will receive an Agency response by no later than two (2) calendar days prior to the due date for bids, proposals, or Task Orders; provided, however, that if that date would fall on a weekend or holiday, an Agency response will be provided by close-of-business on the business day before such weekend or holiday date.



(c) If the Agency determines that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, it shall revise the solicitation and extend the deadline for bids and proposals, or revise the Task Order, as applicable.

(d) Agency may grant a full or partial waiver of the **Participation Goals** to a bidder, proposer or contractor, as applicable, who demonstrates—before submission of the bid, proposal or Task Order, as applicable—that it has legitimate business reasons for proposing the level of

subcontracting in its **M/WBE** Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder, proposer or contractor, as applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts represented by the **Participation Goals**. In making such determination, Agency may consider whether the **M/WBE** Utilization Plan is consistent with past subcontracting practices of the bidder, proposer or contractor, as applicable, whether the bidder, proposer or contractor, as applicable, has made efforts to form a joint venture with a certified firm, and whether the bidder, proposer, or contractor, as applicable, has made good faith efforts to identify other portions of the Contract that it intends to subcontract.

11. Modification of **M/WBE** Utilization Plan. (a) A Contractor may request a modification of its **M/WBE** Utilization Plan after award of this Contract. **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its M/WBE Utilization Plan as part of its bid submission.** The Agency may grant a request for Modification of a Contractor's **M/WBE** Utilization Plan if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the **Participation Goals**. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

(i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;

(ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;

(iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;

(iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the **M/WBE** Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;

(v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;

(vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;

(vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;

(viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency's M/WBE officer shall provide written notice to the Contractor of the determination.

(b) The Agency may modify the **Participation Goals** when the scope of the work has been changed by the Agency in a manner that affects the scale and types of work that the Contractor indicated in its **M/WBE Utilization Plan** would be awarded to subcontractors.

12. If the Contractor was required to identify in its bid or proposal the MBEs and/or WBEs they intended to use in connection with the performance of the Contract or Task Order, substitutions to the identified firms may only be made with the approval of the Agency, which shall only be given when the Contractor has proposed to use a firm that would satisfy the **Participation Goals** to the same extent as the firm previously identified, unless the Agency determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts. In making such determination, the Agency shall require evidence of the efforts listed in Section 11(a) above, as applicable, along with any other relevant factors.

13. If this Contract is for an indefinite quantity of construction, standard or professional services or is a requirements type contract and the Contractor has submitted an **M/WBE Utilization Plan** and has committed to subcontract work to MBEs and/or WBEs in order to meet the **Participation Goals**, the Contractor will not be deemed in violation of the M/WBE Program requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

14. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, at least once annually during the term of the Contract or Task Order, as applicable, Agency shall review the Contractor's progress toward attainment of its **M/WBE Utilization Plan**, including but not limited to, by reviewing the percentage of work the Contractor has actually awarded to MBE and/or WBE subcontractors and the payments the Contractor made to such subcontractors.

15. If **Participation Goals** have been established for this Contract or a Task Order issued pursuant to this Contract, Agency shall evaluate and assess the Contractor's performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor's overall contract performance evaluation.

## **PART B**

### **MISCELLANEOUS**

1. The Contractor shall take notice that, if this solicitation requires the establishment of a **M/WBE Utilization Plan**, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See §6-129(e)(10). Furthermore, such resulting contract may also be examined by the City's Comptroller to assess compliance with the **M/WBE Utilization Plan**.

2. Pursuant to DSBS rules, construction contracts that include a requirement for a **M/WBE Utilization Plan** shall not be subject to the law governing Locally Based Enterprises set forth in Section 6-108.1 of the Administrative Code of the City of New York.

3. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and/or WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and/or WBEs in contracts.

4. Prospective contractors are encouraged to enter into qualified joint venture agreements with MBEs and/or WBEs as defined by Section 6-129(c)(30).

5. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE Program requirements set forth herein and the pertinent provisions of Section 6-129, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE Program requirements of this Contract and pertinent provisions of Section 6-129, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of MBEs and/or WBEs to meet the required **Participation Goals**.

## **ARTICLE II. ENFORCEMENT**

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder's or proposer's prequalification status, if applicable.

2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any **M/WBE** Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering the Contractor an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.

3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to, any **M/WBE** Utilization Plan, Agency may determine that one of the following actions should be taken:

- (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- (c) making a finding that the Contractor is in default of the Contract;
- (d) terminating the Contract;
- (e) declaring the Contractor to be in breach of Contract;
- (f) withholding payment or reimbursement;
- (g) determining not to renew the Contract;
- (h) assessing actual and consequential damages;
- (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the M/WBE Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional

procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;

(j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or

(k) taking any other appropriate remedy.

4. If an **M/WBE** Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to fulfill its **Participation Goals** contained in its **M/WBE** Utilization Plan or the **Participation Goals** as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of work required to be awarded to MBE and/or WBE firms to meet the **Participation Goals** and the dollar amount the Contractor actually awarded and paid, and/or credited, to MBE and/or WBE firms. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the **Participation Goals**, the foregoing amount is hereby fixed and agreed as the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.

5. Whenever Agency has reason to believe that an MBE and/or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129(c)(8)), or has violated any provision of Section 6-129, Agency shall notify the Commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE and/or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.

7. The Contractor's record in implementing its **M/WBE** Utilization Plan shall be a factor in the evaluation of its performance. Whenever Agency determines that a Contractor's compliance with an **M/WBE** Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief Procurement Officer, file an advice of caution form for inclusion in PASSPort as caution data.

## Part 1: M/WBE Participation Goals

### Contract Overview (To be completed by contracting agency)

APT E-Pin# \_\_\_\_\_ FMS Project ID# \_\_\_\_\_  
 Project Title \_\_\_\_\_ Agency PIN# \_\_\_\_\_  
 Contracting Agency \_\_\_\_\_ Bid/Proposal Response Date \_\_\_\_\_  
 Agency Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
 Contact Person \_\_\_\_\_ Title \_\_\_\_\_  
 Telephone \_\_\_\_\_ Email \_\_\_\_\_

Project Description (attach additional pages if necessary)

Bidder or proposer  is required OR  is not required to specifically identify the contact information of all M/WBE firms they intend to use as a subcontractor on this contract, including the M/WBE vendor name, address and telephone number in the space provided below in Part 2 Section 4.

### M/WBE Participation Goals for Services

Enter the percentage amount for each category or for an unspecified Goal.

**Prime Contract Industry:** \_\_\_\_\_

**Category and Breakdown:**

Unspecified \_\_\_\_\_ %  
 Black American \_\_\_\_\_ %  
 Hispanic American \_\_\_\_\_ %  
 Asian American \_\_\_\_\_ %  
 Women \_\_\_\_\_ %

**Total Participation Goals** \_\_\_\_\_ %  
Line 1

## Part 2: M/WBE Participation Plan

(To be completed by the bidder/proposer unless granted a full waiver, which must be submitted with the bid/proposal in lieu of this form)

### Section 1: Prime Contractor Contact Information

Tax ID# \_\_\_\_\_ FMS Vendor ID# \_\_\_\_\_  
 Business Name \_\_\_\_\_ Contact Person \_\_\_\_\_  
 Business Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
 Telephone \_\_\_\_\_ Email \_\_\_\_\_

### Section 3: Contractor M/WBE Utilization Plan

Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation. Check applicable box. The Proposer or Bidder will fulfill the M/WBE Participation Goals:

- As an M/WBE Prime Contractor that will self-perform and/or subcontract to other M/WBE firms a portion of the contract the value of which is at least the amount located on Lines 2 or 3 in the panels in Section 2, as applicable. The value of any work subcontracted to non-M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals. Please check all that apply to Prime Contractor:  MBE  WBE
- As a Qualified Joint Venture with an M/WBE partner, in which the value of the M/WBE partner's participation and/or the value of any work subcontracted to other M/WBE firms is at least the amount located on Lines 2 or 3 in the panels in Section 2, as applicable. The value of any work subcontracted to non-M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals.
- As a non-M/WBE Prime Contractor that will enter into subcontracts with M/WBE firms the value of which is at least the amount located on Lines 2 or 3 in the panels in Section 2, as applicable.

### Section 2: M/WBE Utilization Goal Calculation

**Prime Contractor Adopting Agency Participation Goals**  
*For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.*

Total Bid/Proposal Value \$ \_\_\_\_\_  
**multiplied by** **x**  
 Total Participation Goals \_\_\_\_\_ %  
(Line 1 above)

Calculated M/WBE Participation Amount \$ \_\_\_\_\_  
Line 2

**OR**

**Prime Contractor With Partial Waiver Approval Adopting Revised Participation Goals**  
*For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Revised M/WBE Participation Goals.*

Total Bid/Proposal Value \$ \_\_\_\_\_  
**multiplied by** **x**  
 Total Revised Participation Goals \_\_\_\_\_ %

Calculated M/WBE Participation Amount \$ \_\_\_\_\_  
Line 3

**Section 4: General Contract Information**

**What is the expected percentage of the total contract dollar value that you expect to award in subcontracts for services, regardless of M/WBE status?** \_\_\_\_\_ %

Enter a brief description of the type(s) and dollar value of subcontracts for all services you plan to subcontract if awarded this contract, along with the anticipated start and end dates for such subcontracts. For each item, indicate whether the work is designated for participation by an M/WBE. Where the contracting agency's solicitation has indicated a requirement that the bidder or proposer specifically identify the contact information of all M/WBEs they intend to use on this contract, vendors must also include the M/WBE vendor name, address and telephone number in the space provided below. Use additional sheets if necessary.

Description of Work	Start Date (MM/YY)	End Date (MM/YY)	Planned \$ Amount	Designated for M/WBE		M/WBE Vendor Name	M/WBE Address	M/WBE Telephone
				Y	N			
1. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
2. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
3. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
4. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
5. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
6. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
7. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
8. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
9. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
10. _____	/	/	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -

**Section 5: Vendor Certification and Required Affirmations**

- I hereby:
- acknowledge my understanding of the M/WBE participation requirements as set forth herein and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder;
  - affirm that the information supplied in support of this M/WBE Utilization Plan is true and correct;
  - agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;
  - agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such Goals are modified by the Agency; and
  - agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or if a partial waiver is obtained or such Goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

*John M Labozza*

Signature \_\_\_\_\_ Date \_\_\_\_\_

Print Name \_\_\_\_\_ Title \_\_\_\_\_

## Request for Waiver of M/WBE Participation Requirement

### Contract Overview

Tax ID# \_\_\_\_\_ FMS Vendor ID# \_\_\_\_\_  
 Business Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
 Email \_\_\_\_\_ Telephone \_\_\_\_\_  
 Contracting Agency \_\_\_\_\_  
 APT E-Pin# \_\_\_\_\_ Bid/Proposal Due Date \_\_\_\_\_

### Basis for Waiver Request: Check appropriate box & explain in detail below (attach additional pages if needed)

- Vendor does not subcontract services, and has the capacity and good faith intention to perform all such work itself with its own employees.
- Vendor subcontracts some of this type of work but at a lower % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract. Identify your subcontracting plan in the vendor certification section below.
- Vendor has other legitimate business reasons for proposing the M/WBE Participation Goal requested here. Explain under separate cover.

### Vendor Contract History

Using the attached Excel template, list all contracts (for City and Non-City work) performed within the last 3 years and provide the requested information for each contract.

From the list of all contracts, provide reference information below for the 5 most relevant contracts in size, scale and scope (performed for New York City or any other entity) to the bid or proposal for which you are submitting this waiver request. Provide the requested information for each subcontract awarded during the life of the listed reference contract.

Please make sure to highlight the 5 reference contracts provided below among the comprehensive list of all your contract awards within the attached Excel template.

### Reference 1

Agency/Organization \_\_\_\_\_ Contract # \_\_\_\_\_  
 Reference Contact \_\_\_\_\_ Telephone \_\_\_\_\_ Email \_\_\_\_\_  
 Contract Start Date \_\_\_\_\_ Contract End Date \_\_\_\_\_ Total Contract Value \$ \_\_\_\_\_

Prime Contract description \_\_\_\_\_

- Did the vendor perform as a Prime Contractor or as a Subcontractor?  Prime Contractor  Subcontractor
- Was the Prime Contract subject to any Goals?  City M/WBE Goals  State Goals  Federal Goals  No Applicable Goals
- Did the Prime Contractor meet Goal requirements?  Yes  No  N/A

If the Prime Contractor did not meet Goal requirements or contract is still ongoing, please explain \_\_\_\_\_

<b>If you performed as the Prime Contractor, please provide a description and value of all work subcontracted to other vendors.</b>	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
	_____	\$ _____
		Percentage of total contract value subcontracted to other vendors _____

**If you performed as the Subcontractor, please provide a description and value of work areas you self-performed.**

\_\_\_\_\_ \$ \_\_\_\_\_

### M/WBE Participation Goals for Services

#### Defined by AGENCY in bid/solicitation documents

Percent of the total contract value to be subcontracted to M/WBE vendors for services and/or credited to an M/WBE Qualified Joint Venture.

Unspecified \_\_\_\_\_ %  
 Black American \_\_\_\_\_ %  
 Hispanic American \_\_\_\_\_ %  
 Asian American \_\_\_\_\_ %  
 Women \_\_\_\_\_ %

**Total Participation Goals \_\_\_\_\_ %**

#### Proposed by VENDOR seeking waiver

Percent of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted to M/WBE businesses for services. Or if M/WBE Qualified Joint Venture, percent of total contract value anticipated to be credited to M/WBE vendor(s).

Unspecified \_\_\_\_\_ %  
 Black American \_\_\_\_\_ %  
 Hispanic American \_\_\_\_\_ %  
 Asian American \_\_\_\_\_ %  
 Women \_\_\_\_\_ %

**Total Participation Goals \_\_\_\_\_ %**





**Reference 4**

Agency/Organization \_\_\_\_\_ Contract # \_\_\_\_\_

Reference Contact \_\_\_\_\_ Telephone \_\_\_\_\_ Email \_\_\_\_\_

Contract Start Date \_\_\_\_\_ Contract End Date \_\_\_\_\_ Total Contract Value \$ \_\_\_\_\_

Prime Contract description \_\_\_\_\_

Did the vendor perform as a Prime Contractor or as a Subcontractor?  Prime Contractor  Subcontractor  
Was the Prime Contract subject to any Goals?  City M/WBE Goals  State Goals  Federal Goals  No Applicable Goals  
Did the Prime Contractor meet Goal requirements?  Yes  No  N/A

If the Prime Contractor did not meet Goal requirements or contract is still ongoing, please explain \_\_\_\_\_

**If you performed as the Prime Contractor, please provide a description and value of all work subcontracted to other vendors.**  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
Percentage of total contract value subcontracted to other vendors \_\_\_\_\_ %

**If you performed as the Subcontractor, please provide a description and value of work areas you self-performed.**  
\$ \_\_\_\_\_

**Reference 5**

Agency/Organization \_\_\_\_\_ Contract # \_\_\_\_\_

Reference Contact \_\_\_\_\_ Telephone \_\_\_\_\_ Email \_\_\_\_\_

Contract Start Date \_\_\_\_\_ Contract End Date \_\_\_\_\_ Total Contract Value \$ \_\_\_\_\_

Prime Contract description \_\_\_\_\_

Did the vendor perform as a Prime Contractor or as a Subcontractor?  Prime Contractor  Subcontractor  
Was the Prime Contract subject to any Goals?  City M/WBE Goals  State Goals  Federal Goals  No Applicable Goals  
Did the Prime Contractor meet Goal requirements?  Yes  No  N/A

If the Prime Contractor did not meet Goal requirements or contract is still ongoing, please explain \_\_\_\_\_

**If you performed as the Prime Contractor, please provide a description and value of all work subcontracted to other vendors.**  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_  
Percentage of total contract value subcontracted to other vendors \_\_\_\_\_ %

**If you performed as the Subcontractor, please provide a description and value of work areas you self-performed.**  
\$ \_\_\_\_\_

**Vendor Certification**

Identify/list all the work areas you intend on subcontracting on the current anticipated contract for which you are submitting this waiver request.

*I hereby affirm that the information supplied in support of this waiver request is true and correct, and that this request is made in good faith. I further affirm that the work that I did not list as work that will be subcontracted on this contract for which I am submitting this waiver request is work that I have performed on past contracts and will not subcontract if awarded this contract.*

Signature \_\_\_\_\_ Date \_\_\_\_\_  
Print Name \_\_\_\_\_ Title \_\_\_\_\_

<p><b>Approvals (for Agency completion only)</b></p> <p>ACCO Signature _____ Date _____</p> <p>CCPO Signature _____ Date _____</p>	<p><b>Waiver Determination</b></p> <p><input type="checkbox"/> Full Waiver Approved</p> <p><input type="checkbox"/> Waiver Denied</p> <p><input type="checkbox"/> Partial Waiver Approved</p> <p>Revised Participation Goal _____ %</p>
--	---

**Section 4: General Contract Information**

**What is the expected percentage of the total contract dollar value that you expect to award in subcontracts for services, regardless of M/WBE status?** \_\_\_\_\_ %

Enter a brief description of the type(s) and dollar value of subcontracts for all services you plan to subcontract if awarded this contract, along with the anticipated start and end dates for such subcontracts. For each item, indicate whether the work is designated for participation by an M/WBE. Where the contracting agency's solicitation has indicated a requirement that the bidder or proposer specifically identify the contact information of all M/WBEs they intend to use on this contract, vendors must also include the M/WBE vendor name, address and telephone number in the space provided below. Use additional sheets if necessary.

Description of Work	Start Date (MM/YY)	End Date (MM/YY)	Planned \$ Amount	Designated for M/WBE		M/WBE Vendor Name	M/WBE Address	M/WBE Telephone
				Y	N			
1. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
2. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
3. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
4. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
5. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
6. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
7. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
8. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
9. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -
10. _____	/ /	/ /	\$ _____	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	( ) -

**Section 5: Vendor Certification and Required Affirmations**

- I hereby:
- acknowledge my understanding of the M/WBE participation requirements as set forth herein and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder;
  - affirm that the information supplied in support of this M/WBE Utilization Plan is true and correct;
  - agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;
  - agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such Goals are modified by the Agency; and
  - agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or if a partial waiver is obtained or such Goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

*John M Labozza*

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Print Name \_\_\_\_\_ Title \_\_\_\_\_

## **Affirmation**

The Bidder affirms and declares:

1. The said bidder is of lawful age and the only one interested in this bid; and no person, firm or corporation other than hereinbefore named has any interest in this bid, or in the Contract proposed to be taken.
2. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; (2) unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) no attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
3. No councilman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in this bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.
4. The bidder is not in arrears to the City of New York upon debt or contract or taxes, and is not a defaulter, as surety or otherwise, upon any obligation of the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York or State of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except as set forth on the Affirmation included as disclosed in PASSPort.
5. The bidder hereby affirms that is has paid all applicable City income, excise and other taxes for all it has conducted business activities in New York City.
6. The bidder, as an individual, or as a member, partner, director or officer of the bidder, if the same be a firm, partnership or corporation, executes this document expressly warranting and representing that should this bid be accepted by the City and the Contract awarded to him, he and his subcontractors engaged in the performance:

(1) will comply with the provisions of Section 6-108 of the Administrative Code of the City of New York and the non-discrimination provisions of Section 220a of the New York State Labor Law, as more expressly and in detail set forth in the Agreement; (2) will comply with Section 6-109 of the Administrative Code of the City of New York in relation to minimum wages and other stipulations as more expressly and in detail set forth in the Agreement; (3) have complied with the provisions of the aforesaid laws since their respective effective dates, and (4) will post notices to be furnished by the City, setting forth the requirements of the aforesaid laws in prominent and conspicuous places in each and every plant, factory, building and structure where employees engaged in the performance of the Contract can readily view it, and will continue to keep such notices posted until the supplies, materials and equipment, or work labor and services required to be furnished or rendered by the Contractor have been finally accepted by the City. In the event of any breach or violation of the foregoing, the Contractor may be subject to damages, liquidated or otherwise, cancellation of the Contract and suspension as a

bidder for a period of three years. (The words, "the bidder", "he", "his", and "him" where used shall mean the individual bidder, firm, partnership or corporation executing this bid).

7. Compliance Report

The bidder, as an individual, or as a member, partner, director, or officer of the bidder, if the same be a firm, partnership, or corporation, (1) represents that his attention has been specifically drawn to Executive Order No. 50, dated April 25, 1980, on Equal Employment Compliance of the contract, and (2) warrants that he will comply with the provisions of Executive Order No. 50. The Employment Report must be submitted as part of the bid.

8. The bidder, as an individual, or as a member, partner, director, or officer of the bidder, if the same be a firm, partnership, or corporation, executes this document expressly warranting that he will comply with: (1) the provision of the contract on providing records, Chapter 8.
9. By submission of this bid, the bidder certifies that it now has and will continue to have the financial capability to fully perform the work required for this contract. Any award of this contract will be made in reliance upon such certification. Upon request therefor, the bidder will submit written verification of such financial capability in a form that is acceptable to the department.
10. In accordance with Section 165 of the State Finance Law, the bidder agrees that tropical hardwoods, as defined in Section 165 of the State Finance Law, shall not be utilized in the performance of this Contract, except as the same are permitted by the foregoing provision of law.
11. The bidder has visited and examined the site of the work and has carefully examined the Contract in the form approved by the Corporation Counsel, and will execute the Contract and perform all its items, covenants and conditions, and will provide, furnish and deliver all the work, materials, supplies, tools and appliances for all labor and materials necessary or required for the hereinafter named work, all in strict conformity with the Contract, for the prices set forth in the Bid Schedule.
12. M/WBE UTILIZATION PLAN: By signing its bid, the bidder agrees to the M/WBE Vendor Certification and Required Affirmations set forth below, unless a full waiver of the Participation Goals is granted.

I hereby:

- 1) acknowledge my understanding of the M/WBE participation requirements as set forth in this Contract and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York and the rules promulgated thereunder;
- 2) affirm that the information supplied in support of the M/WBE Utilization Plan is true and correct;
- 3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;
- 4) agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and

agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

**PROJECT #HWQ274F2**

**QUALIFICATION FORM**

**QUALIFICATION FORM**

Name of Contractor: CAO DUS DUC  
Name of Project: STONE RD - HWQ985  
Location of Project: DOUGLASSON NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:  
Name: AMIR ASCM  
Title: RESIDENT ENGINEER Phone Number: 917-882-7190

Brief description of the Project completed or the Project in progress: ROADWAY IMPROVEMENTS AT STONE RD - BORO OF QUEENS

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: PRIME  
Amount of Contract, Subcontract or Sub-subcontract: \$ 7,471,069.38  
Start Date and Completion Date: 6/15 - 6/18

\*\*\*\*\*

Name of Contractor: CAO DUS DUC  
Name of Project: HWMT CATF - WARREN'S JOHN ST  
Location of Project: NEW YORK CITY, NY

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:  
Name: JOSEPH G LIONE PE  
Title: RESIDENT ENGINEER Phone Number: 646-477-2734

Brief description of the Project completed or the Project in progress: RECONSTRUCTION OF WARREN'S JOHN ST

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: PRIME  
Amount of Contract, Subcontract or Sub-subcontract: \$ 2,336,399.34  
Start Date and Completion Date: 1/17 - 6/2019

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
BID SCHEDULE**

Project ID: HWQ274F2

ePIN: 85023B0052

TOTAL BID PRICE: \$51,821,971.92

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
1	4.02 AB-R	ASPHALTIC CONCRETE WEARING COURSE, 1-1/2" THICK	6,801.00	S.Y.	\$8.00	\$54,408.00	
2	4.02 AG	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	49,238.00	S.Y.	\$13.00	\$640,094.00	
3	4.02 CB	ASPHALTIC CONCRETE MIXTURE	23,565.00	TONS	\$1.00	\$23,565.00	
4	4.04 B	CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, CLASS B-32	1,342.00	C.Y.	\$117.00	\$157,014.00	
5	4.04 HA	CONCRETE BASE FOR PAVEMENT, 6" THICK (HIGH-EARLY STRENGTH)	4,105.00	C.Y.	\$185.00	\$759,425.00	
6	4.04 HC	CONCRETE BASE FOR PAVEMENT, 8" THICK (HIGH-EARLY STRENGTH)	3,956.00	C.Y.	\$335.00	\$1,325,260.00	
7	4.05 AX	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS)	310.00	C.Y.	\$750.00	\$232,500.00	
8	4.06	CONCRETE IN STRUCTURES, CLASS A-40	1,213.00	C.Y.	\$750.00	\$909,750.00	
9	4.08 AA	CONCRETE CURB (18" DEEP)	73.00	L.F.	\$80.00	\$5,840.00	
10	4.08 CG	INTEGRAL CONCRETE CURB AND GUTTER	12,731.00	L.F.	\$51.00	\$649,281.00	
11	4.09 AF	STRAIGHT STEEL FACED CONCRETE CURB (27" DEEP)	692.00	L.F.	\$90.00	\$62,280.00	
12	4.09 BF	DEPRESSED STEEL FACED CONCRETE CURB (27" DEEP)	45.00	L.F.	\$110.00	\$4,950.00	
13	4.09 CGA	INTEGRAL STRAIGHT STEEL FACED CONCRETE CURB AND GUTTER	6,436.00	L.F.	\$61.00	\$392,596.00	
14	4.09 CGC	INTEGRAL CORNER STEEL FACED CONCRETE CURB AND GUTTER	2,035.00	L.F.	\$142.00	\$288,970.00	
15	4.09 CGD	INTEGRAL DEPRESSED STEEL FACED CONCRETE CURB AND GUTTER	2,369.00	L.F.	\$125.00	\$296,125.00	
16	4.11 CA	FILL, PLACE MEASUREMENT	28,900.00	C.Y.	\$75.00	\$2,167,500.00	
17	4.13 AAS	4" CONCRETE SIDEWALK (UNPIGMENTED)	133,352.00	S.F.	\$6.00	\$800,112.00	
18	4.13 BAS	7" CONCRETE SIDEWALK (UNPIGMENTED)	64,331.00	S.F.	\$12.00	\$771,972.00	
19	4.13 DE	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	2,640.00	S.F.	\$1.00	\$2,640.00	
20	4.14	STEEL REINFORCEMENT BARS	289,846.00	LBS.	\$2.00	\$579,692.00	
21	4.14 W	WELDED STEEL WIRE FABRIC	250.00	LBS.	\$2.50	\$625.00	
22	4.15	TOPSOIL	3,157.00	C.Y.	\$114.00	\$359,898.00	
23	4.16 AA	TREES REMOVED (4" TO UNDER 12" CALIPER)	168.00	EACH	\$594.00	\$99,792.00	
24	4.16 AB	TREES REMOVED (12" TO UNDER 18" CALIPER)	48.00	EACH	\$1,290.00	\$61,920.00	
25	4.16 AC	TREES REMOVED (18" TO UNDER 24" CALIPER)	30.00	EACH	\$1,992.00	\$59,760.00	
26	4.16 ADE	TREES REMOVED (24" TO UNDER 48" CALIPER)	37.00	EACH	\$3,888.00	\$143,856.00	
27	4.16 BA	TREES PLANTED, 2-1/2" TO 3" CALIPER, ALL TYPES	496.00	EACH	\$1,230.00	\$610,080.00	
28	4.16 STUMP	STUMP REMOVAL	24.00	EACH	\$510.00	\$12,240.00	
29	4.18 A	MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	38.00	EACH	\$890.00	\$33,820.00	
30	4.18 B	MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	16.00	EACH	\$1,070.00	\$17,120.00	
31	4.18 C	MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	4.00	EACH	\$1,306.00	\$5,224.00	
32	4.18 D	MAINTENANCE TREE PRUNING (24" CAL. AND OVER)	4.00	EACH	\$1,521.00	\$6,084.00	
33	4.19	SODDING	8,482.00	S.Y.	\$23.00	\$195,086.00	
34	4.21	TREE CONSULTANT	2,778.00	P/HR	\$80.00	\$222,240.00	
35	50.11MS040026	4'-0"W X 2'-6"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	568.00	L.F.	\$575.00	\$326,600.00	
36	50.11MS056030	5'-6"W X 3'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	289.00	L.F.	\$1,000.00	\$289,000.00	
37	50.11MS056036	5'-6"W X 3'-6"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	279.00	L.F.	\$1,000.00	\$279,000.00	
38	50.11MS056040	5'-6"W X 4'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	659.00	L.F.	\$1,500.00	\$988,500.00	
39	50.11MS056046	5'-6"W X 4'-6"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	481.00	L.F.	\$2,000.00	\$962,000.00	
40	50.11MS060030	6'-0"W X 3'-0"H SINGLE BARREL FLAT TOP REINFORCED CONCRETE STORM SEWER	922.00	L.F.	\$800.00	\$737,600.00	
41	50.21M3C024D	24" R.C.P. CLASS III STORM SEWER, ON CONCRETE CRADLE	582.00	L.F.	\$270.00	\$157,140.00	
42	50.21M3E023W	23"W X 14"H R.C.P. CLASS HE-III STORM SEWER, ENCASED IN CONCRETE	285.00	L.F.	\$400.00	\$114,000.00	
43	50.21M3E024D	24" R.C.P. CLASS III STORM SEWER, ENCASED IN CONCRETE	695.00	L.F.	\$300.00	\$208,500.00	
44	50.21M3E038W	38"W X 24"H R.C.P. CLASS HE-III STORM SEWER, ENCASED IN CONCRETE	216.00	L.F.	\$400.00	\$86,400.00	
45	50.21M3E045W	45"W X 29"H R.C.P. CLASS HE-III STORM SEWER, ENCASED IN CONCRETE	1,255.00	L.F.	\$500.00	\$627,500.00	
46	50.21M3E048D	48" R.C.P. CLASS III STORM SEWER, ENCASED IN CONCRETE	224.00	L.F.	\$900.00	\$201,600.00	

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BID SCHEDULE**

Project ID: HWQ274F2

ePIN: 85023B0052

TOTAL BID PRICE: \$51,821,971.92

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
47	50.21M3E053W	53"W X 34"H R.C.P. CLASS HE-III STORM SEWER, ENCASED IN CONCRETE	231.00	L.F.	\$800.00	\$184,800.00	
48	50.21M4C030W	30"W X 19"H R.C.P. CLASS HE-IV STORM SEWER, ON CONCRETE CRADLE	34.00	L.F.	\$750.00	\$25,500.00	
49	50.31MC15	15" E.S.V.P. STORM SEWER, ON CONCRETE CRADLE	20.00	L.F.	\$760.00	\$15,200.00	
50	50.31ME12	12" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	81.00	L.F.	\$380.00	\$30,780.00	
51	50.31ME15	15" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	822.00	L.F.	\$280.00	\$230,160.00	
52	50.31ME18	18" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	396.00	L.F.	\$420.00	\$166,320.00	
53	50.31SC10	10" E.S.V.P. SANITARY SEWER, ON CONCRETE CRADLE	1,535.00	L.F.	\$460.00	\$706,100.00	
54	50.31SC12	12" E.S.V.P. SANITARY SEWER, ON CONCRETE CRADLE	1,780.00	L.F.	\$740.00	\$1,317,200.00	
55	50.31SE10	10" E.S.V.P. SANITARY SEWER, ENCASED IN CONCRETE	307.00	L.F.	\$200.00	\$61,400.00	
56	51.11C001	CHAMBER NO. 1	1.00	EACH	\$540,000.00	\$540,000.00	
57	51.11C002	CHAMBER NO. 2	1.00	EACH	\$640,000.00	\$640,000.00	
58	51.11C003	CHAMBER NO. 3	1.00	EACH	\$680,000.00	\$680,000.00	
59	51.11C004	CHAMBER NO. 4	1.00	EACH	\$440,000.00	\$440,000.00	
60	51.11C005	CHAMBER NO. 5	1.00	EACH	\$200,000.00	\$200,000.00	
61	51.11C006	CHAMBER NO. 6	1.00	EACH	\$350,000.00	\$350,000.00	
62	51.11C007	CHAMBER NO. 7	1.00	EACH	\$330,000.00	\$330,000.00	
63	51.11C008	CHAMBER NO. 8	1.00	EACH	\$330,000.00	\$330,000.00	
64	51.11C009	CHAMBER NO. 9	1.00	EACH	\$540,000.00	\$540,000.00	
65	51.11C010	CHAMBER NO. 10	1.00	EACH	\$600,000.00	\$600,000.00	
66	51.11C011	CHAMBER NO. 11	1.00	EACH	\$340,000.00	\$340,000.00	
67	51.11C012	CHAMBER NO. 12	1.00	EACH	\$340,000.00	\$340,000.00	
68	51.11C013	CHAMBER NO. 13	1.00	EACH	\$449,000.00	\$449,000.00	
69	51.11C014	CHAMBER NO. 14	1.00	EACH	\$600,000.00	\$600,000.00	
70	51.11P005	STANDARD 5'-0" DIAMETER PRECAST MANHOLE	1.00	EACH	\$30,000.00	\$30,000.00	
71	51.11P007	STANDARD 7'-0" DIAMETER PRECAST MANHOLE	1.00	EACH	\$106,000.00	\$106,000.00	
72	51.11P008	STANDARD 8'-0" DIAMETER PRECAST MANHOLE	2.00	EACH	\$152,000.00	\$304,000.00	
73	51.21A001000C	ACCESS MANHOLE NO. 1	4.00	EACH	\$34,000.00	\$136,000.00	
74	51.21A002000C	ACCESS MANHOLE NO. 2	1.00	EACH	\$46,000.00	\$46,000.00	
75	51.21A003000C	ACCESS MANHOLE NO. 3	2.00	EACH	\$46,000.00	\$92,000.00	
76	51.21A004000C	ACCESS MANHOLE NO. 4	3.00	EACH	\$48,000.00	\$144,000.00	
77	51.21A005000C	ACCESS MANHOLE NO. 5	3.00	EACH	\$92,000.00	\$276,000.00	
78	51.21A006000C	ACCESS MANHOLE NO. 6	5.00	EACH	\$50,000.00	\$250,000.00	
79	51.21A007000C	ACCESS MANHOLE NO. 7	1.00	EACH	\$34,000.00	\$34,000.00	
80	51.21A008000C	ACCESS MANHOLE NO. 8	1.00	EACH	\$64,000.00	\$64,000.00	
81	51.21S0A1000V	STANDARD MANHOLE TYPE A-1	6.00	EACH	\$9,000.00	\$54,000.00	
82	51.21S0A3000V	STANDARD SHALLOW MANHOLE TYPE A-3	28.00	EACH	\$7,000.00	\$196,000.00	
83	51.21S0B1000V	STANDARD MANHOLE TYPE B-1	21.00	EACH	\$10,000.00	\$210,000.00	
84	51.21S0E1030H	STANDARD MANHOLE TYPE E-1 ON 30"W X 19"H H.E.R.C.P. SEWER	1.00	EACH	\$10,000.00	\$10,000.00	
85	51.21W001000V	SPECIAL SHALLOW MANHOLE NO. 1	10.00	EACH	\$20,000.00	\$200,000.00	
86	51.23RF	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	30.00	EACH	\$1,100.00	\$33,000.00	
87	51.41S001	STANDARD CATCH BASIN, TYPE 1	34.00	EACH	\$15,000.00	\$510,000.00	
88	51.41W000	SHALLOW CATCH BASIN	58.00	EACH	\$15,000.00	\$870,000.00	
89	52.11D12	12" DUCTILE IRON PIPE BASIN CONNECTION	2,530.00	L.F.	\$260.00	\$657,800.00	
90	52.21V08	8" E.S.V.P. RISER FOR HOUSE CONNECTION	48.00	V.F.	\$100.00	\$4,800.00	
91	52.31V06S10	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 10" E.S.V.P. SANITARY SEWER	63.00	EACH	\$300.00	\$18,900.00	
92	52.31V06S12	6" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 12" E.S.V.P. SANITARY SEWER	62.00	EACH	\$600.00	\$37,200.00	
93	52.31V08S10	8" E.S.V.P. SPUR FOR HOUSE CONNECTION ON 10" E.S.V.P. SANITARY SEWER	2.00	EACH	\$300.00	\$600.00	
94	52.41V06N	NEW 6" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE	96.00	L.F.	\$75.00	\$7,200.00	
95	52.41V06R	6" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE (RECONNECTION)	2,283.00	L.F.	\$1.00	\$2,283.00	
96	52.41V08N	NEW 8" E.S.V.P. HOUSE CONNECTION DRAIN ON CONCRETE CRADLE	30.00	L.F.	\$85.00	\$2,550.00	
97	53.11DR	TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	12,810.00	L.F.	\$1.00	\$12,810.00	
98	55.11AB	ABANDONING BASINS AND INLETS	8.00	EACH	\$500.00	\$4,000.00	



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Project ID: HWQ274F2

ePIN: 85023B0052

**TOTAL BID PRICE: \$51,821,971.92**

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
99	6.01 AC	CLEARING AND GRUBBING	2,150.00	S.Y.	\$12.00	\$25,800.00	
100	6.02 AAN	UNCLASSIFIED EXCAVATION	13,613.00	C.Y.	\$90.00	\$1,225,170.00	
101	6.03 AA	STRIPPING PAVEMENT SURFACE (ASPHALTIC CONCRETE)	1,300.00	S.Y.	\$1.00	\$1,300.00	
102	6.22 F	ADDITIONAL HARDWARE	6,171.00	LBS.	\$0.01	\$61.71	
103	6.25 RS	TEMPORARY SIGNS	125.00	S.F.	\$50.00	\$6,250.00	
104	6.26	TIMBER CURB	66,662.00	L.F.	\$0.01	\$666.62	
105	6.28 AA	LIGHTED TIMBER BARRICADES	9,133.00	L.F.	\$0.01	\$91.33	
106	6.29 LSS	FURNISH AND INSTALL PERMANENT DEDICATED LANE SEPARATOR SYSTEM WITH REBOUNDABLE BOLLARDS	60.00	L.F.	\$200.00	\$12,000.00	
107	6.34 ACT	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH	66,662.00	L.F.	\$0.01	\$666.62	
108	6.36 DR	STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	106.00	C.Y.	\$1.00	\$106.00	
109	6.40 DU	ENGINEER'S FIELD OFFICE (JOINT USE) (TYPE DU)	42.00	MONTH	\$2,500.00	\$105,000.00	
110	6.43 D	DIGITAL PHOTOGRAPHS	3,256.00	SETS	\$15.00	\$48,840.00	
111	6.44	THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	28,820.00	L.F.	\$1.10	\$31,702.00	
112	6.49	TEMPORARY PAVEMENT MARKINGS (4" WIDE)	22,822.00	L.F.	\$1.00	\$22,822.00	
113	6.50	CLEANING OF DRAINAGE STRUCTURES	159.00	EACH	\$500.00	\$79,500.00	
114	6.52 CG	CROSSING GUARD	39,653.00	P/HR	\$1.00	\$39,653.00	
115	6.53	REMOVE EXISTING LANE MARKINGS (4" WIDE)	13,649.00	L.F.	\$1.10	\$15,013.90	
116	6.55	SAWCUTTING EXISTING PAVEMENT	4,917.00	L.F.	\$0.01	\$49.17	
117	6.82 A	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	625.00	S.F.	\$15.00	\$9,375.00	
118	6.82 B	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	2,968.00	L.F.	\$14.00	\$41,552.00	
119	6.83 AA	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	63.00	S.F.	\$43.00	\$2,709.00	
120	6.83 AB	FURNISHING NEW TRAFFIC SIGN POSTS	1,068.00	L.F.	\$15.00	\$16,020.00	
121	6.83 AR	FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	243.00	S.F.	\$46.00	\$11,178.00	
122	6.83 BA	INSTALLING TRAFFIC SIGNS	306.00	S.F.	\$32.00	\$9,792.00	
123	6.83 BB	INSTALLING TRAFFIC SIGN POSTS	1,068.00	L.F.	\$31.00	\$33,108.00	
124	6.84 B	LOLLIPOP TYPE BUS STOP SIGNS	1.00	F.S.	\$17,500.00	\$17,500.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 17,500.00
125	6.86 AA	FURNISHING NEW STREET NAME SIGNS	107.00	S.F.	\$65.00	\$6,955.00	
126	6.86 AB	FURNISHING NEW STREET NAME SIGN POSTS	798.00	L.F.	\$21.00	\$16,758.00	
127	6.86 BA	INSTALLING STREET NAME SIGNS	107.00	S.F.	\$33.00	\$3,531.00	
128	6.86 BB	INSTALLING STREET NAME SIGN POSTS	798.00	L.F.	\$31.00	\$24,738.00	
129	6.87	PLASTIC BARRELS	20,889.00	EACH	\$0.01	\$208.89	
130	6.91	REFLECTIVE CRACKING MEMBRANE (18" WIDE)	18,424.00	L.F.	\$7.50	\$138,180.00	
131	6.94 A	CONCRETE SUMP WITH GRATING	69.00	EACH	\$1,850.00	\$127,650.00	
132	6.99	AUDIO AND VIDEO DOCUMENTATION SURVEY	1.00	L.S.	\$250,000.00	\$250,000.00	
133	60.11R606	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	382.00	L.F.	\$52.00	\$19,864.00	
134	60.11R608	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	6,557.00	L.F.	\$75.00	\$491,775.00	
135	60.11R612	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	3,454.00	L.F.	\$119.00	\$411,026.00	
136	60.12D06	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	382.00	L.F.	\$137.00	\$52,334.00	
137	60.12D08	LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	6,760.00	L.F.	\$95.00	\$642,200.00	
138	60.12D12	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	3,600.00	L.F.	\$102.00	\$367,200.00	
139	60.13MOA24	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	19.00	TONS	\$11,500.00	\$218,500.00	
140	61.11DMM06	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	35.00	EACH	\$2,000.00	\$70,000.00	
141	61.11DMM08	FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	27.00	EACH	\$2,200.00	\$59,400.00	
142	61.11DMM12	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	8.00	EACH	\$5,000.00	\$40,000.00	

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TOTAL BID PRICE: \$51,821,971.92

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Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
143	61.11TWC04	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH	\$1.00	\$2.00	
144	61.11TWC06	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	3.00	EACH	\$1.00	\$3.00	
145	61.11TWC08	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	3.00	EACH	\$1.00	\$3.00	
146	61.12DMM06	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	35.00	EACH	\$1.00	\$35.00	
147	61.12DMM08	SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	27.00	EACH	\$1.00	\$27.00	
148	61.12DMM12	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	8.00	EACH	\$1.00	\$8.00	
149	61.12TWC04	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH	\$1.00	\$2.00	
150	61.12TWC06	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	3.00	EACH	\$1.00	\$3.00	
151	61.12TWC08	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	3.00	EACH	\$1.00	\$3.00	
152	62.11SD	FURNISHING AND DELIVERING HYDRANTS	35.00	EACH	\$5,000.00	\$175,000.00	
153	62.12SG	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	35.00	EACH	\$2,000.00	\$70,000.00	
154	62.13RH	REMOVING HYDRANTS	21.00	EACH	\$100.00	\$2,100.00	
155	62.14FS	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	74.00	EACH	\$350.00	\$25,900.00	
156	63.11VC	FURNISHING AND DELIVERING VARIOUS CASTINGS	64.00	TONS	\$1.00	\$64.00	
157	64.11EL	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	12.00	EACH	\$650.00	\$7,800.00	
158	64.11ST	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	218.00	EACH	\$475.00	\$103,550.00	
159	64.12COEG	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	10.00	L.F.	\$100.00	\$1,000.00	
160	64.12COLT	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	315.00	L.F.	\$70.00	\$22,050.00	
161	64.12ESEG	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	10.00	L.F.	\$35.00	\$350.00	
162	64.12ESLT	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	508.00	L.F.	\$25.00	\$12,700.00	
163	64.13WC08	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	1.00	EACH	\$3,500.00	\$3,500.00	
164	64.13WC12	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	3.00	EACH	\$5,000.00	\$15,000.00	
165	65.11BR	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	1,320.00	LBS.	\$0.01	\$13.20	
166	65.21PS	FURNISHING AND PLACING POLYETHYLENE SLEEVE	10,742.00	L.F.	\$0.75	\$8,056.50	Unit price bid shall not be less than: \$ 0.75
167	65.31FF	FURNISHING, DELIVERING AND PLACING FILTER FABRIC	79,884.00	S.F.	\$0.25	\$19,971.00	Unit price bid shall not be less than: \$ 0.25
168	65.71SG	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	300.00	C.Y.	\$45.00	\$13,500.00	
169	7.12 A	PROCTOR ANALYSIS	32.00	EACH	\$250.00	\$8,000.00	
170	7.12 B	IN-PLACE SOIL DENSITY TEST	96.00	EACH	\$200.00	\$19,200.00	
171	7.13 B	MAINTENANCE OF SITE	36.00	MONTH	\$12,200.00	\$439,200.00	Unit price bid shall not be less than: \$ 12,200.00
172	7.35	PEDESTRIAN CHANNELIZER	54,424.00	L.F.	\$0.01	\$544.24	
173	7.88 AA	RODENT INFESTATION SURVEY AND MONITORING	1.00	L.S.	\$25,000.00	\$25,000.00	Unit price bid shall not be less than: \$ 10,000.00
174	7.88 AB	RODENT BAIT STATIONS	5,400.00	EACH	\$65.00	\$351,000.00	Unit price bid shall not be less than: \$ 65.00
175	7.88 AC	BAITING OF RODENT BAIT STATIONS	5,400.00	EACH	\$11.00	\$59,400.00	Unit price bid shall not be less than: \$ 11.00
176	7.88 AD	WATERBUG BAIT APPLICATIONS	1,650.00	BLOCK	\$75.00	\$123,750.00	Unit price bid shall not be less than: \$ 75.00

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN  
BID SCHEDULE**

Project ID: HWQ274F2

ePIN: 85023B0052

TOTAL BID PRICE: \$51,821,971.92

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
177	70.21DK	DECKING	2,900.00	S.Y.	\$30.00	\$87,000.00	Unit price bid shall not be less than: \$ 30.00
178	70.31FN	FENCING	47,357.00	L.F.	\$1.50	\$71,035.50	Unit price bid shall not be less than: \$ 1.50
179	70.51EO	EXCAVATION OF BOULDERS IN OPEN CUT	30.00	C.Y.	\$58.00	\$1,740.00	Unit price bid shall not be less than: \$ 58.00
180	70.61RE	ROCK EXCAVATION	30.00	C.Y.	\$1.00	\$30.00	
181	70.71SB	STONE BALLAST	6,989.00	C.Y.	\$17.50	\$122,307.50	Unit price bid shall not be less than: \$ 17.50
182	70.81CB	CLEAN BACKFILL	10,011.00	C.Y.	\$15.00	\$150,165.00	Unit price bid shall not be less than: \$ 15.00
183	70.91SW12	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	11,424.00	S.F.	\$0.01	\$114.24	
184	72.11HF	HYDRAULIC FILL FOR ABANDONED SEWERS AND WATER MAINS	37.00	C.Y.	\$168.00	\$6,216.00	
185	73.11AB	ADDITIONAL BRICK MASONRY	30.00	C.Y.	\$46.50	\$1,395.00	Unit price bid shall not be less than: \$ 46.50
186	73.21AC	ADDITIONAL CONCRETE	30.00	C.Y.	\$188.00	\$5,640.00	Unit price bid shall not be less than: \$ 63.50
187	73.31AE0	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS)	270.00	C.Y.	\$250.00	\$67,500.00	Unit price bid shall not be less than: \$ 17.25
188	73.41AG	ADDITIONAL SELECT GRANULAR BACKFILL	20.00	C.Y.	\$126.00	\$2,520.00	Unit price bid shall not be less than: \$ 14.50
189	73.51AS	ADDITIONAL STEEL REINFORCING BARS	1,000.00	LBS.	\$2.00	\$2,000.00	Unit price bid shall not be less than: \$ 1.50
190	76.11CR	CONSTRUCTION REPORT	1.00	L.S.	\$25,000.00	\$25,000.00	
191	8.01 C1	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	4,782.00	TONS	\$42.50	\$203,235.00	Unit price bid shall not be less than: \$ 42.50
192	8.01 C2	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	50.00	SETS	\$1,250.00	\$62,500.00	Unit price bid shall not be less than: \$ 1,250.00
193	8.01 H	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	1,594.00	TONS	\$200.00	\$318,800.00	Unit price bid shall not be less than: \$ 200.00
194	8.01 S	HEALTH AND SAFETY	1.00	L.S.	\$50,000.00	\$50,000.00	Unit price bid shall not be less than: \$ 20,000.00
195	8.01 W1	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	320.00	DAY	\$850.00	\$272,000.00	Unit price bid shall not be less than: \$ 850.00
196	8.01 W2	SAMPLING AND TESTING OF CONTAMINATED WATER	320.00	SETS	\$700.00	\$224,000.00	Unit price bid shall not be less than: \$ 700.00
197	8.02 A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	880.00	S.F.	\$4.00	\$3,520.00	
198	8.02 B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	550.00	L.F.	\$23.00	\$12,650.00	
199	8.10 C-1	NEW SURVEY MONUMENTS, TYPE "C" CLASS 1	8.00	EACH	\$10,000.00	\$80,000.00	
200	8.32	BARK CHIP MULCH	2,024.00	S.Y.	\$7.50	\$15,180.00	
201	9.00 C	EXPLORATORY TEST PITS	44.00	C.F.	\$19.00	\$836.00	
202	9.04 HW	ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE	1.00	F.S.	\$25,000.00	\$25,000.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 25,000.00
203	9.23	PRICE ADJUSTMENTS	1.00	F.S.	\$1,707,000.00	\$1,707,000.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 1,707,000.00
204	9.28	EXPANDED WORK ALLOWANCE	1.00	F.S.	\$2,847,000.00	\$2,847,000.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 2,847,000.00
205	9.30	STORM WATER POLLUTION PREVENTION	1.00	L.S.	\$188,000.00	\$188,000.00	
206	9.99	FLASHING ARROW BOARD	6.00	EACH	\$10,000.00	\$60,000.00	
207	GI-2.07A	3/8" CLEAN OPEN GRADED STONE	105.00	C.Y.	\$45.00	\$4,725.00	
208	GI-2.07B1	1/2" CLEAN OPEN GRADED STONE (TYPE B1)	1,030.00	C.Y.	\$160.00	\$164,800.00	
209	GI-5.10 OW	OBSERVATION WELL	39.00	EACH	\$750.00	\$29,250.00	
210	GI-5.35	SLEEVE FOR UTILITY CROSSINGS	110.00	L.F.	\$25.00	\$2,750.00	
211	GI-PPCP	PRECAST POROUS CONCRETE PANEL SYSTEM	15,609.00	S.F.	\$44.00	\$686,796.00	
212	GI-PPCP-BXG	BIAXIAL GEOGRID	2,561.00	S.Y.	\$8.50	\$21,768.50	
213	GI-PPCP-DC	DRAINAGE CELLS	478.00	C.Y.	\$1,140.00	\$544,920.00	
214	GI-PPCP-MG	MICROGRID GEOTEXTILE	3,071.00	S.Y.	\$9.00	\$27,639.00	
215	HW-900H	ALLOWANCE FOR CITY WORK ACCELERATION	1.00	F.S.	\$1,000,000.00	\$1,000,000.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 1,000,000.00
216	JB-FS-CE	CON EDISON JB FIXED SUM	1.00	F.S.	\$353,726.00	\$353,726.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 353,726.00
217	JB-FS-NG	NATIONAL GRID JB FIXED SUM	1.00	F.S.	\$22,349.00	\$22,349.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 22,349.00
218	JB-FS-VZ	ECS-VERIZON JB FIXED SUM	1.00	F.S.	\$115,597.00	\$115,597.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 115,597.00
219	SL-20.02.02	FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION, AS PER DRAWING E-3788	7.00	EACH	\$1,900.00	\$13,300.00	
220	SL-21.02.02	FURNISH AND INSTALL A STANDARD WOOD POLE	2.00	EACH	\$3,200.00	\$6,400.00	
221	SL-21.03.02	FURNISH AND INSTALL TYPE 8S LAMPOST WITH TRANSFORMER BASE	7.00	EACH	\$4,800.00	\$33,600.00	
222	SL-21.09.05	REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	5.00	EACH	\$800.00	\$4,000.00	

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
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Project ID: HWQ274F2

 ePIN: 

TOTAL BID PRICE: \$51,821,971.92

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
223	SL-22.03.18	FURNISH AND INSTALL TYPE COBRA HEAD LUMINAIRE WITH 150 WATT HPS WITH SOLID STATE BALLAST AND STRAY VOLTAGE INDICATOR FOR 100 VOLT LAMP.	160.00	EACH	\$550.00	\$88,000.00	
224	SL-24.01.04	REMOVE BRACKET, LUMINAIRE AND CONTROL, IF ANY, FROM WOOD POLE	145.00	EACH	\$600.00	\$87,000.00	
225	SL-24.01.05	FURNISH AND INSTALL FABRICATED STEEL 8 Ft. BRACKET WITH HARDWARE ON WOOD POLE, AS PER DRAWING J-3585.	160.00	EACH	\$830.00	\$132,800.00	
226	SL-26.01.02	REMOVE A PLUG-IN CONTROL, OR SHORTING BRIDGE. INSTALL A PLUG-IN SOLID STATE PHOTOELECTRIC CONTROL	160.00	EACH	\$140.00	\$22,400.00	
227	SL-33.02.02	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL FOR OVERHEAD INSTALLATION	500.00	L.F.	\$8.50	\$4,250.00	
228	T-1.1	INSTALL TYPE "S" OR "T" FOUNDATION	6.00	EACH	\$1,600.00	\$9,600.00	
229	T-1.18	REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	2.00	EACH	\$575.00	\$1,150.00	
230	T-1.2	INSTALL TYPE "F-1" FOUNDATION	1.00	EACH	\$1,600.00	\$1,600.00	
231	T-1.20	REMOVE TYPE "M" SERIES FOUNDATION	2.00	EACH	\$825.00	\$1,650.00	
232	T-1.27	REMOVE STEEL CYLINDER (32" DIAMETER X 18-1/4")	1.00	EACH	\$575.00	\$575.00	
233	T-1.3	INSTALL TYPE "M2-S5" FOUNDATION	8.00	EACH	\$2,400.00	\$19,200.00	
234	T-2.1	INSTALL TYPE "S-1" OR "T-1" SERIES POST	6.00	EACH	\$1,100.00	\$6,600.00	
235	T-2.2	INSTALL TYPE "S-14" POST	1.00	EACH	\$1,100.00	\$1,100.00	
236	T-2.22	REMOVE TYPE "S-1" OR "T-1" SERIES POST	2.00	EACH	\$800.00	\$1,600.00	
237	T-2.24	REMOVE TYPE "M" SERIES POST	2.00	EACH	\$900.00	\$1,800.00	
238	T-2.28	REMOVE MAST ARM FROM ANY POST	1.00	EACH	\$850.00	\$850.00	
239	T-2.4	INSTALL TYPE "M-2" POST	4.00	EACH	\$1,300.00	\$5,200.00	
240	T-2.6	INSTALL 5 FOOT MAST ARM EXTENSION W/CUSTOM FINISH	4.00	EACH	\$850.00	\$3,400.00	
241	T-2.7	INSTALL SHAFT ON "M-2" POST	2.00	EACH	\$800.00	\$1,600.00	
242	T-20000	FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	6.00	EACH	\$1,350.00	\$8,100.00	
243	T-20020	a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	6.00	EACH	\$130.00	\$780.00	
244	T-20021	b) FURNISH 1" ANCHOR BOLT ASSEMBLIES FOR F-1 (EACH) (4 REQUIRED PER POST)	1.00	EACH	\$145.00	\$145.00	
245	T-20160	FURNISH 20 FOOT SIGNAL MAST ARM POLE ASSEMBLY TYPE "M-2"	4.00	EACH	\$5,500.00	\$22,000.00	
246	T-20170	M-2A POLE SHAFT WITH BOLT COVERINGS	4.00	EACH	\$2,900.00	\$11,600.00	
247	T-20184	a) FURNISH 5' EXTENSION ARM ASSEMBLY WITH FITTINGS	4.00	EACH	\$860.00	\$3,440.00	
248	T-20200	M-2A POLE TRANSFORMER BASE WITH SHAFT	4.00	EACH	\$4,500.00	\$18,000.00	
249	T-20220	c) FURNISH 1-1/4" ANCHOR BOLT ASSEMBLIES FOR M-2 (EACH) (4 REQUIRED PER POST)	8.00	EACH	\$175.00	\$1,400.00	
250	T-20640	FURNISH ALUMINUM TRAFFIC SIGNAL POST TYPE "S-14"	1.00	EACH	\$1,800.00	\$1,800.00	
251	T-3.1	INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	16.00	EACH	\$680.00	\$10,880.00	
252	T-3.16	RAISE SIGNAL HEAD ON ANY TYPE POST	2.00	EACH	\$375.00	\$750.00	
253	T-3.2	INSTALL "ONE-WAY" SIGNAL UNIT ON THE SHAFT OF ANY POST	1.00	EACH	\$700.00	\$700.00	
254	T-3.21	REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	16.00	EACH	\$500.00	\$8,000.00	
255	T-3.4	INSTALL "ONE-WAY" SIGNAL UNIT OR PEDESTRIAN SIGNAL ON STEEL STRUCTURE (PER FACE)	10.00	EACH	\$590.00	\$5,900.00	
256	T-3.40	INSTALL AUDIBLE PEDESTRIAN SIGNALS UNIT	18.00	EACH	\$860.00	\$15,480.00	
257	T-3.6	INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	18.00	EACH	\$690.00	\$12,420.00	
258	T-30013L	FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	17.00	EACH	\$620.00	\$10,540.00	
259	T-31210	h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	21.00	EACH	\$190.00	\$3,990.00	
260	T-31235	d) "4MS"	4.00	EACH	\$450.00	\$1,800.00	
261	T-31340	f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	16.00	EACH	\$280.00	\$4,480.00	
262	T-31351	g) "VB-2P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	2.00	EACH	\$432.00	\$864.00	
263	T-33001-L	FURNISH POLYCARBONATE PEDESTRIAN SIGNAL (16 X 16) W/LED COUNT LENS (SPECIFICATION A-L)	18.00	EACH	\$600.00	\$10,800.00	

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION  
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TOTAL BID PRICE: \$51,821,971.92

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Seq. No	Item Number	Item Description	Engineer's Estimate of Quantity	Unit	Unit Price	Extended Amount	Price Criteria
264	T-33002	FURNISH AUDIBLE PEDESTRIAN SIGNAL UNIT	18.00	EACH	\$940.00	\$16,920.00	
265	T-4.22	INSTALL ANY TYPE OF ADVANCED SOLID STATE TRAFFIC SIGNAL CONTROLLER AND CABINET ON METAL POLE	2.00	EACH	\$1,500.00	\$3,000.00	
266	T-4.8	REMOVE ONE CONTROL BOX AND CONTROLLER FROM ANY POST OR SUPPORT	2.00	EACH	\$1,100.00	\$2,200.00	
267	T-5.14	SAW CUT ROADWAY	330.00	L.F.	\$4.00	\$1,320.00	
268	T-5.31	FURNISH AND INSTALL 2" FLEXIBLE BEND IN EXISTING FOUNDATION	16.00	EACH	\$700.00	\$11,200.00	
269	T-5.34	RESTORING PERMANENT SIDEWALK	405.00	S.F.	\$11.00	\$4,455.00	
270	T-5.52	FURNISH AND INSTALL 2" HDPE UNDERGROUND CONDUIT IN UNPAVED AREA	750.00	L.F.	\$65.00	\$48,750.00	
271	T-6.1	INSTALL CABLE (INCLUDES OVERHEAD)	1,400.00	L.F.	\$7.00	\$9,800.00	
272	T-6.10	REMOVE CABLE (INCLUDES OVERHEAD)	1,000.00	L.F.	\$6.00	\$6,000.00	
273	T-6.2	INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	2,500.00	L.F.	\$8.00	\$20,000.00	
274	T-60000B	FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	1,500.00	L.F.	\$5.00	\$7,500.00	
275	T-60040	c) 7 CONDUCTOR, 14 A.W.G.	500.00	L.F.	\$4.10	\$2,050.00	
276	T-60190	e) 13 CONDUCTOR, 14 A.W.G.	2,500.00	L.F.	\$5.00	\$12,500.00	
277	T-60200	FURNISH AND INSTALL AUDIBLE PEDESTRIAN SIGNALS CABLE	350.00	L.F.	\$3.50	\$1,225.00	
278	T-8.8	INSTALL CONCRETE PYLON	6.00	EACH	\$700.00	\$4,200.00	
279	T-8.9	REMOVE CONCRETE PYLON	6.00	EACH	\$1,500.00	\$9,000.00	
280	UTL-6.01.1 (NG)	GAS MAIN CROSSING SEWER UP TO 24" IN DIAMETER (\$6.01)	13.00	EACH	\$1,040.00	\$13,520.00	Unit price bid shall not be less than: \$ 1,040.00
281	UTL-6.01.2A (NG)	GAS MAIN CROSSING 38"W X 24"H HORIZONTAL ELLIPTICAL REINFORCED CONCRETE STORM SEWER (\$6.01)	2.00	EACH	\$1,770.00	\$3,540.00	Unit price bid shall not be less than: \$ 1,770.00
282	UTL-6.01.3 (NG)	GAS MAIN CROSSING SEWER 36" THRU 42" IN DIAMETER (\$6.01)	4.00	EACH	\$2,040.00	\$8,160.00	Unit price bid shall not be less than: \$ 2,040.00
283	UTL-6.01.4 (NG)	GAS MAIN CROSSING SEWER 48" THRU 54" IN DIAMETER (\$6.01)	1.00	EACH	\$2,120.00	\$2,120.00	Unit price bid shall not be less than: \$ 2,120.00
284	UTL-6.01.4C (NG)	GAS MAIN CROSSING 45"W X 29"H HORIZONTAL ELLIPTICAL REINFORCED CONCRETE STORM SEWER (\$6.01)	4.00	EACH	\$1,960.00	\$7,840.00	Unit price bid shall not be less than: \$ 1,960.00
285	UTL-6.01.4D (NG)	GAS MAIN CROSSING 4'-0"W X 2'-6"H FLAT TOP REINFORCED CONCRETE STORM SEWER (\$6.01)	1.00	EACH	\$2,120.00	\$2,120.00	Unit price bid shall not be less than: \$ 2,120.00
286	UTL-6.01.5D (NG)	GAS MAIN CROSSING 53"W X 34"H HORIZONTAL ELLIPTICAL REINFORCED CONCRETE STORM SEWER (\$6.01)	1.00	EACH	\$2,340.00	\$2,340.00	Unit price bid shall not be less than: \$ 2,340.00
287	UTL-6.01.6E (NG)	GAS MAIN CROSSING 6'-0"W X 3'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (\$6.01)	1.00	EACH	\$2,540.00	\$2,540.00	Unit price bid shall not be less than: \$ 2,540.00
288	UTL-6.01.6M (NG)	GAS MAIN CROSSING 5'-6"W X 4'-0"H FLAT TOP REINFORCED CONCRETE STORM SEWER (6.01)	1.00	EACH	\$2,540.00	\$2,540.00	Unit price bid shall not be less than: \$ 2,540.00
289	UTL-6.01.8 (NG)	GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (\$6.01)	128.00	EACH	\$465.00	\$59,520.00	Unit price bid shall not be less than: \$ 465.00
290	UTL-6.01.9 (NG)	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (\$6.01)	22.00	EACH	\$485.00	\$10,670.00	Unit price bid shall not be less than: \$ 485.00
291	UTL-6.02 (NG)	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (\$6.02)	7.00	EACH	\$850.00	\$5,950.00	Unit price bid shall not be less than: \$ 850.00
292	UTL-6.03 (NG)	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (\$6.03)	4,200.00	L.F.	\$15.00	\$63,000.00	Unit price bid shall not be less than: \$ 15.00
293	UTL-6.03.1 (NG)	REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (FOR NATIONAL GRID WORK ONLY) (\$6.03)	7,600.00	L.F.	\$25.00	\$190,000.00	Unit price bid shall not be less than: \$ 25.00
294	UTL-6.04 (NG)	ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (\$6.04)	100.00	EACH	\$35.00	\$3,500.00	Unit price bid shall not be less than: \$ 35.00
295	UTL-6.05 (NG)	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (\$6.05)	70.00	EACH	\$130.00	\$9,100.00	Unit price bid shall not be less than: \$ 65.00
296	UTL-6.06 (NG)	SPECIAL CARE EXCAVATION AND BACKFILLING (\$6.06)	3,100.00	C.Y.	\$180.00	\$558,000.00	Unit price bid shall not be less than: \$ 180.00
297	UTL-6.07 (NG)	TEST PITS FOR GAS FACILITIES (\$6.07)	100.00	C.Y.	\$100.00	\$10,000.00	Unit price bid shall not be less than: \$ 100.00
298	UTL-6.09 (NG)	TRENCH EXCAVATION AND BACKFILL FOR GAS MAINS AND SERVICES. GAS INSTALLED BY OTHERS (FOR NATIONAL GRID WORK ONLY). (\$6.09)	100.00	C.Y.	\$190.00	\$19,000.00	Unit price bid shall not be less than: \$ 190.00
299	UTL-GCS-2WS (NG)	GAS INTERFERENCES AND ACCOMMODATIONS	1.00	F.S.	\$100,000.00	\$100,000.00	PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 100,000.00
		<b>SUBTOTAL</b>				<b>\$47,983,971.92</b>	
300	6.39 B	MOBILIZATION	1.00	L.S.	\$3,838,000.00	\$3,838,000.00	BID PRICE OF MOBILIZATION SHALL NOT EXCEED 8% OF THE ABOVE SUB-TOTAL PRICE.

**BID SUBMISSION FORM**

Bidder Name: CAC INDUSTRIES INC.  
Procurement Title: 85023B0052-HWQ274F2  
RECONSTRUCTION OF STREETS IN  
ROSEDALE AREA-PHASE 2  
RFx Name: 85023B0052-HWQ274F2 RECONSTRUCTION OF  
STREETS IN ROSEDALE AREA-PHASE 2

The above-named bidder affirms and declares:

1. The bidder has completed and submitted all required information for the above procurement in the PASSPort system;
2. Any discrepancy between the bid price listed on this Bid Submission Form and the bid information submitted in PASSPort may result in the agency finding the bid non-responsive; and
3. This bid is being submitted in accordance with New York State General Municipal Law § 103.

Total Bid Price: \$ 51,821,971.92  
(a/k/a Total Amount)

**Bidder Signature**

EIN (if applicable): 11-3082726

(EIN must match the EIN of the entity that submitted bid information in PASSPort)

Bidder Name: CAC INDUSTRIES INC.

By: RICHARD E GWIN

(Name of Partner or Corporate Officer)

Signature: [Handwritten Signature]  
(Signature of Partner or Corporate Officer)

## Pre-Award Process

The bidder is advised that as part of the pre-award review of its bid, it may be required to submit the information described in Sections (A) through (D) below. If required, the bidder must submit such information within five (5) business days following receipt of notification from DDC that it is among the low bidders. Such notification from DDC will be by email and will specify the types of information which must be submitted directly to DDC.

### In the event the bidder fails to submit the required information within the specified time frame, its bid may be rejected as nonresponsive.

\*\*\*\*\*

- (A) **Project Reference Form:** If required, the bidder must complete and submit the Project Reference Form set forth in this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Contracts Completed by the Bidder, (2) Contracts Currently Under Construction by the Bidder, and (3) Pending Contracts Not Yet Started by the Bidder.
- (B) **Copy of License:** If required, the bidder must submit a copy of the license under which the bidder will be performing the work. Such license must clearly show the following: (1) Name of the Licensee, (2) License Number, and (3) Expiration date of the License. A copy of the license will be required from bidders for the following contracts: Plumbing Work, Electrical Work and Asbestos Abatement.
- (C) **Financial Information:** If required, the bidder must submit the financial information described below:
  - (1) **Audited Financial Statements:** Financial statements (Balance Sheet and Income Statement) of the entity submitting the bid, as audited by an independent auditor licensed to practice as a certified public accountant (CPA). Audited financial statements for the three most recent fiscal years must be submitted. Each such financial statement must include the auditor's standard report.

If the bidder does not have audited financial statements, it must submit an affidavit attesting to the fact that the bidder does not have such statements. In addition, the bidder must submit the following documentation covering the three most recent fiscal years: signed federal tax returns, unaudited financial statements, and a "certified review letter" from a certified public accountant (CPA) verifying the unaudited financial statements.

Unless the most recent audited or unaudited financial statement was issued within ninety (90) days, the bidder must submit interim financial information that includes data on financial position and results of operation (income data) for the current fiscal year. Such information may be summarized on a monthly or quarterly basis or at other intervals.

- (2) **Schedule of Aged Accounts Receivable,** including portion due within ninety (90) days.

(D) **Project Specific Information:** If required, the bidder must submit the project specific information described below:

- (1) Statement indicating the number of years of experience the bidder has had and in what type of construction.
- (2) Resumes of all key personnel to be involved in the project, including the proposed project superintendent.
- (3) List of significant pieces of equipment expected to be used for the contract, and whether such equipment is owned or leased.
- (4) Description of work expected to be subcontracted, and to what firms, if known.
- (5) List of key material suppliers.
- (6) Preliminary bar chart time schedule
- (7) Contractor's expected means of financing the project. This should be based on the assumption that the contractor is required to finance 2X average monthly billings throughout the contract period.
- (8) Any other issues the contractor sees as impacting his ability to complete the project according to the contract.

In addition to the information described in Sections (A) through (D) above, the bidder shall submit such additional information as the Commissioner may require, including without limitation, an explanation or justification for specific unit price items.

The bidder is further advised that it may be required to attend a pre-award meeting with DDC representatives. If such a meeting is convened, the bidder will be advised as to any additional material to be provided.



# Project References

Contracts currently under construction by the bidder & Pending contracts not yet started by the bidder

Project & Location	Contract Type	Contract Amount (\$000)	Date Completed	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. (if different from owner)
*Please see next page for C.A.C. INDUSTRIES, INC 's list of work in progress and contracts not started*					

**PROJECT #HWQ274F2**

**PROJECT REFERENCE FORMS**

### A. Contracts Completed by Bidder

	Project	Contract No.	Location	Type	Contract Amnt.	Owner	Tel. No.	Arch/Eng.	Tel. No.	Completion
1	JFK-174.30 Bldg 83	JFK-174.30	Queens	Airport Paving	\$ 516,375	PANYNJ	347-572-2005	PANYNJ	646-335-2253	12/20/2022
2	Watermains 33rd Ave Trunk WM	QED-991	Queens	Trunk Watermain	\$ 62,521,672	DDC	718-391-2469	Lambert Monah	718-391-2469	11/23/2022
3	Hallets Point 27th Avenue	4049-10-02-700	Queens	Water/Sewer	\$ 2,400,000	CNY	212-302-9060	Langan	TBD	7/15/2022
4	Ganservoort Peninsular	C5290	Manhattan	Waterfront	\$ 1,809,000	HRPT	tadams@hrpt.ny.gov	Various	-	5/28/2021
5	Pedestrian Safety - Multi-Sites	HWPEDSF3A	CityWide	Pedestrian Ramp	\$ 6,331,389	DDC	212-313-3558	John Delucia	212-313-3558	11/30/2020
6	WaterMain	BEDA002	Brooklyn	Watermains	\$ 18,821,967	DDC	718-391-1937	Robert Yueh,P.E.	718-391-1937	9/8/2020
7	Warren and John Streets	HMMWTCA7F	Manhattan	Water/Sewer	\$ 23,366,399	DDC	212-442-1890	Shahram Jaromi	212-442-1890	7/28/2020
8	Combined Sewers in 74th St (Penelope)	SEQ002693	Queens	Sewers	\$ 22,131,638	DDC	718-391-1958	Pat Larkin	718-391-1958	5/27/2020
9	SUNY Old Westbury Emergency Field Hospital	Subcontract	Old Westbury	Covid Hospital	\$ 9,652,313	ACOE	Retired	Tishman	917-999-6495	4/22/2020
10	Stanton Court - Sheepshead Bay	Subcontract	Brooklyn	Water/Sewer	\$ 8,650,000	RBBC	romskig@gmail	Gerald Romski	romskig@gmail	1/27/2020

**B. Contracts currently under construction by the bidder**

	Project	Contract No.	Location	Contract Amnt.	Subcontracted	Uncompleted	Complete	Owner	Tel. No.	Arch/Eng.	Tel. No.
1	Ped Ramps at MTA Facilities	HWP15XMTA	Manhattan	\$ 7,431,926	\$ 872,683	\$ 10,000	6/23/23	DDC	212-442-1890	Shahram Jaromi	212-442-1890
2	Gateway E	HD161E	Brooklyn	\$ 24,221,583	\$ 6,055,396	\$ 2,000,000	6/30/23	DDC	718-391-1937	Robert Yueh,P.E.	718-391-1937
3	Water Meters at JFK II	NYCDEP-JFK-12	Queens	\$ 7,846,000	\$ 1,087,184	\$ 4,082,923	12/30/22	DEP	718-595-4217	Ovi Pena	646-413-2564
4	Pelham Parkway Phase II	HWPLZ011K	Bronx	\$ 115,271,100	\$ 23,054,220	\$ 6,000,000	7/31/23	DDC	718-391-2469	Lambert Monah	718-391-2469
5	Storm and Combined Sewers in 229th St.	SE823	Queens	\$ 72,721,954	\$ 18,180,489	\$ 100,000	6/30/23	DDC	718-391-2045	Adwait Das	718-391-2045
6	NYCT 207th St. Yard Sewer Relocation	C-34869	Manhattan	\$ 95,400,000	\$ 33,390,000	\$ 55,000,000	5/1/25	NYCT	646-252-4066	Richard DeCurtis	646-252-4066
7	East Coast Resiliency Project (CAC is a member of the JV IPC)	SANDRESM1	Manhattan	\$ 275,000,000	\$ 55,000,000	\$ 245,000,000	7/15/26	DDC	TBD	DDC	TBD
8	Renovation of Grand Concourse Bridge over Metro North Railroad Hudson Line	HBX1190	Bronx	\$ 44,951,400	\$ 15,732,990	\$ 42,000,000	1/15/23	NYCDOT	718-704-8787	Dhiana	718-704-8787
9	Bronx Repair V	SEX0201ZC	Bronx	\$ 13,127,901	\$ 3,281,975	\$ 1,000	6/30/23	NYCDEP	718-595-4555	Daniel Martine	718-595-4555
10	Trunk Watermain - 48" - East NY Ave	BED776	Brooklyn	\$ 77,221,635	\$ 15,444,327	\$ 62,000,000	9/9/24	DDC	718-391-1937	Robert Yueh,P.E.	718-391-1937
11	Forest Avenue Improvements with Hudson Meridian	37640001	Staten Island	\$ 4,549,500	\$ 68,242,500	\$ 3,549,500	5/31/23	EDC		Hudson Meridian	646-860-8039
12	JFK 90 inch Sewer Relocation with VRH	4130-02-0015	Queens	\$ 14,747,400	\$ 221,211,000	\$ 2,750,000	7/31/23	VRH	917-295-5556	VRH	917-295-5556
13	14th St. ADA-Subcontract with Cinalta Forte	A-37129	Manhattan	\$ 3,123,900	\$ 25,000	\$ 1,500,000	8/4/23	MTA	718-499-4827	Cinalta-Forte	516-757-2948
14	ADA Stations - Subcontract with MLJCT2	A-37135	VArious	\$ 6,025,968	\$ 200,000	\$ 3,000,000	8/31/23	MTA	718-499-4827	MLJ	929-800-1972
	<b>Gas Related Contracts</b>										
1	Bronx Gas Mains and Services	PO 4887798	Bronx	\$ 85,000,000.00	\$ 4,250,000.00	\$ 43,000,000.00	6/30/2023	David Blaut	212-460-6265	17-430	212-894-9397
2	Bronx/Queens Gas Major Projects	PO 4885539	Bx/Queens	\$ 23,000,000.00	\$ 1,150,000.00	\$ 3,000,000.00	7/28/2023	David Blaut	212-460-6265	17-604	212-894-9397
3	Manhattan Gas Turnkey 2020	20-103	Manhattan	\$ 123,000,000.00	\$ 6,150,000.00	\$ 100,000,000.00	09/09/23	Con Edison	212-894-9397	Cherno Cham	212-894-9397
5	HPPE Gas Service - 50 Hudson Yards	PO - 2021	Manhattan	\$ 132,480.00	\$ 6,624.00	\$ 100,250.00	02/27/24	Con Edison	212-894-9397	Cherno Cham	212-894-9397
6	Corroded Sleeve Contract	TBD	Various	\$ 28,000,000.00	\$ 1,400,000.00	\$ 24,000,000.00	05/01/24	Con Edison	212-894-9397	Cherno Cham	212-894-9397
7	PI Advanced Relocations Con Ed	CE-5501742	Various	\$8,497,064.00	\$ 424,853.20	\$6,500,000.00	8/3/2023	Con Edison	212-894-9397	Cherno Cham	212-894-9397
8	Transformer Vault Repair	PO5534204	Manhattan	\$ 25,000,000.00	\$ 1,250,000.00	\$ 20,000,500.00	10/31/23	Con Edison	212-894-9397	Cherno Cham	212-894-9397
9	Gas Horizontal Directions Drilling	BPA5494282	Westchester	\$ 4,900,000.00	\$ 2,450,000.00	\$ 3,750,000.00	04/15/23	Con Edison	212-894-9397	Cherno Cham	212-894-9397

**C. Pending contracts not yet started by the bidder**

List all contracts awarded to or won by the bidder but not yet started.

Project & Location	Contract Type	Contract Amount (\$000)	Date Scheduled to Start	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. (if different from owner)
NONE					

**PROJECT #HWQ274F2**

**PROJECT SPECIFIC INFORMATION**

**(D) Project Specific Information**

- 1. Statements indicating number of years of experience the bidder has had and in what type of construction.**

*C.A.C. Industries, Inc. has been performing sewer, water main and roadway work for NYCDEP and NYCDDC since 1994. Our work has included RCP and ESVP sewers up to 35 feet deep, pre-cast and poured in place concrete box sewers, chambers, water meter vaults, steel trunk water mains, transmission and distribution water mains, foundations, steel sheeting systems, soldier beams and lagging; timber, steel, CFA and displacement auger piles; curb, sidewalk and asphalt and concrete roadways and utility relocations.*

- 2. Resumes of all key personnel to be involved in the project, including the proposed project superintendent.**

*Attached are the resumes of key personnel that may be involved in the project including:*

*Michael A. Capasso – Chief Executive Officer  
John M. Labozza, P.E. – Chief Operations Office-Vice President  
Glenn Biesiadecki – Chief Compliance Officer  
William Svilar – Chief Engineer  
Superintendent- To be determined.*

*After the commencement date is announced the project management team will be finalized.*

- 3. List of significant pieces of equipment expected to be used for the contract, and whether such equipment is owned or leased.  
Note: All equipment listed below is “Owned”.**

*Attached is a sample list. The actual equipment used will depend on the conditions encountered during construction. CAC owns an extended amount of heavy equipment and a list can be provided upon request.*

**4. Description of work to be subcontracted, and to what firms, if known.**

- *Trucking*
- *Crossing Guards*
- *Landscaping*
- *Tree Consultant*
- *Rodent Control*
- *TV Inspection*
- *Street Lighting*
- *Traffic signals*
- *Traffic signs*
- *Fire Alarm*
- *Thermoplastic*
- *Photos / Video Survey*

*Subcontractor firms are not known at this time.*

**5. List of Key Material Suppliers.**

- *T. Mina Supply*
- *US Pipe*
- *Green Asphalt*
- *Coastal Pipe*
- *City Ready Mix Concrete*
- *Campbell Foundry*

**7. Contractor's expected means of financing the project. This should be based on billings throughout the contract period.**

*C.A.C. Industries, Inc. currently has cash on hand in excess of \$15,000,000.00 as well as a \$27,000,000 bank line of credit with Bank of America. We also have receivables due from NYC DDC and others in excess of \$18,000,000, in addition to nearly \$22,000,000 in retainage. These items will more than cover our anticipated financing requirements for this project.*

**8. Any other issues the contractor sees as impacting his ability to complete the project according to the contract.**

*None*



### 3 List (Sample) of Significant Equipment

EQ#	YR/MAKE/MODELS	Ownership	EQ Type
3077	2008 Caterpillar AP1055D Track Paver	Own	Asphalt Paver
3275	2017 P385B Weiler Paver	Own	Asphalt Paver
3304	2015 CAT AP255E Asphalt Paver	Own	Asphalt Paver
3350	2015 CAT AP1055F Rubber Track Paver	Own	Asphalt Paver
3011	2000 Ape 50E Driver/Extractor	Own	Attachment
3272	CAT Broom Attachment	Own	Attachment
3284	CAT Milling Attachment	Own	Attachment
3285	CAT Milling Attachment	Own	Attachment
3286	CAT Broom Attachment	Own	Attachment
3351	Erkat ER 2000 Drum Cutter	Own	Attachment
3222	2017 CAT 450F Backhoe	Own	Backhoe
3223	2017 CAT 450F Backhoe	Own	Backhoe
3224	2017 CAT 450F Backhoe	Own	Backhoe
3246	2017 CAT 450F Backhoe	Own	Backhoe
3247	2017 CAT 450F Backhoe	Own	Backhoe
3248	2016 CAT 450F Backhoe	Own	Backhoe
3255	2017 CAT 450F Backhoe	Own	Backhoe
3256	2017 CAT 450F Backhoe	Own	Backhoe
3257	2017 CAT 450F Backhoe	Own	Backhoe
3258	2017 CAT 450F Backhoe	Own	Backhoe
3292	2018 CAT 450F Backhoe	Own	Backhoe
3293	2018 CAT 450F Backhoe	Own	Backhoe
3376	2021 CAT 450 Backhoe (leased)	Leased	Backhoe
3388	2022 CAT 450 Backhoe (leased)	Leased	Backhoe
1079	2014 Isuzu NQR Box Truck	Own	Box
1080	2014 Isuzu NQR Box Truck	Own	Box
1081	2014 Isuzu NQR Box Truck	Own	Box
3234	2017 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3290	2017 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3291	2017 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3319	2018 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3320	2018 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3321	2018 Sullivan Palatek D185UDZ Compressor	Own	Compressor
3322	2018 Sullivan Palatek D185UDZ Compressor	Own	Compressor

EQ#	YR/MAKE/MODELS	Ownership	EQ Type
3048	2008 Komatsu Dozer D37EX-21	Own	Dozer
1138	2016 Ford F550 Dump Truck	Own	Dump
1139	2015 Ford F550 Dump Truck	Own	Dump
1278	2020 Ford F-550 Pickup	Own	Dump
3360	2020 Komatsu PC238 Excavator	Own	Excavator
3372	2021 CAT M316 Excavator	Own	Excavator
3382	2021 CAT 335 Excavator	Own	Excavator
3389	2022 Komatsu PC138 Excavator	Own	Excavator
3395	2023 Komatsu PC 138 Excavator	Own	Excavator
2035	2011 Hino 268-11 Flat Bed Truck	Own	Flat
2044	2013 Hino 268A Flat Bed Truck	Own	Flat
3387	2022 TecnoGen KL80FQ Generator	Own	Generator
3393	2022 Wacker G70 Generator	Own	Generator
3394	2022 Wacker G70 Generator	Own	Generator
3281	2013 Wirtgen W120CFI Cold Milling Machine	Own	Milling Machine
3029	2003 6" Hydraulic Pump	Own	Misc
3084	Magnum Light Tower	Own	Misc
3108	2013 Hydra-Tech Pump (6")	Own	Misc
3377	2022 CAT Pin Grabber Coupler (335F)	Own	Misc
3371	2021 CAT 966M Wheel Loader	Own	Payloader
3379	2022 CAT 950M Wheel Loader	Own	Payloader
3380	2022 CAT 950M Wheel Loader	Own	Payloader
3381	2022 CAT 966M Wheel Loader	Own	Payloader
3391	2022 CAT 950M Wheel Loader	Own	Payloader
3282	Hamm HD10CVV Asphalt Compactor	Own	Roller
3283	Hamm HD10CVV Asphalt Compactor	Own	Roller
3305	MQ MRH-800GS Walk Behind Roller	Own	Roller
3314	MQ MRH-800GS Walk Behind Roller	Own	Roller
3329	2018 Hamm HD12 Roller	Own	Roller
3343	2018 Hamm HD12 Roller	Own	Roller
3349	2019 Bomag BW120AD-5 Asphalt Compaction Roller	Own	Roller
3274	Read RD-90-B Screener	Own	Screener
3347	2019 Metso CV100 Screener	Own	Screener
3296	2018 Husqvarna FS7000D W/B Saw	Own	W/B Saw
3300	2018 Husqvarna FS7000D W/B Saw	Own	W/B Saw
3363	Lincoln SAE-300 HE Engine Driven Welder	Own	Welding Machine

**Michael A. Capasso**  
54-08 Vernon Blvd.  
Long Island City, NY 11101  
(718) 729-3600, ext. 235

**Education:** Cornell University - Ithaca, NY

**Professional Experience:**

**C.A.C. Industries, Inc.** 1993-Present  
Long Island City, NY

President - Served as President overseeing a company with less than 5 employees in 1993 to approximately 200 employees in 2012. Performed work for owners such as NYC DEP, NYC DOT, NYC DDC, Port Authority of NY & NJ, Economic Development Corporation, Turner Construction, Bovis, Liro. Contracts range in size from less than 1 million dollars to over 65 million dollars.

**284 Aggregates** 2008-Present  
Wantage, NJ

Founder - 284 Aggregates is a sand mining operation in NJ.

**Green Asphalt Co., LLC** 2011-Present  
Long Island City, NY

Founder - Green Asphalt is New York City's first commercial 100% Recycled Hot Mix Asphalt Plant. Supplying NYC DOT for pot hole repairs, NYC Contractors and Private paving Projects. We are lowering the carbon footprint one ton at a time.

**Young Presidents Organization Metro NY Chapter Board Member**  
**Ruby Peck Foundation Board Member**

References available on request

**John M. Labozza, P.E.**  
17 Waterview Drive  
Ossining, N.Y. 10562  
(914) 923-2091

**WORK EXPERIENCE:**

**C.A.C. Industries Inc. -- 2010 to present**  
Long Island City, N.Y.

\*Chief Operations Officer overseeing all field operations of major New York City construction projects in excess of \$100 million including coordination of superintendents and scheduling of labor and equipment

\*Assist Chief Executive Officer in day to day corporate operations

**EN-TECH Corp. -- 2007 to 2010**  
Closter, N.J.

\*Operations Manager overseeing daily operations of cleaning, television inspection, gunite, and CIPP lining crews including scheduling of manpower and equipment.

**Diamond Asphalt Corp. -- 1991 to 2007**  
Brooklyn, N.Y.

\*Chief Engineer responsible for all billings, payments, correspondence, contract changes, field inspections, and estimating of major New York City Design and Construction projects in excess of \$200 million.

\*General Superintendent overseeing all field operations of major New York City Design and Construction projects in excess of \$200 million including scheduling of labor and equipment.

**Perez Interboro Asphalt Co., Inc. -- 1987 to 1991**  
Brooklyn, N.Y.

\*Chief Engineer responsible for all billings, payments, correspondence, contract changes, field inspections, and estimating of major New York City DOT projects in excess of \$100 million.

**Haloyon Const. Corp. -- 1982 to 1987**  
Pleasantville, N.Y.

\*Project Superintendent/Engineer overseeing individual NYCDEP/NYCDOT sewer/water main projects including daily scheduling of work crews, field operations, progressing projects, daily reports, and project payments.

**R.T. Sewer Project Corp. - 1978 to 1982**  
**Brooklyn, N.Y.**

**\*Project Superintendent/Engineer overseeing individual NYCDEP/  
Sewer projects including daily scheduling of work crews, field  
operations, progressing projects, daily reports, and project payments.**

**Defoe Corp. - 1977 to 1978**  
**Mt. Vernon, N.Y.**

**\*Assistant Project Superintendent on NYCDEP Clove Rd. Pump Station,  
S.I. trunk water main project.**

**NYC Dept. of Environmental Protection - 1973 to 1977**  
**Bureau of Water Supply**  
**Brooklyn, N.Y.**

**\*Assistant Civil Engineer overseeing several NYCDEP water main  
projects in the Borough of Brooklyn including scheduling inspectors,  
compiling field card drawings, and maintaining payment quantities.**

**EDUCATION:**

**Polytechnic Institute of Brooklyn - Bachelor of Science, Civil Engineering 1973**

**PROFESSIONAL LICENSE:**

**New York State Professional Engineer - 1978**  
**License No. 055597**

James E. McMurray, III  
19 Longview Drive  
Ridgefield, CT 06877  
Cell: (847) 728-0220 Home: (203) 244-5911  
thrdjam@aol.com

**Education**

B.S. Business Administration, Minor in Economics  
SAINT MICHAEL'S COLLEGE, Colchester, VT, May 1987

*Relevant Course Work:* Management and Organizational Behavior, Production and Operations, Business Policy and Strategic Management

**Work Experience**

1989-Present

C.A.C. Industries - Queens, NY  
*General Manager/Vice President*

Field Management Responsibilities

- Management of New York City Infrastructure projects with budgets ranging from \$2M to \$50M
- Coordinate the construction and installation of sewers and water mains
- Set up dewatering and sheeting systems
- Organize and execute paving and concrete projects
- Communicate directly with both utility and city representatives
- Direct multiple work crews made up of various tradesman
- Control off site transfer stations and storage yards

Office Responsibilities

- Create detailed take-offs of project plans
- Assist with generating project budget and bids
- Track daily quantities of work performed

1997-1999

KBD Excavating and Hauling - Danbury, CT  
*Job Supervisor*

Management Responsibilities

- Project management, job estimation and costing
- Equipment logistics and maintenance scheduling
- Crew scheduling and employee training

Field Responsibilities

- Job layout
- Heavy equipment operation

1992-1997

Town & Country Pools - Redding, CT  
*Seasonal Operations Manager, Heavy Equipment Operator*

Management Responsibilities

- Coordination of daily work schedule
- Seasonal marketing plans
- Customer relations
- Employee management and recruiting
- Management of supplier and vendor relationships
- Maintenance of internal bookkeeping

Field Responsibilities

- Lead field crews in new construction, service, maintenance, repair and renovations
- Employee training and supervision of technical field work

**Computer Skills**

Microsoft Word, Excel, Internet

**Other Training**

OSHA 40 Hour Training  
Confined Space Awareness Training



## GLENN BIESIADECKI, P.E.

### PROFESSIONAL PROFILE

Professional Engineer with over 40 years of heavy construction and infrastructure experience. Construction career includes responsible positions as Owner's Representative, Design Liaison Engineer, Construction Field Superintendent, Resident Engineer and Project Management and Compliance.

### EXPERIENCE

2020-Present  
Chief Compliance Officer C.A.C. Industries, Inc. Long Island City, NY

Responsible for company compliance, and as Head of the Corporations' Risk Management Group (RMG), manages all safety, insurance, legal and risk management functions across all projects and business entities.

2013-2020  
Executive Project Manager C.A.C. Industries, Inc. Long Island City, NY

Responsible for setting up project controls. Oversees the company's project management staff. Salient projects include:

- Reconstruction of Gateway Estates (Phases A, B, C) NYCDDC HD-161 \$41.5 Million
- Trunk Water Mains in Beach 94<sup>th</sup> Street NYCDDC QED983 \$24.4 Million
- Reconstruction of Thursby Avenue, Phase II NYCDDC HWQ631B1 \$41.5 Million
- Reconstruction of Somerville Areas, Queens NYCDDC HWQ631A \$15.2 Million

1998-2013  
Senior Associate Hazen and Sawyer New York, NY

- Chief of the Change Order Unit for the Croton Water Filtration Plant.
- Newtown Creek WPCP - Resident Engineer for the Construction of the New Disinfection Facilities, Poured -in-Place Inflow and Effluent Box Conduits, New Award winning NYCDEP Administration Office Building with Electrical and Mechanical Shops and Biological and Chemical laboratories, New Waterfront Seawall, and critically acclaimed Nature Walk. Geotechnical aspects included steel reinforced caisson foundations, steel H-piles, heavy sectional sheeting walls, multi-level tie-back systems and secant pile retaining walls.
- Design Liaison Engineer for the Interim Upgrade of the Newtown Creek WPCP.

1990-1998  
Project Manager AFC Enterprises, Inc. Queens, NY

- NYCDOT - Bridge Reconstruction in the Bronx
- NYCDPR - Restoration of NYC Landmark Building, park, and pool for Parks.
- Construction of USTA's Tennis Facility in Queens.
- NYCDDC/NYCDEP - Infrastructure Construction including Sewers, Water, Streets and Highways.

1993-1990  
Design Liaison and Resident Engineer at the Owls Head WPCP Metcalf & Eddy, Inc. New York, NY

- Construction of the pile supported Chloride Contact tanks and Primary Settling Tanks.
- Construction of the plant discharge outfall structure and underwater pipping.
- Reconstruction of the docking facilities, including a new fender system and pier decking.

- Design Liaison for the construction of new sludge complex.

1978-1983

American Electric Power, Inc.

New York, NY

Contract Manager-Civil Engineering Division

- Racine Hydroelectric Power Plant at the Army COE's Lock and Dam at Racine, Ohio.
- Administration Building at the Donald C. Cook Nuclear Plant, Bridgeman, Michigan.
- Coal Fired Power Plant Stack Liner, Kiger Creek, Ohio.

## REGISTRATION

Professional Engineer - New York

## EDUCATION

MSCE - Brooklyn Polytechnic (environmental Engineering)

MECE - CCNY (Structural Engineering)

BECE - CCNY - President of ASCE Student Chapter, College Senator for Engineering School.

## OTHER

Represented CAC at the 2013 London Business School's Team Innovation Seminar in Dubai.



**William Svilar, P.E.**

89-07 74th Avenue  
Glendale, New York 11385  
Home Tel.: (718) 275-0621  
Bus. Tel.: (718) 729-3600  
Mobile Tel.: (347) 728-6363

**EDUCATION:**

City College of New York - Cum Laude  
Degree: Bachelor of Engineering (Civil Engineering), January 1986

**Honors:**

ASCE Associate Member Forum Award Winner, Spring 1985  
Member of Tau Beta Pi and Chi Epsilon

**PROFESSIONAL LICENSES:**

New York State Professional Engineer

**EXPERIENCE:**

Chief Engineer CAC Industries, Inc.  
54-08 Vernon Blvd., LIC, NY 11101  
August 2012 - Present

Chief Engineer overseeing administrative estimating functions, project management and engineering. Member of the company's executive team.

Senior Project Manager CAC Industries, Inc.  
54-08 Vernon Blvd., LIC, NY 11101  
June 2009 - August 2012

Senior Project Manager for High Line Park - Section 2, Pelham Parkway E/B Reconstruction (HWK710), East Fordham Road Reconstruction (HWXP134), Balley Place Retaining Wall (RWK003) and Fairfax Avenue Storm & Combined Sewer Reconstruction (SEX20039). Task include: material buyouts and issuing purchase orders; review, preparation and submittal of shop drawings, preparation of estimates for change orders and partial payments; project scheduling. Assists superintendents in coordinating material deliveries, resolving field issues and performing general administrative activities. Supervises and trains project engineers and managers in performing above tasks.

Administrative Engineer M-2 New York City Dept. of Design & Construction  
Division of Infrastructures  
January 2007 - June 2009

Chief Construction Engineer for the Division of Infrastructure works closely with the Associate Commissioner of Construction for Infrastructures. Develops & coordinates technical training for the Division, manages & conducts "constructability" reviews with Borough Directors for complex projects, evaluates ongoing and completed complex projects for recommendation of changes, implements & develops new initiatives, troubleshoots private utility interference work performed under Section U. Supervises Infrastructure's Construction Support Unit that tracks and ensures completion of contract closeout tasks, surveys and prepares record drawings, performs guarantee inspections, prepares force account payments, guarantee and retainage release payments.

Administrative Engineer M-2 New York City Dept. of Design & Construction  
Division of Infrastructures  
July 2003 - January 2007

Engineering Specialist for the Division of Infrastructure works closely with the First Assistant Commissioner of Infrastructures, develops & coordinates technical training for the Division, manages & conducts "constructability" reviews with Borough Directors for complex projects, evaluates ongoing and completed complex projects for recommendation of changes, implements & develops new initiatives.

William Sillar, P.E.

Civil Engineer Level III

New York City Dept. of Design & Construction  
Div. of Infrastructures - Construction, Queens-South  
February 1998 - July 2003

Deputy Director of Queens-South Construction Division conducting construction inspection work on NYCDEP and NYCDOT contracts ranging from \$4 to \$27 million. Manages professional service contracts providing resident engineering services and qualified personnel to conduct construction inspection work. Manages a team of Engineers-in-Charge, Resident Engineers and inspectors supervising construction contracts in Queens-South. Assures construction work is done in compliance with pertinent NYCDOT and NYCDEP specifications and standards. Assures the preparation of monthly estimates, reports, change orders, and review of shop drawings are done in compliance with NYCDDC guidelines. Coordinates construction work with various city agencies, community boards, contractors, local utility companies and the general public. Review plans and specifications for future NYCDEP/NYCDOT/DDC contracts. Listed as an in-house expert for trunk water main work, distribution water main work and change order preparation.

Civil Engineer Level III

Div. of Infrastructures - Construction, Special Projects Unit  
August 1996 - January 1998

Engineer-in-Charge of the citywide Special Projects Unit primarily conducting trunk water main work. Supervise and train Resident Engineers and personnel conducting construction inspection work on NYCDEP contracts ranging from \$4 to \$8 million. Assures construction work is done in compliance to the contract specifications and NYCDEP standards. Supervises preparation of monthly estimates, reports, development and processing of change orders, and review of shop drawings. Coordinates construction work with various city agencies, community boards, contractors, local utility companies and the general public. Review plans and specifications for future NYCDEP/DDC contracts. Member of the Change Order and Closeout process re-engineering taskforces. Trained Infrastructure personnel to implement new a Change Order process. Developed and conducted a distribution water main inspection seminar.

Civil Engineer Level III

New York City Dept. of Environmental Protection  
Bureau of Water Supply & Wastewater Collection  
Construction Division  
June 1993 - July 1996

Supervising Resident Engineer of the citywide Trunk Main Section and Emergency Water Main Repair Unit (see duties described below for Trunk Main Section). Supervise, coordinate and train personnel conducting inspection work on NYCDEP Emergency Water Main Repair contracts. Duties included assisting metallurgist and NYCDEP maintenance crews in determining cause of water breaks.

Project Coordinator

March 1991 - May 1993

Assistant Civil Engineer

September 1987 - February 1991

Performed Resident Engineer duties on NYCDEP contracts ranging from \$4 to \$11 million. Supervised personnel conducting inspection work on the installation of 60", 48", & 36" diameter steel trunk water mains, butterfly valve chambers, regulator valve chambers, corrosion control systems, 20", 12" & 6" diameter ductile iron distribution water mains, house services, sanitary sewer systems, drainage systems, temporary and final restoration of roadways, sidewalks and curbs. Additional responsibilities included preparing monthly estimates, developing and processing change orders, reviewing shop drawings training new personnel, preparing progress reports, coordinating work with various city agencies and local utility companies, conducting meetings, preparing punchlists and conducting final inspections.

Design Engineer

O'Brien & Gere Engineers, Inc., New York City  
February 1986 - June 1987

# **PROJECT #HWQ274F2**

## **CONSTRUCTION EMPLOYMENT REPORT**

### **Includes:**

- 1. Questionnaire**
- 2. Form A - Contract Bid Information**
- 3. Form B - Projected Work Force**
- 4. Form C – Current Work Force**
- 5. Documents Requested In Part II**

The City of New York Department of Small Business Services  
Division of Labor Services Contract Compliance Unit  
1 Liberty Plaza, New York, New York 10006  
Phone: (212) 513 - 6323  
Fax: (212) 618-8879

**CONSTRUCTION EMPLOYMENT REPORT**

**GENERAL INFORMATION**

1. Your contractual relationship in this contract is: Prime contractor  Subcontractor
- 1a. Are M/WBE goals attached to this project? Yes  No
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
- Minority Owned Business Enterprise  Locally Based Business Enterprise  
 Women Owned Business Enterprise  Emerging Business Enterprise  
 Disadvantaged Business Enterprise
- 2a. If you are certified as an **MBE, WBE, LBE, EBE** or **DBE**, what city/state agency are you certified with? W/A Are you DBE certified? Yes  No
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes  No
4. Is this project subject to a project labor agreement? Yes  No
5. Are you a Union contractor? Yes  No  If yes, please list which local(s) you affiliated with L 731, L1010, L14, L15, L1556
6. Are you a Veteran owned company? Yes  No

**PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION**

7. 11- 808 2776 ehab@cacindinc.com  
Employer Identification Number or Federal Tax I.D. Email Address
8. C.A.C. INDUSTRIES INC.  
Company Name
9. 54-08 VERNON BLVD , LONG ISLAND CITY, NY 11101  
Company Address and Zip Code
10. Michael A. Capasso 718-729-3600  
Chief Operating Officer / President Telephone Number
11. Diana Rangel 718-729-3600 \*228  
Designated Equal Opportunity Compliance Officer Telephone Number  
(If same as Item #10, write "same")
12. Same  
Name of Prime Contractor and Contact Person  
(If same as Item #8, write "same")

13. Number of employees in your company: 394

14. Contract information:

- (a) NYCDDC  
Contracting Agency (City Agency)
- (b) \$ 51,821,971.92  
Contract Amount
- (c) 05023 80052  
Procurement Identification Number (PIN)
- (d) HwQ 274 F2  
Contract Registration Number (CT#)
- (e) TBD  
Projected Commencement Date
- (f) TBD  
Projected Completion Date

(g) Description and location of proposed contract:

Reconstruction of Streets in Rosedale Area - Phase 2, Queens

15. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes  No

If yes, attach a copy of certificate.

16. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes  No

If yes, attach a copy of certificate.

**NOTE: DLS WILL NOT ISSUE A CONTINUED CERTIFICATE OF APPROVAL IN CONNECTION WITH THIS CONTRACT UNLESS THE REQUIRED CORRECTIVE ACTIONS IN PRIOR CONDITIONAL CERTIFICATES OF APPROVAL HAVE BEEN TAKEN.**

17. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate? Yes  No

If yes,

Date submitted: 3/16/23  
Agency to which submitted: NYCDDC  
Name of Agency Person: Alexander Higgins  
Contract No: BED 827  
Telephone: 718-391-1294

18. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes  No

If yes,

(a) Name and address of OFCCP office.

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(b) Was a Certificate of Equal Employment Compliance issued within the past 36 months?  
Yes\_\_\_ No\_\_\_

If yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes\_\_\_ No\_\_\_

If yes, attach a copy of such requirements or agreements.

(d) Were any deficiencies found? Yes\_\_\_ No\_\_\_

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes  No\_\_\_

If yes, attach a list of such associations and all applicable CBA's.

*GCA (General Contractors Association of New York)*

## PART II: DOCUMENTS REQUIRED

20. For the following policies or practices, attach the relevant documents (e.g., printed booklets, brochures, manuals, memoranda, etc.). If the policy(ies) are unwritten, attach a full explanation of the practices. See instructions.

- (a) Health benefit coverage/description(s) for all management, nonunion and union employees (whether company or union administered)
- (b) Disability, life, other insurance coverage/description
- (c) Employee Policy/Handbook
- (d) Personnel Policy/Manual
- (e) Supervisor's Policy/Manual
- (f) Pension plan or 401k coverage/description for all management, nonunion and union employees, whether company or union administered
- (g) Collective bargaining agreement(s).
- (h) Employment Application(s)
- (i) Employee evaluation policy/form(s).
- (j) Does your firm have medical and/or non-medical (i.e. education, military, personal, pregnancy, child care) leave policy?
- (k) Sexual Harassment Policy

21. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 Form?

- |  |     |                                     |    |     |
|--|-----|-------------------------------------|----|-----|
| (a) Prior to job offer                     | Yes | ___                                 | No | ___ |
| (b) After a conditional job offer          | Yes | ___                                 | No | ___ |
| (c) After a job offer                      | Yes | ___                                 | No | ___ |
| (d) Within the first three days on the job | Yes | <input checked="" type="checkbox"/> | No | ___ |
| (e) To some applicants                     | Yes | ___                                 | No | ___ |
| (f) To all applicants                      | Yes | ___                                 | No | ___ |
| (g) To some employees                      | Yes | ___                                 | No | ___ |
| (h) To all employees                       | Yes | <input checked="" type="checkbox"/> | No | ___ |

22. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.

Documents are at CAC's Main Office at 54-08 Vernon Blvd, LIC, NY 11101  
in files maintained by Brian Rangel

23. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination? Yes \_\_\_ No

If yes, is the medical examination given:

- |                                   |     |     |    |     |
|-----------------------------------|-----|-----|----|-----|
| (a) Prior to a job offer          | Yes | ___ | No | ___ |
| (b) After a conditional job offer | Yes | ___ | No | ___ |
| (c) After a job offer             | Yes | ___ | No | ___ |
| (d) To all applicants             | Yes | ___ | No | ___ |
| (e) Only to some applicants       | Yes | ___ | No | ___ |

If yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

\_\_\_\_\_

\_\_\_\_\_

24. Do you have a written equal employment opportunity (EEO) policy? Yes \_\_\_ No \_\_\_

If yes, list the document(s) and page number(s) where these written policies are located.

Employee Handbook, p 10

\_\_\_\_\_

25. Does the company have a current affirmative action plan(s) (AAP)

\_\_\_ Minorities and Women

\_\_\_ Individuals with handicaps

\_\_\_ Other. Please specify \_\_\_\_\_

26. Does your firm or collective bargaining agreement(s) have an internal grievance procedure with respect to EEO complaints? Yes  No \_\_\_

If yes, please attach a copy of this policy. (see Handbook)

If no, attach a report detailing your firm's unwritten procedure for handling EEO complaints.

27. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes\_\_\_ No

If yes, attach an internal complaint log. See instructions.

28. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes\_\_\_ No

If yes, attach a log. See instructions.

29. Are there any jobs for which there are physical qualifications? Yes\_\_\_ No

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

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30. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes\_\_\_ No

If yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

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SIGNATURE PAGE

I, (print name of authorized official signing) Glenn J. Biesiadcki hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation. I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

C.A.C. INDUSTRIES INC.

Contractor's Name

Diana Rangel / Glenn Biesiadcki

HR

Name of person who prepared this Employment Report

Title

Glenn J. Biesiadcki

Chief Compliance Officer

Name of official authorized to sign on behalf of the contractor

Title

718-683-8775

Telephone Number

*Glenn J. Biesiadcki*

4-12-2023

Signature of authorized official

Date

If contractors are found to be underutilizing minorities and females in any given trade based on Chapter 56 Section 3H, the Division of Labor Services reserves the right to request the contractor's workforce data and to implement an employment program.

Contractors who fail to comply with the above mentioned requirements or are found to be in noncompliance may be subject to the withholding of final payment.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

To the extent permitted by law and consistent with the proper discharge of DLS' responsibilities under Charter Chapter 56 of the City Charter and Executive Order No. 50 (1980) and the implementing Rules and Regulations, all information provided by a contractor to DLS shall be confidential.

Only original signatures accepted.

Sworn to before me this 12<sup>TH</sup> day of April 20 23

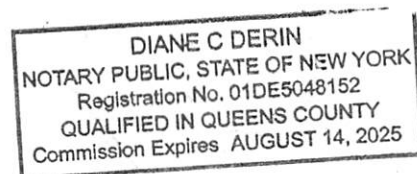
*[Signature]*

4-12-2023

Notary Public

Authorized Signature

Date



**FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES**

1. Do you plan to subcontractor work on this contract? Yes  No

2. If yes, complete the chart below.

**NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.**

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT
TBD	F	Landscaping	N/A	1360801 <sup>00</sup>
TBD	F	Tree Consultant	N/A	222740 <sup>00</sup>
TBD	F	Photos/Video Survey	N/A	45828 <sup>00</sup>
TBD	F	Striping	N/A	69538 <sup>00</sup>
TBD	F	TV Inspection	N/A	57645 <sup>00</sup>

\*If subcontractor is presently unknown, please enter the trade (craft name).

**OWNERSHIP CODES**

- W: White
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

**FORM A CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES**

1. Do you plan to subcontractor work on this contract? Yes  No
2. If yes, complete the chart below.

**NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.**

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT
TBD	A	Electrical	N/A	740,006 <sup>00</sup>
TBD	H	Paving	N/A	1000987 <sup>00</sup>
TBD	H	Trucking/Disposal	N/A	5,066,637 <sup>00</sup>
TBD	A	Contaminated Material	N/A	948,430 <sup>00</sup>
TBD	A	LAB Testing	N/A	306,386 <sup>00</sup>

\*If subcontractor is presently unknown, please enter the trade (craft name).

**OWNERSHIP CODES**

- W: White
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

**FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES**

1. Do you plan to subcontractor work on this contract? Yes  No

2. If yes, complete the chart below.

**NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.**

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT
TBD	B	Truck & Disposal	N/A	5614525~
TBD	B	Crossing Guard	N/A	1268896~

\*If subcontractor is presently unknown, please enter the trade (craft name).

**OWNERSHIP CODES**

- W: White
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

**FORM B: PROJECTED WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade: Operating Engineers

Union Affiliation, if applicable  
14

Total (Col. #1-10):  
2

Total Minority, Male & Female  
 (Col. #2,3,4,5,7,8,9, & 10):  
1

Total Female  
 (Col. #6 - 10):  
0

	MALES					FEMALES				
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	1		1							
H										
A										
TRN										
TOT	1	T	1							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?  
GCA

**FORM B: PROJECTED WORKFORCE**

**TRADE CLASSIFICATION CODES**

- (J) Journeylevel Workers
- (H) Helper
- (TOT) Total by Column
- (A) Apprentice
- (TRN) Trainee

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade: Operating Engineers

Union Affiliation, if applicable  
15

Total (Col. #1-10):  
2

Total Minority, Male & Female  
(Col. #2,3,4,5,7,8,9, & 10):  
0

Total Female  
(Col. #6 - 10): 0

		MALES					FEMALES				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
J		2									
H											
A											
TRN											
TOT		2	T								

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

GCA

**FORM B: PROJECTED WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade: Timbermen

Union Affiliation, if applicable  
1556

Total (Col. #1-10):  
3

Total Minority, Male & Female  
 (Col. #2,3,4,5,7,8,9, & 10):  
1

Total Female  
 (Col. #6 - 10):  
0

		MALES					FEMALES				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
J		2		1							
H											
A											
TRN											
TOT		2	T	1							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?  
GCA

**FORM B: PROJECTED WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade: LABORERS

Union Affiliation, if applicable  
31

Total (Col. #1-10):  
5

Total Minority, Male & Female  
 (Col. #2,3,4,5,7,8,9, & 10):  
3

Total Female  
 (Col. #6 - 10): 0

	MALES					FEMALES				
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	2	1	2							
H										
A										
TRN										
TOT	2	1	2							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?  
GLA



**FORM B: PROJECTED WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification on the charts below.

Trade: LABORERS

Union Affiliation, if applicable  
1010

Total (Col. #1-10): 6

Total Minority, Male & Female (Col. #2,3,4,5,7,8,9, & 10):  
2

Total Female (Col. #6 - 10): 0

		MALES					FEMALES				
		(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J		4		2							
H											
A											
TRN											
TOT		4	T	2							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?  
GCA

**FORM C: CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

- (J) Journeylevel Workers      (A) Apprentice
- (H) Helper                      (TRN) Trainee
- (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:  
Operating Engineers

Union Affiliation, if applicable  
L14

Total (Col. #1-10):  
7

Total Minority, Male & Female  
(Col. #2,3,4,5,7,8,9, & 10):  
1

Total Female  
(Col. #6 - 10):  
0

		MALES					FEMALES				
		(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J		6		1							
H											
A											
TRN											
TOT		6		1							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

\_\_\_\_\_

\_\_\_\_\_

**FORM C: CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade: Operating Engineers

Union Affiliation, if applicable  
L15

Total (Col. #1-10):  
62

Total Minority, Male & Female  
 (Col. #2,3,4,5,7,8,9, & 10):  
14

Total Female  
 (Col. #6 - 10):  
0

		MALES					FEMALES				
		(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J		48	6	6	2						
H											
A											
TRN											
TOT		48	6	6	2						

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

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**FORM C: CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers (A) Apprentice  
 (H) Helper (TRN) Trainee  
 (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade: Timbermen

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Union Affiliation, if applicable  
L 1556

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Total (Col. #1-10):  
14

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Total Minority, Male & Female  
 (Col. #2,3,4,5,7,8,9, & 10):  
2

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Total Female  
 (Col. #6 - 10):  
0

	MALES					FEMALES				
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	12		2							
H										
A										
TRN										
TOT	12		2							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

---



---

**FORM C: CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

(J) Journeylevel Workers  
(H) Helper  
(TOT) Total by Column

(A) Apprentice  
(TRN) Trainee

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:

LABORERS

Union Affiliation, if applicable

L731

Total (Col. #1-10):

94

Total Minority, Male & Female  
(Col. #2,3,4,5,7,8,9, & 10):

49

Total Female  
(Col. #6 - 10):

1

**MALES**

	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.
J	45	22	25	-	-
H	-	-	-	-	-
A	-	-	1	-	-
TRN	-	-	-	-	-
TOT	45	22	26	-	-

**FEMALES**

	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J			1		
H					
A					
TRN					
TOT	-	-	1	-	-

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

**FORM C: CURRENT WORKFORCE**

**TRADE CLASSIFICATION CODES**

- (J) Journeylevel Workers      (A) Apprentice
- (H) Helper                      (TRN) Trainee
- (TOT) Total by Column

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:  
LABORERS

Union Affiliation, if applicable  
L 1010

Total (Col. #1-10):  
63

Total Minority, Male & Female  
(Col. #2,3,4,5,7,8,9, & 10):  
29

Total Female  
(Col. #6 - 10):  
0

		MALES					FEMALES				
		(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J		34		29							
H											
A											
TRN											
TOT		34		29							

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)?

---



---



careers  
businesses  
neighborhoods

Kevin D. Kim  
Commissioner

1 Liberty Plaza  
11<sup>th</sup> Floor  
New York, NY 10006

212.513.6300 tel  
212.618.8891 fax  
711 NY Relay

DLS #223CY211

April 20, 2023

Mr. Michael A. Capasso  
President  
C.A.C. Industries, Inc.  
54-08 Vernon Boulevard  
Long Island City, NY 11101

RE: **Department of Design and Construction (DDC) Contract**; FMS ID: HWQ274F2; Pin #8502020HW0016C; Reconstruction of Streets in Rosedale area – Phase 2, Queens; Contract Value: **\$51,821,971.92**; **Continued Certificate of Approval**.

Dear Mr. Capasso:

Please be advised that **C.A.C. Industries, Inc.** has already received notice of its approval for the three (3) year period indicated in the Department of Small Business Services/Division of Labor Services (DLS) Certificate of Approval dated September 29, 2021, for DLS File No. 27125C.

As your organization continues to meet the equal employment opportunity requirements of the City of New York, DLS approves the awarding of the above-referenced contract. This approval does not extend the initial three (3) year approval (**September 29, 2021 – September 28, 2024**) referred to above.

If you have any questions, please call Judy Mitchell-Albert, Project Manager at (212) 513-9272 or e-mail her at [jmitchell-albert@sbs.nyc.gov](mailto:jmitchell-albert@sbs.nyc.gov).

Very truly yours,

Miri Shpuza/MS  
Chief Vendor Compliance Officer  
Division of Labor Services

c: Lorraine Holley/ Karen General (DDC)  
Judy Mitchell-Albert (SBS)  
File



careers  
businesses  
neighborhoods

**Kevin D. Kim**  
**Commissioner**

**1 Liberty Plaza**  
**11<sup>th</sup> Floor**  
**New York, NY 10006**

**212.513.6300 tel**  
**212.618.8891 fax**  
**711 NY Relay**

DLS File No. 223CY167

April 5, 2023

Mr. Michael Capasso, COO  
C.A.C. Industries, Inc.  
54-08 Vernon Blvd  
Long Island City, NY 11101

**RE: Department of Design and Construction (DDC); Project No. BED827; PIN No. 8502019WM0003C; Replacement of Regulator Chamber Roof; Boroughs of Brooklyn and the Bronx; Contract Value: \$1,378,517.40; Certificate of Approval.**

Dear Mr. Capasso:

Please be advised that C.A.C. Industries, Inc. has already received notice of its approval status for the three (3) year period indicated in the Department of Small Business Services/Division of Labor Services' (DLS') Certificate of Approval dated **September 29, 2021**.

As your organization continues to meet the equal employment opportunity requirements of the City of New York, DLS approves the awarding of the above-referenced contract. This approval does not extend the initial 3-year approval (**September 29, 2021 – September 28, 2024**) referred to above.



**PAGE TWO**

If you have any questions, please call Mr. Ra Amen Nu Jah Baddal at (212) 618-6778 or email him at [rbaddal@sbs.nyc.gov](mailto:rbaddal@sbs.nyc.gov).

Very truly yours,

Miri Shpuza/MS  
Chief Vendor Compliance Officer, DLS

c: Lorraine Holley (DDC)  
Karen General (DDC)  
Ra Amen Nu Jah Baddal  
File



**Department of  
Design and  
Construction**

**THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND  
CONSTRUCTION  
DIVISION OF INFRASTRUCTURE**  
30-30 THOMSON AVENUE  
LONG ISLAND CITY, NY, 11101  
TEL: 718.391.1000  
WEB: [www.nyc.gov/ddc](http://www.nyc.gov/ddc)

*TO BE FILLED IN BY THE BIDDER:*

BIDDER'S NAME:

\_\_\_\_\_  
\_\_\_\_\_

BID SECURITY (CIRCLE ONE):

BID BOND / CERTIFIED CHECK

NUMBER OF ADDENDUMS RECEIVED  
AND ATTACHED TO BID:

\_\_\_\_\_ ADDENDUMS

*DDC CLIENT AGENCY:*

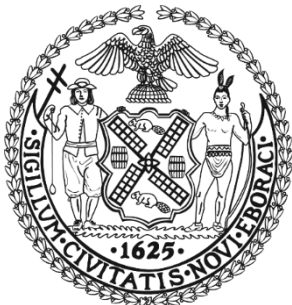
**DEPARTMENT OF TRANSPORTATION**

*PREPARED BY:*

**IN-HOUSE DESIGN**

*DATE PREPARED:*

**01/03/2023**



# VOLUME 2 OF 3

FOR FURNISHING ALL LABOR AND MATERIALS  
NECESSARY AND REQUIRED FOR:

**PROJECT ID: HWQ274F2**

**INFORMATION FOR BIDDERS**

**CONTRACT**

**PERFORMANCE AND PAYMENT BONDS**

**PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND  
REQUIRED FOR:

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2**

**Hook Creek Boulevard from 257th Street to 149th Avenue**

**Francis Lewis Boulevard from 257th Street to Hook Creek Boulevard**

**Frankton Street from Francis Lewis Boulevard to Nassau County Line**

**145th Avenue from Francis Lewis Boulevard to Nassau County Line**

**259th Street from 147th Avenue to 149th Road**

**259th Street from 149th Road to Craft Avenue**

**147th Avenue from 258th Street to Francis Lewis Boulevard**

**147th Road from 258th Street to Francis Lewis Boulevard**

**147th Drive from 257th Street to Hook Creek Boulevard**

**148th Avenue from 259th Street to Hook Creek Boulevard**

**148th Road from 259th Street to Hook Creek Boulevard**

**148th Drive from 259th Street to Hook Creek Boulevard**

**149th Road from 259th Street to 262nd Street**

**Hungry Harbor Road from Hook Creek Boulevard to Nassau County Line**

**262nd Place from Hungry Harbor Road to Station 10+00**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND  
TRAFFIC WORK TOGETHER WITH ALL WORK INCIDENTAL  
THERETO TOGETHER**

**BOROUGH OF QUEENS**

**CITY OF NEW YORK**

(NO TEXT ON THIS PAGE)

**CITY OF NEW YORK**  
**DEPARTMENT OF DESIGN AND CONSTRUCTION**  
**INFORMATION FOR BIDDERS**  
**December 2021**

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*CITY OF NEW YORK*  
*DEPARTMENT OF DESIGN AND CONSTRUCTION*  
***INFORMATION FOR BIDDERS***

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1. Description and Location of Work

The description and location of the work for which bids are requested are specified in the PASSPort RFX field "Description".

2. Time and Place for Receipt of Bids

Sealed bids shall be received on or before the date and hour specified in the PASSPort RFX, at which time they will be publicly opened and read aloud in the presence of the Commissioner or the Commissioner's or her representative, and any bidders who may desire to be present.

3. Definitions

The definitions set forth in the Procurement Policy Board Rules shall apply to this Invitation For Bids.

4. Invitation For Bids and Contract Documents

(A) Except for titles, sub-titles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience) the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of the Contract and the Invitation for Bids.

- (1) All provisions required by law to be inserted in this Contract, whether actually inserted or not
- (2) The Contract Drawings and Specifications
- (3) The General Conditions, the General Requirements and the Special Conditions, if any
- (4) The Contract
- (5) The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and the Bid Booklet
- (6) The Budget Director's Certificate; all Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

(B) For particulars as to this procurement, including quantity and quality of the purchase, extent of the work or labor to be performed, delivery and performance schedule, and any other special instructions, prospective bidders are referred to the Invitation For Bids Documents. A copy of such documents can be obtained in the PASSPort RFX.

5. Pre-Bid Conference

A pre-bid conference shall be held as set forth in the PASSPort RFX. Nothing stated at the pre-bid conference shall change the terms or conditions of the Invitation For Bids Documents, unless a change is made by written amendment as provided in Section 9 below. Failure to attend a mandatory pre-bid conference shall constitute grounds for the rejection of the bid.

6. Agency Contact

Any questions or correspondence relating to this bid solicitation shall be addressed to the Agency Contact person specified in the PASSPort RFX.

7. Bidder's Oath

- (A) The bid shall be properly signed by an authorized representative of the bidder and the bid shall be verified by the written oath of the authorized representative who signed the bid, that the several matters stated and information furnished therein are in all aspects true.
- (B) A materially false statement willfully or fraudulently made in connection with the bid or any of the forms completed and submitted with the bid may result in the termination of any Contract between the City and the Bidder. As a result, the Bidder may be barred from participating in future City contracts as well as be subject to possible criminal prosecution.



8. Examination and Viewing of Site, Consideration of Other Sources of Information and Changed Conditions

- (A) Pre-Bidding (Investigation) Viewing of Site - Bidders must carefully view and examine the site of the proposed work, as well as its adjacent area, and seek other usual sources of information, for they will be conclusively presumed to have full knowledge of any and all conditions on, about or above the site relating to or affecting in any way the performance of the work to be done under the Contract which were or should have been indicated to a reasonably prudent bidder. To arrange a date for visiting the work site, bidders are to contact the Agency Contact person specified in The PASSPort RFx.
- (B) Should the contractor encounter during the progress of the work subsurface conditions at the site materially differing from any shown on the Contract Drawings or indicated in the Specifications or such subsurface conditions as could not reasonably have been anticipated by the contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the Contract, the attention of the Commissioner must be called immediately to such conditions before they are disturbed. The Commissioner shall thereupon promptly investigate the conditions. If the Commissioner finds that they do so materially differ, or that they could not reasonably have been anticipated by the contractor and were not anticipated by the City, the Contract may be modified with the Commissioner's written approval.

9. Examination of Proposed Contract

- (A) Request for Interpretation or Correction: Prospective bidders must examine the Contract Documents carefully and before bidding must request the Commissioner in writing for an interpretation or correction of every patent ambiguity, inconsistency or error therein which should have been discovered by a reasonably prudent bidder. Such interpretation or correction, as well as any additional contract provisions the Commissioner may decide to include, will be issued in writing by the Commissioner as an addendum to the Contract, which will be transmitted to each person recorded as having received a copy of the Contract Documents from the Department. Transmission of such addendum will be by mail, e-mail, facsimile or hand delivery. Such addendum will also be posted at the place where the Contract Documents are available for the inspection of prospective bidders. Upon transmission as provided for herein, such addendum shall become a part of the Contract Documents, and binding on all bidders, whether or not actual notice of such addendum is shown.
- (B) Only Commissioner's Interpretation or Correction Binding: Only the written interpretation or correction so given by the Commissioner shall be binding, and prospective bidders are warned that no other officer, agent or employee of the City is authorized to give information concerning, or to explain or interpret, the Contract.
- (C) Documents given to a subcontractor for the purpose of soliciting the subcontractor's bid shall include either a copy of the bid cover sheet or a separate information sheet setting forth the project name, the Contract number (if available), the contracting agency and the Project's location.

10. Form of Bid

Each bid must be submitted upon the prescribed form and must contain: a) the name, residence and place of business of the person or persons making the same; b) the names of all persons interested therein, and if no other person is so interested, such fact must be distinctly stated; c) a statement to the effect that it is made without any connection with any other person making a bid for the same purpose and that it is in all respects fair and without collusion or fraud; d) a statement that no Council member or other officer or employee or person whose salary is payable in whole or part from the City Treasury is directly or indirectly interested therein or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof; e) a statement that the bidder is not in arrears to the City or to any agency upon a debt or contract or taxes, and is not a defaulter as surety or otherwise upon any obligation to the City to any agency thereof, except as set forth in the bid.

THE BID SHALL BE TYPEWRITTEN OR WRITTEN LEGIBLY IN INK. THE BID SHALL BE SIGNED IN INK. ERASURES OR ALTERATIONS SHALL BE INITIALED BY THE SIGNER IN INK. FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION 10 SHALL RESULT IN THE REJECTION OF THE BID.

11. Irrevocability of Bid

The prices set forth in the bid cannot be revoked and shall be effective until the award of the Contract, unless the bid is withdrawn as provided for in Sections 15 and 18 below.

12. Acknowledgment of Amendments

The receipt of any amendment to the Contract Documents shall be acknowledged by the bidder in its bid submission.

13. Bid Samples and Descriptive Literature

Bid samples and descriptive literature shall not be submitted by the bidder, unless expressly requested elsewhere in the Contract or Contract Documents. Any unsolicited bid samples or descriptive literature which are submitted shall not be examined or tested and shall not be deemed to vary any of the provisions of this Contract.

14. Proprietary Information/Trade Secrets

- (A) The bidder shall identify those portions of the bid which it deems to be confidential, proprietary information or trade secrets, and provide justification why such materials shall not be disclosed by the City. All such materials shall be clearly indicated by stamping the pages on which such information appears, at the top and bottom thereof with the word "Confidential". Such materials stamped "Confidential" must be easily separable from the non-confidential sections of the bid.
- (B) All such materials so indicated shall be reviewed by the Agency and any decision not to honor a request for confidentiality shall be communicated in writing to the bidder. For those bids which are unsuccessful, all such confidential materials shall be returned to the bidder. Prices, makes and model or catalog numbers of the items offered, deliveries, and terms of payment shall be publicly available after bid opening, regardless of any designation of confidentiality made by the bidder.

15. Pre-Opening Modification or Withdrawal of Bids

Bids may be modified or withdrawn by written notice received in the office designated in the PASSPort RFx, before the time and date set for the bid opening. If a bid is withdrawn in accordance with this Section, the bid security, if any, shall be returned to the bidder.

16. Bid Evaluation and Award

In accordance with the New York City Charter, the Procurement Policy Board Rules and the terms and conditions of this Invitation For Bids, this Contract shall be awarded, if at all, to the responsible bidder whose bid meets the requirements and evaluation criteria set forth in the Invitation For Bids, and whose bid price is either the most favorable bid price or, if the Invitation For Bids so states, the most favorable evaluated bid price. A bid may not be evaluated for any requirement or criterion that is not disclosed in the Invitation For Bids.

**Restriction:** No negotiations with any bidder shall be allowed to take place except under the circumstances and in the manner set forth in Section 21. Nothing in this Section shall be deemed to permit a contract award to a bidder submitting a higher quality item than that designated in the Invitation For Bids, if that bid is not also the most favorable bid.

17. Late Bids, Late Withdrawals and Late Modifications

Any bid received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. Any request for withdrawal or modification received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. The exception to this provision is that a late modification of a successful bid that makes the bid terms more favorable to the City shall be considered at any time it is received.

18. Withdrawal of Bids.

Except as provided for in Section 15, above, a bidder may not withdraw its bid before the expiration of forty-five (45) days after the date of the opening of bids; thereafter, a bidder may withdraw its bid only in writing and in advance of an actual award. If within sixty (60) days after the execution of the Contract, the Commissioner fails to fix the date

for commencement of work by written notice to the bidder, the bidder at the bidder's option, may ask to be relieved of the bidder's obligation to perform the work called for by written notice to the Commissioner. If such notice is given to the Commissioner, and the request to withdraw is granted, the bidder waives all claims in connection with this Contract.

19. Mistake in Bids

(A) Mistake Discovered Before Bid Opening: A bidder may correct mistakes discovered before the time and date set for bid opening by withdrawing or correcting the bid as provided in Section 15 above.

(B) Mistakes Discovered Before Award

(1) In accordance with General Municipal Law (Section 103, subdivision 11), where a unilateral error or mistake is discovered in a bid, such bid may be withdrawn upon written approval of the Agency Chief Contracting Officer if the following conditions are met:

(a) The mistake is known or made known to the agency prior to the awarding of the Contract or within 3 days after the opening of the bid, whichever period is shorter; and

(b) The price bid was based upon an error of such magnitude that enforcement would be unconscionable; and

(c) The bid was submitted in good faith and the bidder submits credible evidence that the mistake was a clerical error as opposed to a judgment error; and

(d) The error in the bid is actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of the original work paper, documents, or materials used in the preparation of the bid sought to be withdrawn; and

(e) It is possible to place the agency in the same position as existed prior to the bid.

(2) Unless otherwise required by law, the sole remedy for a bid mistake in accordance with this Article shall be withdrawal of the bid, and the return of the bid bond or other security, if any, to the bidder. Thereafter, the agency may, in its discretion, award the Contract to the next lowest bidder or rebid the Contract. Any amendment to or reformation of a bid or a Contract to rectify such an error or mistake therein is strictly prohibited.

(3) If the mistake and the intended correct bid are clearly evident on the face of the bid document, the bid shall be corrected to the intended correct bid and may not be withdrawn. Examples of mistakes that may be corrected are typographical errors, errors in extending unit prices, transposition errors and arithmetical errors.

20. Low Tie Bids

(A) When two or more low responsive bids from responsible bidders are identical in price, meeting all the requirements and criteria set forth in the Invitation For Bids, the Agency Chief Contracting Officer will break the tie in the following manner and order of priority:

(1) Award to a certified New York City small, minority or woman-owned business entity bidder;

(2) Award to a New York City bidder;

(3) Award to a certified New York State small, minority or woman-owned business bidder;

(4) Award to a New York State bidder.

(B) If two or more bidders still remain equally eligible after application of paragraph (A) above, award shall be made by a drawing by lot limited to those bidders. The bidders involved shall be invited to attend the drawing. A witness shall be present to verify the drawing and shall certify the results on the bid tabulation sheet.

**21. Rejection of Bids**

- (A) **Rejection of Individual Bids**: The Agency may reject a bid if:
- (1) The bidder fails to furnish any of the information required pursuant to Section 24 or 28 hereof; or if
  - (2) The bidder is determined to be not responsible pursuant to the Procurement Policy Board Rules; or if
  - (3) The bid is determined to be non-responsive pursuant to the Procurement Policy Board Rules; or if
  - (4) The bid, in the opinion of the Agency Chief Contracting Officer, contains unbalanced bid prices and is thus non-responsive, unless the bidder can show that the prices are not unbalanced for the probable required quantity of items, or if the imbalance is corrected pursuant to Section 15.
- (B) **Rejection of All Bids**: The Agency, upon written approval by the Agency Chief Contracting Officer, may reject all bids and may elect to resolicit bids if in its sole opinion it shall deem it in the best interest of the City so to do.
- (C) **Rejection of All Bids and Negotiation With All Responsible Bidders**: The Agency Head may determine that it is appropriate to cancel the Invitation For Bids after bid opening and before award and to complete the acquisition by negotiation. This determination shall be based on one of the following reasons:
- (1) All otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Agency Chief Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or
  - (2) In the judgment of the Agency Chief Contracting Officer, the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.
- (B) When the Agency has determined that the Invitation for Bids is to be canceled and that use of negotiation is appropriate to complete the acquisition, the contracting officer may negotiate and award the Contract without issuing a new solicitation, subject to the following conditions:
- (1) prior notice of the intention to negotiate and a reasonable opportunity to negotiate have been given by the contracting officer to each responsible bidder that submitted a bid in response to the Invitation for Bids;
  - (2) the negotiated price is the lowest negotiated price offered by a responsible bidder; and
  - (3) the negotiated price is lower than the lowest rejected bid price of a responsible bidder that submitted a bid in response to the Invitation for Bids.

**22. Right to Appeal Determinations of Non-Responsiveness or Non-Responsibility and Right to Protest Solicitations and Award**

The bidder has the right to appeal a determination of non-responsiveness or non-responsibility and has the right to protest a solicitation and award. For further information concerning these rights, the bidder is directed to the Procurement Policy Board Rules.

**23. Affirmative Action and Equal Employment Opportunity**

This Invitation For Bids is subject to applicable provisions of Federal, State and Local Laws and executive orders requiring affirmative action and equal employment opportunity.

**24. PASSPort COMPLIANCE**

All vendors that intend to do business with the City of New York must complete a disclosure process in order to be considered for a contract. This disclosure process was formerly completed using Vendor Information Exchange System (VENDEX) paper-based forms. The City of New York has moved collection of vendor disclosure information online. In early August 2017, the New York City Mayor's Office of Contract Services (MOCS) launched the Procurement and Sourcing Solutions Portal (PASSPort), a new online procurement system that replaced the paper-VENDEX process. In anticipation of awards, all bidders must create online accounts in the new PASSPort system, and

file all disclosure information using PASSPort. Paper submissions, including certifications of no changes to existing VENDEX packages, will not be accepted in lieu of complete online filings using PASSPort.

All vendors that intend to do business with the City, but specifically those that fall into any of the following categories, are required to enroll:

- Have a pending award with a City Agency; or
- Hold a current contract with a City Agency and have either an expiring VENDEX or expiring Certificate of No Change.

The Department of Design and Construction (DDC) and MOCS hereby notifies all proposers that the PASSPort system is available, and that disclosure filing completion is required prior to any award through this competitive bid.

To enroll in PASSPort and to access the PASSPort website (including online training), please visit [www.nyc.gov/passport](http://www.nyc.gov/passport). Contact MOCS at [passport@mocs.nyc.gov](mailto:passport@mocs.nyc.gov) for additional information and technical support.

#### 25. Complaints About the Bid Process

The New York City Comptroller is charged with the audit of contracts in New York City. Any vendor who believes that there has been unfairness, favoritism or impropriety in the bid process should inform the Comptroller, Office of Contract Administration, One Centre Street, Room 835, New York, New York; telephone number (212)669-2323.

#### 26. Bid, Performance and Payment Security

(A) Bid Security: Each bid must be accompanied by bid security in an amount and type specified in the PASSPort RFX questionnaire. The bid security shall assure the City of New York of the adherence of the bidder to its proposal, the execution of the Contract, and the furnishing of Performance and Payment Bonds by the bidder, if required in the PASSPort RFX. Bid security shall be returned to the bidder as follows:

- (1) Within ten (10) days after the bid opening, the Comptroller will be notified to return the deposits of all but the three (3) lowest bidders. Within five (5) days after the award, the Comptroller will be notified to return the deposits of the remaining two unsuccessful bidders.
- (2) Within five (5) days after the execution of the Contract and acceptance of the Contractor's bonds, the Comptroller will be notified to return the bid security of the successful bidder or, if performance and payment bonds are not required, only after the sum retained under Article 21 of the Contract equals the amount of the bid security.
- (3) Where all bids are rejected, the Comptroller will be notified to return the deposit of the three (3) lowest bidders at the time of rejection.

(B) Performance and Payment Security: Performance and Payment Security must be provided in an amount and type specified in the PASSPort RFX. The performance and payment security shall be delivered by the contractor prior to or at the time of execution of the Contract. If a contractor fails to deliver the required performance and payment security, its bid security shall be enforced, and an award of Contract may be made to the next lowest responsible and responsive bidder, or the contract may be rebid.

(C) Acceptable Types of Security: Acceptable types of security for bids, performance, and payment shall be limited to the following:

- (1) a one-time bond in a form satisfactory to the City;
- (2) a bank certified check or money order;
- (3) obligations of the City of New York; or
- (4) other financial instruments as determined by the Office of Construction in consultation with the Comptroller.

Whenever the successful bidder deposits obligations of the City of New York as performance and payment security, the Comptroller may sell and use the proceeds thereof for any purpose for which the principal or

surety on such bond would be liable under the terms of the Contract. If the money is deposited with the Comptroller, the successful bidder shall not be entitled to receive interest on such money from the City.

- (D) Form of Bonds: Security provided in the form of bonds must be prepared on the form of bonds authorized by the City of New York. Forms for bid, performance, and payment bonds are included in the Invitation for Bids Documents. Such bonds must have as surety thereunder such surety company or companies as are: (1) approved by the City of New York; (2) authorized to do business in the State of New York, and (3) approved by the Department of the Treasury of the United States. Premiums for any required bonds must be included in the base bid.

The bidder is advised that submission of a bid bond where the surety on such bond fails to meet the criteria set forth herein, shall result in the rejection of the bid as non-responsive.

The Department of the Treasury of the United States advises that information concerning approved surety companies may be obtained as follows: (1) from the Government Printing Office at 215-364-6465; (2) through the Internet at <https://www.fiscal.treasury.gov/surety-bonds/>.

- (E) Power of Attorney: Attorneys in fact who sign bid, performance, or payment bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

**27. Failure to Execute Contract**

In the event of failure of the successful bidder to execute the Contract and furnish the required security within ten (10) days after notice of the award of the Contract, the deposit of the successful bidder or so much thereof as shall be applicable to the amount of the award made shall be retained by the City, and the successful bidder shall be liable for and hereby agrees to pay on demand the difference between the price bid and the price for which such Contract shall be subsequently awarded, including the cost of any required reletting and less the amount of such deposit. No plea of mistake in such accepted bid shall be available to the bidder for the recovery of the deposit or as a defense to any action based upon such accepted bid. Further, should the bidder's failure to comply with this Section cause any funding agency, body or group (Federal, State, City, Public, Private, etc.) to terminate, cancel or reduce the funding on this project, the bidder in such event shall be liable also to the City for the amount of actual funding withdrawn by such agency on this project, less the amount of the forfeited deposit.

**28. Bidder Responsibilities and Qualifications**

- (A) Bidders must include with their bids all information necessary for a determination of bidder responsibility, as set forth in the Specifications.
- (B) The Agency may require any bidder or prospective bidder to furnish all books of account, records, vouchers, statements or other information concerning the bidder's financial status for examination as may be required by the Agency to ascertain the bidder's responsibility and capability to perform the Contract. If required, a bidder must also submit a sworn statement setting forth such information as the Agency may require concerning present and proposed plant and equipment, the personnel and qualifications of the bidder's working organizations, prior experience and performance record.
- (C) Oral Examination on Qualifications: In addition thereto, and when directed by the Agency, the bidder, or a responsible officer, agent or employee of the bidder, must submit to an oral examination to be conducted by the Agency in relation to the bidder's proposed tentative plan and schedule of operations, and such other matters as the Agency may deem necessary in order to determine the bidder's ability and responsibility to perform the work in accordance with the Contract. Each person so examined must sign and verify a stenographic transcript of such examination noting thereon such corrections as such person may desire to make.
- (D) If the bidder fails or refuses to supply any of the documents or information set forth in paragraph (B) hereof or fails to comply with any of the requirements thereof, the Agency may reject the bid.

**29. Employment Report**

In accordance with Executive Order No. 50 (1980) as modified by Executive Order 108 (1986), the filing of a

completed Employment Report (ER) is a requirement of doing business with the City of New York for construction contractors with contracts of \$1,000,000 or more and subcontractors with construction subcontracts of \$750,000 or more. The required forms and information are included in the PASSPort Vendor Profile.

**30. Labor Law Requirements**

- (A) General: The successful bidder will be required to comply strictly with all Federal, State and local labor laws and regulations.
- (B) New York State Labor Law: This Contract is subject to New York State Labor Law Section 220, which requires that construction workers on the site be paid prevailing wages and supplements. The Contractor is reminded that all wage provisions of this Contract will be enforced strictly and failure to comply will be considered when evaluating performance. Noncompliance may result in the contractor being debarred by the City from future contracts. Complaints filed with the Comptroller may result in decisions which may debar a contractor from bidding contracts with any state governmental entity and other political subdivisions.
- (C) Records: The Contractor is expected to submit accurate payroll reports and other required documents and verify attendance and job classifications being utilized in compliance with the law, Contract provisions and agency procedures.

**31. Insurance**

- (A) Bidders are advised that the insurance requirements contained herein are regarded as material terms of the Contract. As required by Article 22 of the Contract, the contractor must effect and maintain with companies licensed and authorized to do business in the State of New York, the types of insurance set forth therein, when required by and in the amounts set forth in Schedule A of the General Conditions. Such required insurance must be provided from the date the contractor is ordered to commence work and up to the date of final acceptance of all required work.
- (B) The contractor must, within ten days of receipt of the notice of award, submit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A of the General Conditions, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by Section 57 of the New York State Workers' Compensation Law and Section 220 of the Disability Benefits Law.

**32. Lump Sum Contracts**

- (A) Comparison of Bids: Bids on Lump Sum Contracts will be compared on the basis of the lump sum price bid, adjusted for alternate prices bid, if any.
- (B) Lump Sum Bids for "General Construction Work" which include excavation shall include all necessary excavation work defined in the Specifications as being included in the lump sum bid. The bidder shall also bid a unit price for the additional cost of excavating material which is defined in the Specifications as excavation for which additional payment will be made. The total estimated additional cost of removing such material will be taken as the quantity set forth in the Engineer's Estimate multiplied by the unit price bid. This total estimated cost of additional excavation shall be added to the lump sum bid for the General Construction Work for the purpose of comparing bids to determine the low bidder.
- (C) Variations from Engineer's Estimate: The Engineer's Estimate of the quantity of excavation for which additional payment will be made is approximate only and is given solely to be used as a uniform basis for the comparison of bids and such estimate is not to be considered as part of this contract. The quantities actually required to complete the contract work may be more or less than the quantities in the Engineer's Estimate and, if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

**33. Unit Price Contracts**

- (A) Comparison of Bids: Bids on Unit Price Contracts will be compared on the basis of a total estimated price,

arrived at by taking the sum of the estimated quantities of such items, in accordance with the Engineer's Estimate of Quantities set forth in the Bid Schedule, multiplied by the corresponding unit prices, and including any lump sum bids on individual items.

(B) Variations from Engineer's Estimate: Bidders are warned that the Engineer's Estimate of Quantities on the various items of work and materials is approximate only, given solely to be used as a uniform basis for the comparison of bids, and is not be considered part of this contract. The quantities actually required to complete the contract work may be less or more than so estimated, and if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

(C) Overruns: The terms and conditions applicable to overruns of unit price items are set forth in Article 26 of the Contract.

**34. Excise Tax**

Bidders are referred to the Specifications for information on Federal Excise Tax exemptions.

**35. Licenses and Permits**

The successful bidder will be required to obtain all necessary licenses and permits necessary to perform the work.

**36. Multiple Prime Contractors**

If more than one prime contractor will be involved on this project, all contractors are required to examine the Invitation for Bid packages for all other parts of the project.

**37. Locally Based Enterprise Requirements (LBE)**

This Contract is subject to the requirements of Administrative Code, Section 6-108.1, and the regulations promulgated thereunder. No construction contract will be awarded unless and until these requirements have been complied with in their entirety. The bidder is advised of the provisions set forth below, as well as the provisions with respect to the Locally Based Enterprise Program contained in Article 67 of the Contract. The contractor is advised that:

(A) If any portion of the Contract is subcontracted, not less than ten percent of the total dollar amount of the contract shall be awarded to locally based enterprises ("LBEs"); except, where less than ten percent of the total dollar amount of the Contract is subcontracted, such lesser percentage shall be so awarded.

(B) No contractor shall require performance and payment bonds from LBE subcontractors.

(C) No Contract shall be awarded unless the contractor first identifies in its bid:

- (1) the percentage, dollar amount and type of work to be subcontracted; and
- (2) the percentage, dollar amount and type of work to be subcontracted to LBEs.

(D) Within ten calendar days after notification of low bid, the apparent low bidder shall submit an "LBE Participation Schedule" to the contracting agency. If such schedule does not identify sufficient LBE subcontractors to meet the requirements of Administrative Code Section 6-108.1, the apparent low bidder shall submit documentation of its good faith efforts to meet such requirements.

(1) The "LBE Participation Schedule" shall include:

- (a) the name and address of each LBE that will be given a subcontract,
- (b) the percentage, dollar amount and type of work to be subcontracted to the LBE, and
- (c) the dates when the LBE subcontract work will commence and end.

(2) The following documents shall be attached to the "LBE Participation Schedule":

- (a) verification letters from each subcontractor listed in the "LBE Participation Schedule" stating that the LBE will enter into a formal agreement for work,



- (b) certification documents of any proposed LBE subcontractor which is not on the LBE certified list, and
  - (c) copies of the certification letter of any proposed subcontractor which is an LBE.
- (3) Documentation of good faith efforts to achieve the required LBE percentage shall include as appropriate but not limited to the following:
- (a) attendance at prebid meetings, when scheduled by the agency, to advise bidders of contract requirements;
  - (b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;
  - (c) written notification to association of small, minority and women contractors soliciting specific subcontractors;
  - (d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;
  - (e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;
  - (f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:
    - (i) The names, address and telephone numbers of LBE firms that are contacted;
    - (ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;
    - (iii) Documentation showing that no reasonable price can be obtained from LBE firms;
    - (iv) A statement of why agreements with LBE firms were not reached;
  - (g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and
  - (h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.
- (E) Unless otherwise waived by the Commissioner with the approval of the Office of Economic and Financial Opportunity, failure of a proposed contractor to provide the information required by paragraphs (C) and (D) above may render the bid non-responsive and the Contract may not be awarded to the bidder. If the contractor states that it will subcontract a specific portion of the work, but can demonstrate despite good faith efforts it cannot achieve its required LBE percentage for subcontracted work until after award of Contract, the Contract may be awarded, subject to a letter of compliance from the contractor stating that it will comply with Administrative Code Section 6-108.1 and subject to approval by the Commissioner. If the contractor has not met its required LBE percentage prior to award, the contractor shall demonstrate that a good faith effort has been made subsequent to award to obtain LBEs on each subcontract until it meets the required percentage.
- (F) When a bidder indicates prior to award that no work will be subcontracted, no work may be subcontracted without the prior written approval of the Commissioner, which shall be granted only if the contractor in good faith seeks LBE subcontractors at least six weeks prior to the start of work.
- (G) The contractor may not substitute or change any LBE which was identified prior to award of the contract without the written permission of the Commissioner. The contractor shall make a written application to the Commissioner for permission to make such substitution or change, explaining why the contractor needs to change its LBE subcontractor and how the contractor will meet its LBE subcontracting requirement. Copies of such application must be served on the originally identified LBE by certified mail return receipt requested,

as well as the proposed substitute LBE. The Commissioner shall determine whether or not to grant the contractor's request for substitution.

38. Bid Submission Requirements

The Bid Submission Requirements are set forth in the PASSPort RFx.

39. Comptroller's Certificate

This Contract shall not be binding or of any force unless it is registered by the Comptroller in accordance with Section 328 of the City Charter and the Procurement Policy Board Rules. This Contract shall continue in force only after annual appropriation of funds by the City of New York and certification as hereinabove set forth.

40. Procurement Policy Board Rules

This Invitation For Bids is subject to the Rules of the Procurement Policy Board of the City of New York. In the event of a conflict between said Rules and a provision of this Invitation For Bids, the Rules shall take precedence.

41. DDC Safety Requirements

The DDC Safety Requirements apply to the work to be performed pursuant to the Contract. The DDC Safety Requirements are set forth on the following pages.

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**CITY OF NEW YORK**  
**DEPARTMENT OF DESIGN AND CONSTRUCTION**  
**SAFETY REQUIREMENTS FOR CONSTRUCTION**  
**CONTRACTS**

January 2020

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**THE DDC SAFETY REQUIREMENTS FOR CONSTRUCTION CONTRACTS INCLUDE THE FOLLOWING SECTIONS:**

- I. POLICY ON SITE SAFETY**
- II. PURPOSE**
- III. DEFINITIONS**
- IV. RESPONSIBILITIES**
- V. SAFETY QUESTIONNAIRE**
- VI. SITE SAFETY PLAN**
- VII. KICK-OFF/PRE-CONSTRUCTION MEETINGS AND SAFETY REVIEW**
- VIII. EVALUATION DURING WORK IN PROGRESS**
- IX. SAFETY PERFORMANCE EVALUATION**

## I. POLICY ON SITE SAFETY

The City of New York Department of Design and Construction (DDC) is committed to a policy of injury and illness prevention and risk management for construction work that will ensure the safety and health of the workers engaged in the projects and the protection of the general public. Therefore, it is DDC's policy that work carried out by Contractors on DDC contracts must, at a minimum, comply with the most current versions of all applicable federal, state and city laws, rules, and regulations, including without limitation:

- ❑ Code of Federal Regulations, Title 29, Part 1926 (29 CFR 1926) and applicable Sub-parts of Part 1910 – U.S. Occupational Safety and Health Administration (OSHA);
- ❑ Federal Highway Administration – Manual on Uniform Traffic Control Devices (MUTCD);
- ❑ New York Codes, Rules and Regulations (NYCRR), Title 12, Part 23 – Protection in Construction, Demolition and Excavation Operations;
- ❑ New York Codes, Rules and Regulations (NYCRR), Title 16, Part 753 – Protection of Underground Facilities;
- ❑ New York City Administrative Code, Title 28 – New York City Construction Codes;
- ❑ Rules of the City of New York, Title 15, Chapter 13 – Rules Pertaining To the Prevention of the Emission of Dust from Construction Related Activities;
- ❑ Rules of the City of New York, Title 15, Chapter 28 – Citywide Construction Noise Mitigation;
- ❑ Rules of the City of New York, Title 34 Chapter 2 – NYCDOT Highway Rules.

The Contractor will be required to comply with all new and/or revised federal, state and city laws, rules, and regulations, issued during the course of the project, at the expense of the Contractor without any additional costs to the DDC.

## II. PURPOSE

The purpose of this policy is to ensure that Contractors perform their work and supervise their employees in accordance with all applicable federal, state and city rules and regulations. Further, Contractors will be expected to minimize or eliminate jobsite and public hazards, through a planning, inspection, auditing and corrective action process. The goal is to control risks so that injuries, illnesses, and accidents to contractors' employees, DDC employees and the general public, as well as damage to city-owned and private property, are reduced to the lowest level feasible.

## III. DEFINITIONS

**Agency Chief Contracting Officer (ACCO):** The ACCO will mean the person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the City Chief Procurement Officer (CCPO).

**Competent Person:** As defined by OSHA, an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees or the general public, and who has authorization to take prompt corrective measures to eliminate them. This individual will have completed, at a minimum an authorized 30-hour OSHA Construction Safety Course. The Contractor may be required to provide more than one competent person due to construction operations and based on the number of active work sites.

**Construction Safety Auditor:** A representative of the Office of Construction Safety who provides inspection and assessment services to enhance health and safety on all DDC construction projects. The activities of the Construction Safety Auditor include performing site audits, reviewing safety plans, reviewing construction permits, drawings, verifying Contractor's compliance with applicable federal, state and city laws, rules, regulations, and DDC Contract Safety Requirements, etc. and rendering technical advice and assistance to DDC Resident Engineers and Project Managers.

**Office of Construction Safety:** A unit of DDC Safety and Site Support that assesses contractor’s safety on DDC jobsites and advises responsible parties of needed corrective actions.

**Registered Construction Superintendent:** For certain projects, as defined in New York City Construction Codes – Title 28, the contractor will provide a Construction Superintendent registered with the NYC Department of Buildings and responsible for all duties as defined in Chapter 33 of Title 1 of the Rules of the City of New York.

**Contractor:** For purposes of these Safety Requirements, the term “Contractor” will mean any person or entity that enters into a contract for the performance of construction work on a DDC project. The term “Contractor” will include any person or entity which enters into any of the following types of contracts: (1) a prime construction contract for a specific project, (2) a prime construction contract using the Job Order Contracting System (“JOCS Contract”), and (3) a subcontract with a CM/Builder (“First Tier Subcontract”).

**Daily Safety Job Briefing:** Daily jobsite safety briefings, given to all jobsite personnel at project site by the Contractor before work begins and/or if hazards or potential hazards are discovered while working, with the purpose of discussing the scheduled activities for the day, the hazards related to these activities, activity specific safety procedures, and Job Hazard Analysis associated with the scheduled construction work. Daily jobsite briefings will be documented, available at the jobsite, and will include at a minimum, topics, name and signature of the person conducting the briefing session, names and signatures of attendants, name of the designated competent person, contractor’s name, DDC Project ID, date, time, and location.

**Director – Office of Construction Safety:** Responsible for the operations of the Office of Construction Safety and the DDC Site Safety management programs.

**Job Hazard Analysis (JHA):** A process of identifying the major job tasks and any potential site-specific hazards that may be present during construction and establishing the means and methods to eliminate or control those hazards. A JHA will be documented, available at the jobsite and will include at a minimum work tasks, being performed, identified hazards, control methods for the identified hazards, contractor’s name, DDC Project ID, location, date, name and signature of certifying person. A JHA is a living document that will be re-evaluated and revised to address new hazards and tasks that may develop and will be present at the worksite and produced upon request.

**Qualified Person:** As defined by OSHA, an individual who, by possession of a recognized degree, certificate, license, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve problems relating to the subject matter, the work, or the project. Qualified Persons are required under regulation to address issues pertaining, but without limit, to fall protection, scaffold design, maintenance and protection of traffic, and excavation protective system, among others.

**Project Site:** Those areas indicated in the Contract Documents where the Work is to be performed.

**Project Safety Representative:** The designated Project Safety Representative will have at a minimum an OSHA 30-hour Construction Safety Course and other safety training applicable to Contractor’s/subcontractor’s project work. This individual will be responsible to oversee safety performance of the required construction work, conduct documented daily safety inspections, and implement corrective actions to maintain a safe work site. The Project Safety Representative must have sufficient experience and skills necessary to thoroughly understand the health and safety hazards and controls and must have authority to undertake corrective actions. A dedicated full-time Project Safety Representative may be required on large projects and projects deemed by DDC to be particularly high risk. DDC reserves the right to request a dedicated full-time Project Safety Representative for any reason at any time during the course of the project at the expense of the Contractor without any additional costs to the DDC. The full-time Project Safety Representative will be present at the site during all work activities.

**Resident Engineer (“RE”):** Representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the work. The RE may be a consultant retained by DDC, including a Construction Management (CM) or Resident Engineer Inspection (REI) firm. If DDC has retained a CM, REI or other consultant firm to perform management and oversight for the Project (e.g., CM-Builder, CM-Design-Builder, Project Manager, Program Manager), that CM, REI or other consultant is the Resident Engineer for purposes of these Safety Requirements.

**Safety Questionnaire:** Used by DDC to evaluate Contractor’s current and past safety performance. It is required to be completed by all Contractors initially when submitting bids for Construction work, or when being pre-qualified and updated annually or as requested by the DDC.

**Site Safety Manager:** For certain projects, as defined in New York City Construction Codes – Title 28, the Contractor will provide a Site Safety Manager with a Site Safety Manager License issued by the New York City Department of Building.

**Site Safety Plan:** A site-specific safety plan developed by the Contractor for a DDC project. The Site Safety Plan will identify the project work scope, identify hazards associated with the project work and include project specific safety procedures and training appropriate and necessary to complete the work. The Site Safety Plan will be submitted within 30 days from the Award Date or as otherwise directed and is subject to review and acceptance by the Office of Construction Safety prior to the commencement of work at the site.

**Unsafe or Unhealthy Condition:** A condition that could be potentially hazardous to the health and safety of personnel or the public, and/or damaging to equipment, machinery, property, or the environment.

**Weekly Safety Meetings:** Weekly jobsite safety meetings, given to all jobsite personnel by Contractor, with the purpose of discussing general safety topics and job specific requirements encountered at the DDC work site. Weekly safety meetings will be documented and will include at a minimum, topics, name and signature of the person conducting the meeting, names and signatures of attendees, contractor’s name, DDC Project ID, date, and location.

**Work:** The construction required by the Contractor’s Contract Documents whether completed or partially completed, performed by the Contractor/ subcontractors. Work refers to the furnishing of labor, furnishing and incorporating materials and equipment into the construction and providing any service required by the Contract Documents to fulfill the Contractor’s obligation to complete the Project. For the purposes of these Safety Requirements, the term “Work” includes all Utility Interference work (commonly referred to as “Section U”, “EP-7”, and “Joint Bid” work) performed in association with this Contract.

#### **IV. RESPONSIBILITIES**

All persons who manage, perform, and provide support for construction projects will conduct operations in compliance with the requirements identified in this Policy and all applicable governing regulatory agency requirements and guidelines pertaining to safety in construction.

##### **A. Resident Engineer**

1. Review and facilitate Contractor(s) Site Safety Plan submittals to DDC for acceptability.
2. Notify the Office of Construction Safety of the commencement of construction work.
3. Develop and implement a training verification process to ensure that all CM/REI, consultant, Contractor, and subcontractor employees are properly trained. Maintain all applicable initial and refresher training records and assures documentation availability on site.
4. Maintain documentation of and attend weekly safety meetings and daily safety job briefings.
5. Assure that Contractor(s) JHA’s are current to reflect the work tasks being performed, hazards, and control methods to mitigate the identified hazards. Verify that all employees at the job site are trained on the JHAs and maintain supporting documentation on site.
6. Assure adequate planning for all critical construction activities (crane operation, excavation, confined space entry, etc.) including coordination between Contractor(s) /DDC/ other Agencies as required.
7. Maintain custody of all construction related permits, plans, approvals, drawings, etc., related to the project and assure their availability on site.
8. Recognize, minimize, or eliminate jobsite and public hazards, through required planning, inspection, verification, and corrective action process.
9. Monitor the conditions at the site for conformance with the Contractor’s Site Safety Plan, DDC policies, permits, and all applicable regulations and documentation that pertain to construction safety.
10. Notify the Contractor and DDC immediately upon determination of any condition or activity existing which is not in compliance with the Contractor’s Site Safety Plan, applicable federal, state or local codes or any

condition that presents a potential risk of injury to the public or workers or possible damage to property. Direct the Contractor to provide such labor, materials, equipment, and supervision to remedy such conditions.

11. Notify the Office of Construction Safety and the ACCO's Insurance and Risk Management Unit of project-related accidents, incidents, and near misses as per DDC's Construction Safety Emergency and Accident Notification and Response Procedure within two (2) hours.
12. In case of an accident, incident, or near miss, RE is responsible to protect the integrity of the accident site including but not limited to: the safeguarding of all evidence, documentation of all personnel on site at the time of the accident, gather facts related to all accidents, incidents, or near miss, and prepare required DDC Construction Accident Report as per DDC's Construction Safety Emergency and Accident Notification and Response Procedure. Maintain all records pertaining to accidents, incidents, and near miss and have them available upon request.
13. Notify the Office of Construction Safety within two (2) hours of the start of an inspection by any outside/regulatory agency personnel, including NYS, OSHA, NYC DOB or any other City/State/Federal oversight entity and forward a copy of the inspection report within one business day of its receipt.
14. Escort and assist Construction Safety Auditors during all field and record audits.
15. Report any emergency conditions to the Office of Construction Safety immediately.

**Note: In addition to the responsibilities listed above, if the Resident Engineer is a CM/REI or other non-City party hired by the City to manage the Project, the Resident Engineer is also required to do the following:**

16. Provide personnel who are certified and or trained appropriately for the requirements of the project.
17. Perform an investigation for any project-related accidents, incidents, and near misses. Within 24-hours of the time of the accident, incident, or near miss, the CM/REI will submit an investigation report to the Office of Construction Safety. Such report will include proposed remedial measures and implementation of corrective actions to prevent recurrence.

DDC reserves the right to request that the CM/REI replace any CM/REI personnel for any reason at any time during the project.

## **B. Construction Contractors**

**Note: For CM-Build and CM-Design-Build Projects, the CM will meet all requirements listed in this section, as well as the Resident Engineer section above.**

1. Submit a completed Safety Questionnaire and other safety performance related documentation with its bid or as part of a pre-qualification package.
2. Submit a Site Safety Plan within 30 days from the Award Date or as otherwise directed. The Site Safety Plan is subject to review and acceptance by the Office of Construction Safety prior to the commencement of work at the site. The Site Safety Plan will be revised and updated as necessary during the course of the project. If requested by the Office of Construction Safety, the Site Safety Plan must be developed and submitted for approval using a web-based system, the Site Safety Plan Application (SSP App).
3. Designate and identify a Project Safety Representative in the Site Safety Plan. The Contractor will immediately notify the Office of Construction Safety, in a form and manner acceptable to the Office of Construction Safety, of any permanent change to the designated Project Safety Representative. In the event the primary designated Project Safety Representative is temporary unable to perform his or her duties, an alternate Project Safety Representative will be provided. Resumes, outlining the qualification and experience for the Project Safety Representative (s) will be included in the Site Safety Plan and available upon request. DDC reserves the right to request the Contractor to replace a Project Safety Representative for any reason at any time during the course of the project.
4. Designate and identify a Competent Person(s) in the Site Safety Plan. Contractor/subcontractor may be required to provide more than one competent person due to construction operations and based on a number of work tasks/areas. DDC reserves the right to request the Contractor to replace a Competent Person or provide additional Competent Person(s) for any reason at any time during the course of the project. The Competent Person will be present at the site during all work activities.
5. For certain projects, as defined in New York City Construction Codes – Title 28, designate and identify the Licensed Site Safety Manager or Registered Construction Superintendent. Resumes, outlining the qualification and experience for the Licensed Site Safety Manager or Registered Construction Superintendent will be included in the Site Safety Plan and available upon request. The Contractor will immediately notify the Office



of Construction Safety, in a form and manner acceptable to the Office of Construction Safety, of any permanent change to the designated Site Safety Manager and/or Construction Superintendent. In the event the primary designated Site Safety Manager or Construction Superintendent is temporarily unable to perform his or her duties, an alternate Licensed Site Safety Manager and/or Registered Construction Superintendent will be provided. The Office of Construction Safety must be informed of such change. DDC reserves the right to request the Contractor to replace Site Safety Manager or Construction Superintendent for any reason at any time during the course of the project.

6. Develop a written Job Hazard Analysis (JHA) that identifies safety hazards and control methods for project specific work tasks. A preliminary JHA will be included in the Site Safety Plan submitted by the Contractor. A JHA is a living document that will be re-evaluated and revised to address new hazards and tasks that may develop during the course of the project and will be present at the worksite and produced upon request.
7. Develop project specific safety procedures to protect employees, general public, and property during all construction activities for the duration of the project.
8. Ensure that all employees are aware of the hazards associated with the project through documented formal and informal training and/or other communications. Conduct and document new employee and site-specific safety orientation for all Contractor and subcontractor personnel to review the hazards associated with the project as identified in the Site Safety Plan and the specific safety procedures and controls that will be used to protect workers, the general public and property. The Project Safety Representative will conduct this training prior to mobilization and if necessary during the course of the project. Documentation will be provided to the RE.
9. Prior to performing any work on DDC projects all Contractor's and subcontractor's employees will, at a minimum, have successfully completed, within the previous five calendar years, an OSHA 10-hour construction safety course.

All training records (OSHA 10-hour, flagger, scaffold, fall protection, confined space, etc.) will be provided to the RE prior to mobilization, included in the Site Safety Plan, kept current during the course of the project, and available for review.

10. Conduct and document weekly safety meetings and daily job briefing sessions for the duration of the project. Attendance at weekly safety meetings and daily job briefing sessions is mandatory. A written record of weekly safety meetings will be available upon request and job briefing sessions will be available at the worksite.
11. As part of the Site Safety Plan, prepare site specific procedures, such as maintenance and protection of traffic plan, steel erection plan, confined space program, fall protection plan, demolition plan, site specific emergency evacuation plan, etc. (if not otherwise provided in the contract documents) and comply with all of its provisions.
12. Have immediately available for review at the project site where actual construction activities are being performed all applicable documentation, including but not limited to: JHAs for work tasks being performed, all required training records, MPT plan (where applicable), Noise and Dust Mitigation Plans, excavation protective system drawings (where applicable), Emergency Evacuation plan, fall protection program (where applicable), confined space program (where applicable), all required permits, daily job briefing records, all required documentation for crane operation (where applicable), daily inspection checklist, scaffold and sidewalk drawings (when applicable), safety data sheets for chemicals in use.
13. Comply with all federal, state and local safety and health rules, laws, and regulations.
14. Comply with all provisions of the Site Safety Plan.
15. Provide, replace, and adequately maintain at or around the project site, suitable and sufficient signage, lights, barricades and enclosures (fences, sidewalk sheds, netting, bracing, etc.). The project specific MPT plan will be developed, implemented, and reviewed during the course of the project.
16. The Project Safety Representative will conduct daily safety inspections, document the inspection results, implement corrective actions for the identified hazards. Maintain the inspection records and have them available upon request.
17. **Report unsafe or unhealthy conditions to the RE as soon as practical, but no more than 24 hours after discovery, and take prompt actions to remove or abate such conditions. Should an imminent dangerous condition be discovered, Contractor will stop all work in the area of danger until corrections are made.**
18. Report all accidents, incidents and near misses involving injuries to workers or the general public, as well as property damage, to the RE within one (1) hour.
19. Following an accident or incident, unless otherwise directed, the Contractor will not remove or alter any equipment, structure, material, or evidence related to the accident or incident. Exception: Immediate emergency procedures taken to secure structures, temporary construction, operations, or equipment that pose a continued imminent danger or facilitate assistance for persons who are trapped or who have sustained bodily injury. Take

additional measures as necessary to secure the accident or incident site and to protect against any further injury or property damage.

20. The Contractor will perform an investigation into the root cause of the accident, incident, or near miss. Within 24 hours of an accident, incident, or near miss, the Contractor will prepare and submit to the RE a written investigation report detailing findings, corrective actions, and hazard mitigation implementation to prevent recurrence.
21. Notify the RE within two (2) hours of the start of an inspection by any outside regulatory agency personnel, including OSHA, NYC DOB, or others.
22. Maintain all records pertaining to all required safety compliance documents, accidents and incidents reports. DDC reserves the right to request copy of any records pertaining to the safety of the project and required by DDC and other federal, state, and city agencies, including but not limited to permits, training records, safety inspection records, drawings, equipment records, etc.
23. Cooperate with DDC Office of Construction Safety/ RE and address DDC recommendations on safety, which will in no way relieve the Contractor of its responsibilities for safety on the project. The Contractor has sole responsibility for safety.

## **V. SAFETY QUESTIONNAIRE**

DDC requires that all Contractors provide information regarding their current and past safety performance and programs. This will be accomplished by the use of the DDC Safety Questionnaire. As a part of the bid submittal package, the contractor will submit a completed DDC Safety Questionnaire listing company workers' compensation experience modification rating and OSHA Incident Rates for the three (3) years prior to the date of the bid opening. DDC may request a Contractor to update its Questionnaire at any time or to provide more detailed information. The Contractor will provide the requested information within 15 days.

The following criteria will be used by DDC in reviewing the Contractor's responsibility, which will be based on the information provided on the questionnaire:

- Criteria 1: OSHA Injury and Illness Rates (I&IR) are no greater than the average for the industry (based on the most current Bureau of Labor Statistics data for the Contractors SIC code); and
- Criteria 2: Insurance workers compensation Experience Modification Rate (EMR) equal to or less than 1.0; and
- Criteria 3: Any willful violations issued by OSHA or NYC DOB within the last three (3) years; and
- Criteria 4: A fatality (worker or member of public) and injuries, requiring OSHA notification, experienced on or near Contractor's worksite within the last three (3) years; and
- Criteria 5: Past safety performance on DDC projects (accidents; status of site safety plan submittals; etc.)
- Criteria 6: OSHA violation history for the last three (3) years;
- Criteria 7: Contractor will provide OSHA Injury and Illness Records (currently OSHA 300 and 300A Logs) for the last three (3) years.

If the Contractor fails to meet the basic criteria listed above, the Office of Construction Safety may request, through the ACCO, more details concerning the Contractor's safety experience. DDC may request the Contractor to provide copies of, among other things, accident investigation reports, OSHA records, OSHA and NYC DOB citations, EPA citations and written corrective action plan.

## **VI. SITE SAFETY PLAN**

Within thirty (30) days from the Award Date or as otherwise directed, the Contractor will submit the Site Safety Plan. The Site Safety Plan will identify project work scope, safety hazards associated with the project tasks, and include specific safety procedures and training appropriate and necessary to complete the work. The Site Safety Plan is subject to review and acceptance by the Office of Construction Safety prior to the commencement of work at the site. Due to the project work scope and project duration, the Office of Construction Safety may grant a conditional acceptance for a Site Safety Plan without all sections being complete. In a case of a "Conditional Acceptance" of a Site Safety Plan,

the Contractor will provide the remaining sections previously incomplete and/or not submitted for review and acceptance by the Office of Construction Safety prior to the commencement of the construction activities. The Office of Construction Safety reserves the right to withdraw the initial “Conditional Acceptance” if the Contractor fails to provide the remaining sections of a Site Safety Plan. Failure by the Contractor to submit an acceptable Site Safety Plan will be grounds for default.

Site Safety Plan requirements: The Site Safety Plan will be a written document and will apply to all project specific Contractor and subcontractor operations, and will have at a minimum, the following elements with each described in a separate section (It may be necessary to modify the basic format for certain unique or high-risk projects, such as tunnels or high-rise construction). All Site Safety Plan sections will be numbered in the order listed below. For sections, which are not applicable for the type of the work being performed by the Contractor on DDC project, the Contractor will in writing indicate “Not applicable based on the project work scope.” The Site Safety Plan will include Contractor’s name, DDC project ID, project location (s), and development and revision dates. The Site Safety Plan will include the sections, attachments, and appendixes provided in the Site Safety Plan. All pages of the Site Safety Plan will be numbered. If requested by the Office of Construction Safety, the Site Safety Plan must be developed and submitted for approval using a web-based system, the Site Safety Plan Application (SSP App).

1. Project Work Scope – Detailed information regarding work tasks that will be performed by Contractor and subcontractors under the project.
2. Responsibility and Organization – Contractor’s organization chart with responsible personnel for the project, including titles, names, contact information, roles, and responsibilities. All Contractor’s personnel required by the DDC Safety Requirements will be identified.
3. Safety Training and Education – OSHA 10 Hours training, requirements for daily safety briefings and weekly safety meetings, any work task specific training, responsible staff for implementation of training program for the project.
4. Job Hazard Analysis (JHA) – Project specific Job Hazard Analysis including work tasks, identified hazards, hazard control methods (administrative, engineering, PPE) to protect workers, property and general public, Contractor’s name, project id, location, name and signature of a certifying person, hazard assessment date.
5. Protection of Public – Project specific procedures covering safety of the general public during all project construction activities.
6. Hazard Corrective Actions - Procedures for hazard identification, including responsible person(s), frequency of safety inspections, implementation of corrective actions, safety inspection checklist.
7. Accident/Exposure Investigation – Project specific procedures for accident/incident/near miss investigation and implementation of corrective actions. Accident/incident/near miss notification procedure of DDC project staff (timer frame and responsible personnel).
8. Recording and Reporting Injuries – Procedures to meet 29 CFR 1904 requirements.
9. First Aid and Medical Attention – Responsible staff, location and inspection of First Aid kit, directions to local hospitals; emergency telephone numbers.
10. Project Specific Fire Protection and Prevention Program – Project specific procedures, including responsible staff, fire alarm system/methods, hot work procedures, etc.
11. Housekeeping Procedure.
12. Project Specific Illumination Procedure.
13. Project Specific Sanitation Procedure.
14. Personal Protective Equipment (PPE), including Respiratory Protection Program and Hearing Conservation Program, if required.
15. Hazard Communication Program – Contractor’s Hazard Communication Program, responsible staff; training; SDS records, project specific list of chemicals; location of the program and SDS records.
16. Means of Egress – Information regarding free and unobstructed egress from all parts of the building or structure; exit marking; maintenance of means of egress, etc.
17. Employee Emergency Action Plan – Project specific: responsible staff, emergency alarm system/devices, evacuation procedure, procedure to account for employees after evacuation, etc.
18. Evacuation Plan – Project specific evacuation plan (drawing/scheme) with exists and evacuation routes.
19. Ionizing/Nonionizing Radiation – Competent person, license and qualification requirements, type of radiation, employee’s exposure and protection, safety procedures, etc.

20. Material Handling, Storage, Use and Disposal – Project specific information regarding material storage, disposal, and handling: procedures, plan/drawings, etc.
21. Signs, Signals, and Barricades – Use of danger/warning signs, safety instruction signs, sidewalk closure and pedestrian fencing and barricades (if not included in the MPT plan), etc.
22. Tools – Hand and Power – Safety procedures for the type of tools to be used.
23. Scaffold – Project specific scaffold types, procedures, training requirements, scaffold drawings, designed, sealed, and signed by NYS Licensed Professional Engineer, or as otherwise directed; competent person, criteria for project specific scaffold, falling object protection, procedures for aerial lifts/scissor lifts.
24. Welding and Cutting – Project specific procedure for welding and cutting, including all necessary safety requirements such as fire prevention, personal protective equipment, hot work permits (if not covered by Contractor’s Fire Prevention and Protection program, FDNY certificate requirements).
25. Electrical Safety – Project specific procedures, including lock out-tag out.
26. Fall Protection – Project specific information regarding selected fall protection systems, fall protection plan, responsible staff.
27. Cranes, Derrick, Hoists, Elevators, Conveyors – project specific equipment information including type, rated load capacity, manufacture specification requirements, competent person, exposure to falling load, inspection, recordkeeping, clearance requirements, communication procedure, ground lines, permits.
28. Excavation Safety – Competent person; excavation procedures; project specific protective system, including drawings, designed, sealed, and signed by NYS Licensed Professional Engineer, or as otherwise directed.
29. Protection of Underground Facilities and Utilities Procedure, including responsible staff and responsibilities.
30. Concrete and Masonry Construction Procedures
31. Maintenance and Protection of Traffic Plan – Project specific MPT plan, designed, sealed, and signed by NYS Licensed Professional Engineer, or as otherwise directed; flagmen training, public safety, etc.
32. Steel Erection – Site specific erection plan, requirements for applicable written notifications, competent person, fall protection plan, training requirements, etc.
33. Demolition – Engineering survey, including written evidence, disconnection of all effected utilities, identification of all hazardous chemicals, materials, gases, etc., floor openings, chutes, inspection and maintenance of all stairs/passageways, removal of materials/debris/structural elements, lock out/tag out, competent person.
34. Blasting and the Use of Explosives – Project specific safety procedures, warning signs, training/qualification, transportation, storage and use of explosives, inspection.
35. Stairways and Ladders – Types of stairs and ladders, safety procedures, training requirements.
36. Alcohol and Drug Abuse Policy
37. Rodents and Vermin Controls
38. Toxic and Hazardous Substances – Safety procedures for substances that Contractor’s and subcontractor’s employees can be exposed on project.
39. Noise Mitigation Plan – Completed project specific Noise Mitigation Plan, and noise mitigation procedures.
40. Confined Space Program – Project specific Confined Space Program, responsible staff, training records, equipment information, rescue procedure, list of project specific confined spaces, forms.
41. Construction Vehicles/Heavy Equipment – Type of construction vehicles/heavy equipment to be used on site, procedures
42. Dust Mitigation Plan – Completed project specific Dust Mitigation Plan, and dust mitigation procedures.
43. Working Over and Near Water. Diving Operations – safety procedures including personal protective equipment, fall protection, rescue services, etc.

The most critical component of the Site Safety Plan is the Job Hazard Analysis (JHA) section. The JHA form is a written document prepared by the Contractor. The Contractor will conduct a site and task assessment to identify the tasks and any potential safety or environmental hazards related to performance of the work, eliminate or implement controls for the potential hazards, and identify proper personal protective equipment for the task. The JHA will be communicated to all Contractor/subcontractor personnel on site. The JHA will include safety hazard identification and controls to protect employees, general public, and property.

The initial JHA will be included in the Contractor’s Site Safety Plan and the current JHA form will be available at the construction site for reference. A JHA is a living document that will be re-evaluated and revised to address new hazards and tasks that may develop and will be present at the worksite and produced upon request.

## **VII. KICK-OFF MEETINGS/PRE-CONSTRUCTION AND SAFETY REVIEW**

Prior to the start of construction activities on all DDC projects, RE will invite the Office of Construction Safety to the construction kick-off meeting. The Office of Construction Safety representative(s) will participate in this meeting with the Contractor and RE for the purpose of:

- A. Reviewing DDC Contract Safety Requirements
- B. Reviewing site-specific safety issues based on a project work scope, location, and any other factors which may impact safety of workers and general public.
- C. Reviewing the Site Safety Plan and JHA requirements.
- D. Reviewing Accident/Incident reporting and investigation procedures.
- E. Reviewing designated safety contacts, roles, and responsibilities.
- F. Discussing planned inspections and audits of the site by the Office of Construction Safety personnel.

## **VIII. EVALUATION DURING WORK IN PROGRESS**

The Contractor's adherence to these Safety Requirements will be monitored throughout the project. This will be accomplished by the following:

- A. Use of a safety checklist by a representative of the Office of Construction Safety (or other designated DDC representative) and the RE during regular inspections and comprehensive audits of the job site. Field Exit Conferences will be held with the RE and Contractor Project Safety Representatives.
- B. The RE will continually monitor the safety and environmental performance of the Contractor's employees and work methods. Deficiencies will be brought to the attention of the Contractor's Project Safety Representative on site for immediate correction. The RE will maintain a written record of these deficiencies and have these records available upon request. Any critical deficiencies will be immediately reported to the Office of Construction Safety via telephone (718)391-1911.
- C. If the Contractor's safety performance during the project is not up to DDC standards (safety performance measure, accident/incident rate, etc.) the Director – Office of Construction Safety, or his/her designee will meet with the Contractor's Project Safety Representative and other representatives, the RE, and the DDC Environmental Specialist (if environmental issues are involved). The purpose of this meeting is to 1) determine the level of non-compliance; 2) explain and clarify the safety/environmental provisions; 3) agree on a future course of action to correct the deficiencies.
- D. If the deficiencies continue, the Commissioner may, without limitation, declare the Contractor in default.
- E. The Contractor will within 1 hour inform the RE of all accidents/incidents/near misses including all fatalities, any injuries to employees or members of the general public, and property damage (e.g., structural damage, equipment rollovers, utility damage, loads dropped from crane). The RE will notify the Office of Construction Safety as per DDC's Construction Safety Emergency and Accident Notification and Response Procedure and will maintain a record of all Contractor accidents/incidents for the project.
- F. The Contractor and the RE will notify the Office of Construction Safety within two (2) hours of the start of any NYS-DOL/ NYC-COSH/ OSHA/ EPA inspections.

## **IX. SAFETY PERFORMANCE EVALUATION**

The Contractor's safety record, including accident/incident history and DDC safety inspection results, will be considered as part of the Contractor's performance evaluation at the conclusion of the project. Poor safety performance during the course of the project will be a reason to rate a Contractor unsatisfactory which may be reflected in the City's PASSPort system and will be considered for future procurement actions as set forth in the City's Procurement Policy Board Rules.

# NOTICE TO BIDDERS

Please be advised that the following Riders to the March 2017 New York City Standard Construction Contract have been attached and incorporated in this Invitation for Bid:

- Rider regarding Non-Compensable Delays and Grounds for Extension;
- Rider regarding NYC Earned Safe and Sick Time Act.

Other than provisions specifically delineated in the Riders, all other terms of the March 2017 New York City Standard Construction Contract continue to apply in full force and effect.

**RIDER TO NEW YORK CITY STANDARD CONSTRUCTION CONTRACT (MARCH  
2017) REGARDING NON-COMPENSABLE DELAYS AND GROUNDS FOR  
EXTENSION**

The following provisions supersede the corresponding provisions in the March 2017 version of the New York City Standard Construction Contract:

1. Section **11.5.1** provides as follows:

11.5.1 The acts or omissions of public or government bodies (other than **City** agencies) or of any third parties who are disclosed in the **Contract Documents**, or those third parties who are ordinarily encountered or who are generally recognized as related to the **Work**, including but not limited to, **Other Contractors**, utilities or private enterprises;

2. Section **11.5.6** provides as follows:

**11.5.6** Climatic conditions, storms, floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides or other catastrophes or acts of God; acts of war or of the public enemy or terrorist acts; disruption, outage or power failure caused by a utility's inability or failure to provide service, pandemics, epidemics, outbreaks of infectious disease or any other public health emergency; other states of emergency declared by the City, State or Federal government, quarantine restrictions, and freight embargoes; including the **City's** reasonable responses to any of the above; and

3. Section **13.3** provides as follows:

**13.3** Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the **Work** caused solely:

**13.3.1** By any of the acts or omissions of the **City**, its officials, agents or employees set forth in Articles **11.4.1.1** through **11.4.1.9**; or

**13.3.2** By or attributable to any of the items set forth in Articles **11.5.1** through **11.5.7**.

**13.3.3** The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **ACCO** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

## **NYC EARNED SAFE AND SICK TIME ACT CONTRACT RIDER**

(To supersede Section 4.06 of the January 2018 Appendix A and Section 35.5 of the March 2017 Standard Construction Contract and to be attached to other City contracts and solicitations)

### A. *Introduction and General Provisions.*

1. The Earned Safe and Sick Time Act (“ESSTA”), codified at Title 20, Chapter 8 of the New York City Administrative Code, also known as the “Paid Safe and Sick Leave Law,” requires covered employees (as defined in Admin. Code § 20-912) in New York City (“City”) to be provided with paid safe and sick time. Contractors of the City or of other governmental entities may be required to provide safe and sick time pursuant to the ESSTA. The ESSTA is enforced by the City’s Department of Consumer and Worker Protection (“DCWP”), which has promulgated 6 RCNY §§ 7-101 and 201 *et seq.* (“DCWP Rules”).

2. The Contractor agrees to comply in all respects with the ESSTA and the DCWP Rules, and as amended, if applicable, in the performance of this agreement. The Contractor further acknowledges that such compliance is a material term of this agreement and that failure to comply with the ESSTA in performance of this agreement may result in its termination.

3. The Contractor must notify (with a copy to DCWP at [ComplianceMonitoring@dcwp.nyc.gov](mailto:ComplianceMonitoring@dcwp.nyc.gov)) the Agency Chief Contracting Officer of the City Agency or other entity with whom it is contracting in writing within 10 days of receipt of a complaint (whether oral or written) or notice of investigation regarding the ESSTA involving the performance of this agreement. Additionally, the Contractor must cooperate with DCWP’s guidance and must comply with DCWP’s subpoenas, requests for information, and other document demands as set forth in the ESSTA and the DCWP Rules. More information is available at <https://www1.nyc.gov/site/dca/about/paid-sick-leave-what-employers-need-to-know.page>.

4. Upon conclusion of a DCWP investigation, Contractor will receive a findings letter detailing any employee relief and civil penalties owed. Pursuant to the findings, Contractor will have the opportunity to settle any violations and cure the breach of this agreement caused by failure to comply with the ESSTA either i) without a trial by entering into a consent order or ii) appearing before an impartial judge at the City’s administrative tribunal. In addition to and notwithstanding any other rights and remedies available to the City, non-payment of relief and penalties owed pursuant to a consent order or final adjudication within 30 days of such consent order or final adjudication may result in the termination of this agreement without further opportunity to settle or cure the violations.

5. The ESSTA is briefly summarized below for the convenience of the Contractor. The Contractor is advised to review the ESSTA and the DCWP Rules in their entirety. The Contractor may go to [www.nyc.gov/PaidSickLeave](http://www.nyc.gov/PaidSickLeave) for resources for employers, such as Frequently Asked Questions, timekeeping tools and model forms, and an event calendar of upcoming presentations and webinars at which the Contractor can get more information about how to comply with the ESSTA and the DCWP Rules. The Contractor acknowledges that it is responsible for compliance with the ESSTA and the DCWP Rules notwithstanding any inconsistent language contained herein.



B. *Pursuant to the ESSTA and DCWP Rules: Applicability, Accrual, and Use.*

1. An employee who works within the City must be provided paid safe and sick time.<sup>1</sup> Employers with one hundred or more employees are required to provide 56 hours of safe and sick time for an employee each calendar year. Employers with fewer than one hundred employees are required to provide 40 hours of sick leave each calendar year. Employers must provide a minimum of one hour of safe and sick time for every 30 hours worked by an employee and compensation for such safe and sick time must be provided at the greater of the employee's regular hourly rate or the minimum wage at the time the paid safe or sick time is taken. Employers are not discouraged or prohibited from providing more generous safe and sick time policies than what the ESSTA requires.

2. Employees have the right to determine how much safe and sick time they will use, provided that an employer may set a reasonable minimum increment for the use of safe and sick time not to exceed four hours per day. For the use of safe time or sick time beyond the set minimum increment, an employer may set fixed periods of up to thirty minutes beyond the minimum increment. In addition, an employee may carry over up to 40 or 56 hours of unused safe and sick time to the following calendar year, provided that no employer is required to carry over unused paid safe and sick time if the employee is paid for such unused safe and sick time and the employer provides the employee with at least the legally required amount of paid safe and sick time for such employee for the immediately subsequent calendar year on the first day of such calendar year.

3. An employee entitled to safe and sick time pursuant to the ESSTA may use safe and sick time for any of the following:

a. such employee's mental illness, physical illness, injury, or health condition or the care of such illness, injury, or condition or such employee's need for medical diagnosis or preventive medical care;

b. such employee's care of a family member (an employee's child, spouse, domestic partner, parent, sibling, grandchild, or grandparent, the child or parent of an employee's spouse or domestic partner, any other individual related by blood to the employee, and any other individual whose close association with the employee is the equivalent of a family relationship) who has a mental illness, physical illness, injury or health condition or who has a need for medical diagnosis or preventive medical care;

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<sup>1</sup> Pursuant to the ESSTA, if fewer than five employees work for the same employer, and the employer had a net income of less than one million dollars during the previous tax year, such employer has the option of providing such employees uncompensated safe and sick time.

c. closure of such employee's place of business by order of a public official due to a public health emergency;

d. such employee's need to care for a child whose school or childcare provider has been closed due to a public health emergency; or

e. when the employee or a family member has been the victim of a family offense matter, sexual offense, stalking, or human trafficking:

1. to obtain services from a domestic violence shelter, rape crisis center, or other shelter or services program for relief from a family offense matter, sexual offense, stalking, or human trafficking;
2. to participate in safety planning, temporarily or permanently relocate, or take other actions to increase the safety of the employee or employee's family members from future family offense matters, sexual offenses, stalking, or human trafficking;
3. to meet with a civil attorney or other social service provider to obtain information and advice on, and prepare for or participate in any criminal or civil proceeding, including but not limited to, matters related to a family offense matter, sexual offense, stalking, human trafficking, custody, visitation, matrimonial issues, orders of protection, immigration, housing, discrimination in employment, housing or consumer credit;
4. to file a complaint or domestic incident report with law enforcement;
5. to meet with a district attorney's office;
6. to enroll children in a new school; or
7. to take other actions necessary to maintain, improve, or restore the physical, psychological, or economic, health or safety of the employee or the employee's family member or to protect those who associate or work with the employee.

4. An employer must not require an employee, as a condition of taking safe and sick time, to search for a replacement. However, where the employee's need for safe and sick time is foreseeable, an employer may require an employee to provide reasonable notice of the need to use safe and sick time. For an absence of more than three consecutive work days, an employer may require reasonable documentation that the use of safe and sick time was needed for a reason listed in Admin. Code § 20-914; and/or written confirmation that an employee used safe and sick time pursuant to the ESSTA. However, an employer may not require documentation specifying the nature of a medical condition, require disclosure of the details of a medical condition, or require disclosure of the details of a family offense matter, sexual offense, stalking, or human trafficking, as a condition of providing safe and sick time. Health information and information concerning family offenses, sexual offenses, stalking or human trafficking obtained solely due to an

employee's use of safe and sick time pursuant to the ESSTA must be treated by the employer as confidential. An employer must reimburse an employee for all reasonable costs or expenses incurred in obtaining such documentation for the employer.

5. An employer must provide to all employees a written policy explaining its method of calculating sick time, policies regarding the use of safe and sick time (including any permissible discretionary conditions on use), and policies regarding carry-over of unused time at the end of the year, among other topics. It must provide the policy to employees using a delivery method that reasonably ensures that employees receive the policy. If such employer has not provided its written policy, it may not deny safe and sick time to an employee because of non-compliance with such a policy.

6. An employer must provide a pay statement or other form of written documentation that informs the employee of the amount of safe/sick time accrued and used during the relevant pay period and the total balance of the employee's accrued safe/sick time available for use.

7. Safe and sick time to which an employee is entitled must be paid no later than the payday for the next regular payroll period beginning after the safe and sick time was used.

C. *Exemptions and Exceptions.* Notwithstanding the above, the ESSTA does not apply to any of the following:

1. an independent contractor who does not meet the definition of employee under N.Y. Labor Law § 190(2);

2. an employee covered by a valid collective bargaining agreement, if the provisions of the ESSTA are expressly waived in such agreement and such agreement provides a benefit comparable to that provided by the ESSTA for such employee;

3. an audiologist, occupational therapist, physical therapist, or speech language pathologist who is licensed by the New York State Department of Education and who calls in for work assignments at will, determines their own schedule, has the ability to reject or accept any assignment referred to them, and is paid an average hourly wage that is at least four times the federal minimum wage;

4. an employee in a work study program under Section 2753 of Chapter 42 of the United States Code;

5. an employee whose work is compensated by a qualified scholarship program as that term is defined in the Internal Revenue Code, Section 117 of Chapter 20 of the United States Code; or

6. a participant in a Work Experience Program (WEP) under N.Y. Social Services Law § 336-c.

D. *Retaliation Prohibited.* An employer shall not take any adverse action against an employee that penalizes the employee for, or is reasonably likely to deter the employee from or interfere with the employee exercising or attempting in good faith to exercise any right provided by the ESSTA. In addition, an employer shall not interfere with any investigation, proceeding, or hearing pursuant to the ESSTA.

E. *Notice of Rights.*

1. An employer must provide its employees with written notice of their rights pursuant to the ESSTA. Such notice must be in English and the primary language spoken by an employee, provided that DCWP has made available a translation into such language. Downloadable notices are available on DCWP's website at <https://www1.nyc.gov/site/dca/about/Paid-Safe-Sick-Leave-Notice-of-Employee-Rights.page>. The notice must be provided to the employees by a method that reasonably ensures personal receipt by the employee.

2. Any person or entity that willfully violates these notice requirements is subject to a civil penalty in an amount not to exceed \$50.00 for each employee who was not given appropriate notice.

F. *Records.* An employer must retain records documenting its compliance with the ESSTA for a period of at least three years, and must allow DCWP to access such records in furtherance of an investigation related to an alleged violation of the ESSTA.

G. *Enforcement and Penalties.*

1. Upon receiving a complaint alleging a violation of the ESSTA, DCWP must investigate such complaint. DCWP may also open an investigation to determine compliance with the ESSTA on its own initiative. Upon notification of a complaint or an investigation by DCWP, the employer must provide DCWP with a written response and any such other information as DCWP may request. If DCWP believes that a violation of the ESSTA has occurred, it has the right to issue a notice of violation to the employer.

2. DCWP has the power to grant an employee or former employee all appropriate relief as set forth in Admin. Code § 20-924(d). Such relief may include, but is not limited to, treble damages for the wages that should have been paid; statutory damages for unlawful retaliation; and damages, including statutory damages, full compensation for wages and benefits lost, and reinstatement, for unlawful discharge. In addition, DCWP may impose on an employer found to have violated the ESSTA civil penalties not to exceed \$500.00 for a first violation, \$750.00 for a second violation within two years of the first violation, and \$1,000.00 for each succeeding violation within two years of the previous violation. When an employer has a policy or practice of not providing or refusing to allow the use of safe and sick time to its employees, DCWP may seek penalties and relief on a per employee basis.

3. Pursuant to Admin. Code § 20-924.2, (a) where reasonable cause exists to believe that an employer is engaged in a pattern or practice of violations of the ESSTA, the Corporation Counsel may commence a civil action on behalf of the City in a court of competent jurisdiction by filing a complaint setting forth facts relating to such pattern or practice and requesting relief, which may include injunctive relief, civil penalties and any other appropriate relief. Nothing in § 20-924.2 prohibits DCWP from exercising its authority under section 20-924 or the Charter, provided that a civil action pursuant to § 20-924.2 shall not have previously been commenced.

H. *More Generous Policies and Other Legal Requirements.* Nothing in the ESSTA is intended to discourage, prohibit, diminish, or impair the adoption or retention of a more generous safe and sick time policy, or the obligation of an employer to comply with any contract, collective bargaining agreement, employment benefit plan or other agreement providing more generous safe and sick time. The ESSTA provides minimum requirements pertaining to safe and sick time and does not preempt, limit, or otherwise affect the applicability of any other law, regulation, rule, requirement, policy or standard that provides for greater accrual or use by employees of safe and sick leave or time, whether paid or unpaid, or that extends other protections to employees. The ESSTA may not be construed as creating or imposing any requirement in conflict with any federal or state law, rule or regulation.

**CITY OF NEW YORK**

**STANDARD CONSTRUCTION CONTRACT**

**March 2017**

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*CITY OF NEW YORK STANDARD CONSTRUCTION CONTRACT*

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## WITNESSETH:

The parties, in consideration of the mutual agreements contained herein, agree as follows:

### CHAPTER I: THE CONTRACT AND DEFINITIONS

#### ARTICLE 1. THE CONTRACT

1.1 Except for titles, subtitles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience), the following, except for such portions thereof as maybe specifically excluded, shall be deemed to be part of this **Contract**:

1.1.1 All provisions required by law to be inserted in this **Contract**, whether actually inserted or not;

1.1.2 The Contract Drawings and Specifications;

1.1.3 The General Conditions and Special Conditions, if any;

1.1.4 The **Contract**;

1.1.5 The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet;

1.1.6 All Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed or the Order to Work.

1.2 Should any conflict occur in or between the Drawings and Specifications, the **Contractor** shall be deemed to have estimated the most expensive way of doing the **Work**, unless the **Contractor** shall have asked for and obtained a decision in writing from the **Commissioner** of the **Agency** that is entering into this **Contract**, before the submission of its bid, as to what shall govern.

#### ARTICLE 2. DEFINITIONS

2.1 The following words and expressions, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless a different meaning is clear from the context:

2.1.1 “**Addendum**” or “**Addenda**” shall mean the additional Contract provisions and/or technical clarifications issued in writing by the Commissioner prior to the receipt of bids.

2.1.2 “**Agency**” shall mean a city, county, borough or other office, position, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from the City treasury.

2.1.3 “**Agency Chief Contracting Officer**” (**ACCO**) shall mean a person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO, or his/her duly authorized representative.

2.1.4 **“Allowance”** shall mean a sum of money which the Agency may include in the total amount of the Contract for such specific contingencies as the Agency believes may be necessary to complete the Work, *e.g.*, lead or asbestos remediation, and for which the Contractor will be paid on the basis of stipulated unit prices or a formula set forth in the Contract or negotiated between the parties provided, however, that if the Contractor is not directed to use the Allowance, the Contractor shall have no right to such money and it shall be deducted from the total amount of the Contract.

2.1.5 **“City”** shall mean the City of New York.

2.1.6 **“City Chief Procurement Officer” (CCPO)** shall mean a person delegated authority by the Mayor to coordinate and oversee the procurement activity of Mayoral agency staff, including the ACCO and any offices which have oversight responsibility for the procurement of construction, or his/her duly authorized representative.

2.1.7 **“Commissioner”** shall mean the head of the Agency that has entered into this Contract, or his/her duly authorized representative.

2.1.8 **“Comptroller”** shall mean the Comptroller of the City of New York.

2.1.9 **“Contract”** or **“Contract Documents”** shall mean each of the various parts of the contract referred to in Article 1 hereof, both as a whole and severally.

2.1.10 **“Contract Drawings”** shall mean only those drawings specifically entitled as such and listed in the Specifications or in any Addendum, or any drawings furnished by the Commissioner, pertaining or supplemental thereto.

2.1.11 **“Contract Work”** shall mean everything required to be furnished and done by the Contractor by any one or more of the parts of the Contract referred to in Article 1, except Extra Work as hereinafter defined.

2.1.12 **“Contractor”** shall mean the entity which executed this Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and its, their, his/her successors, personal representatives, executors, administrators, and assigns, and any person, firm, partnership, joint venture, individual, or corporation which shall at any time be substituted in the place of the Contractor under this Contract.

2.1.13 **“Days”** shall mean calendar days, except where otherwise specified.

2.1.14 **“Engineer”** or **“Architect”** or **“Project Manager”** shall mean the person so designated in writing by the Commissioner in the Notice to Proceed or the Order to Work to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be. Subject to written approval by the Commissioner, the Engineer, Architect or Project Manager may designate an authorized representative.

2.1.15 **“Engineering Audit Officer” (EAO)** shall mean the person so designated by the Commissioner to perform responsible auditing functions hereunder.

2.1.16 **“Extra Work”** shall mean Work other than that required by the Contract at the time of award which is authorized by the Commissioner pursuant to Chapter VI of this Contract.

- 2.1.17 **“Federal-Aid Contract”** shall mean a contract in which the United States (federal) Government provides financial funding as so designated in the Information for Bidders.
- 2.1.18 **“Final Acceptance”** shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.
- 2.1.19 **“Final Approved Punch List”** shall mean a list, approved pursuant to Article 14.2.2, specifying those items of Work to be completed by the Contractor after Substantial Completion and dates for the completion of each item of Work.
- 2.1.20 **“Law” or “Laws”** shall mean the Constitution of the State of New York, the New York City Charter, the New York City Administrative Code, a statute of the United States or of the State of New York, a local law of the City of New York, any ordinance, rule or regulation having the force of law, or common law.
- 2.1.21 **“Materialman”** shall mean any corporation, firm, partnership, joint venture, or individual, other than employees of the Contractor, who or which contracts with the Contractor or any Subcontractor, to fabricate or deliver, or who actually fabricates or delivers, plant, materials or equipment to be incorporated in the Work.
- 2.1.22 **“Means and Methods of Construction”** shall mean the labor, materials, temporary structures, tools, plant, and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by this Contract.
- 2.1.23 **“Notice to Proceed” or “Order to Work”** shall mean the written notice issued by the Commissioner specifying the time for commencement of the Work and the Engineer, Architect or Project Manager.
- 2.1.24 **“Other Contractor(s)”** shall mean any contractor (other than the entity which executed this Contract or its Subcontractors) who or which has a contract with the City for work on or adjacent to the building or Site of the Work.
- 2.1.25 **“Payroll Taxes”** shall mean State Unemployment Insurance (SUI), Federal Unemployment Insurance (FUI), and payments pursuant to the Federal Insurance Contributions Act (FICA).
- 2.1.26 **“Project”** shall mean the public improvement to which this Contract relates.
- 2.1.27 **“Procurement Policy Board” (PPB)** shall mean the Agency of the City of New York whose function is to establish comprehensive and consistent procurement policies and rules which shall have broad application throughout the City.
- 2.1.28 **“Required Quantity”** in a unit price Contract shall mean the actual quantity of any item of Work or materials which is required to be performed or furnished in order to comply with the Contract.
- 2.1.29 **“Resident Engineer”** shall mean the representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the Work.
- 2.1.30 **“Site”** shall mean the area upon or in which the Contractor’s operations are carried on, and such other areas adjacent thereto as may be designated as such by the Engineer.
- 2.1.31 **“Small Tools”** shall mean items that are ordinarily required for a worker’s job

function, including but not limited to, equipment that ordinarily has no licensing, insurance or substantive storage costs associated with it; such as circular and chain saws, impact drills, threaders, benders, wrenches, socket tools, etc.

2.1.32 “**Specifications**” shall mean all of the directions, requirements, and standards of performance applying to the Work as hereinafter detailed and designated under the Specifications.

2.1.33 “**Subcontractor**” shall mean any person, firm or corporation, other than employees of the Contractor, who or which contracts with the Contractor or with its subcontractors to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, or superintendence, supervision and/or management at the Site. Wherever the word Subcontractor appears, it shall also mean sub-Subcontractor.

2.1.34 “**Substantial Completion**” shall mean the written determination by the Engineer that the Work required under this Contract is substantially, but not entirely, complete and the approval of the **Final Approved Punch List**.

2.1.35 “**Work**” shall mean all services required to complete the Project in accordance with the Contract Documents, including without limitation, labor, material, superintendence, management, administration, equipment, and incidentals, and obtaining any and all permits, certifications and licenses as may be necessary and required to complete the Work, and shall include both Contract Work and Extra Work.

## **CHAPTER II: THE WORK AND ITS PERFORMANCE**

### **ARTICLE 3. CHARACTER OF THE WORK**

3.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Work** shall be performed in accordance with the best modern practice, utilizing, unless otherwise specified in writing, new and unused materials of standard first grade quality and workmanship and design of the highest quality, to the satisfaction of the **Commissioner**.

### **ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION**

4.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications, and Addenda**, the **Means and Methods of Construction** shall be such as the **Contractor** may choose; subject, however, to the **Engineer’s** right to reject the **Means and Methods of Construction** proposed by the **Contractor** which in the opinion of the **Engineer**:

4.1.1 Will constitute or create a hazard to the **Work**, or to persons or property; or

4.1.2 Will not produce finished **Work** in accordance with the terms of the **Contract**; or

4.1.3 Will be detrimental to the overall progress of the **Project**.

4.2 The **Engineer’s** approval of the **Contractor’s Means and Methods of Construction**, or his/her failure to exercise his/her right to reject such means or methods, shall not relieve the **Contractor** of its obligation to complete the **Work** as provided in this **Contract**; nor shall the exercise of such right to reject

create a cause of action for damages.

## ARTICLE 5. COMPLIANCE WITH LAWS

5.1 The **Contractor** shall comply with all **Laws** applicable to this **Contract** and to the **Work** to be done hereunder.

5.2 Procurement Policy Board Rules: This **Contract** is subject to the Rules of the **PPB** (“**PPB Rules**”) in effect at the time of the bid opening for this **Contract**. In the event of a conflict between the **PPB Rules** and a provision of this **Contract**, the **PPB Rules** shall take precedence.

5.3 Noise Control Code provisions.

5.3.1 In accordance with the provisions of Section 24-216(b) of the Administrative Code of the **City** (“**Administrative Code**”), Noise Abatement Contract Compliance, devices and activities which will be operated, conducted, constructed or manufactured pursuant to this **Contract** and which are subject to the provisions of the **City** Noise Control Code shall be operated, conducted, constructed, or manufactured without causing a violation of the Administrative Code. Such devices and activities shall incorporate advances in the art of noise control development for the kind and level of noise emitted or produced by such devices and activities, in accordance with regulations issued by the **Commissioner** of the **City** Department of Environmental Protection.

5.3.2 The **Contractor** agrees to comply with Section 24-219 of the Administrative Code and implementing rules codified at 15 Rules of the City of New York (“**RCNY**”) Section 28-100 *et seq.* In accordance with such provisions, the **Contractor**, if the **Contractor** is the responsible party under such regulations, shall prepare and post a Construction Noise Mitigation Plan at each **Site**, in which the **Contractor** shall certify that all construction tools and equipment have been maintained so that they operate at normal manufacturers operating specifications. If the **Contractor** cannot make this certification, it must have in place an Alternative Noise Mitigation Plan approved by the **City** Department of Environmental Protection. In addition, the **Contractor**’s certified Construction Noise Mitigation Plan is subject inspection by the **City** Department of Environmental Protection in accordance with Section 28-101 of Title 15 of RCNY. No **Contract Work** may take place at a **Site** unless there is a Construction Noise Mitigation Plan or approved Alternative Noise Mitigation Plan in place. In addition, the **Contractor** shall create and implement a noise mitigation training program. Failure to comply with these requirements may result in fines and other penalties pursuant to the applicable provisions of the Administrative Code and RCNY.

5.4 Ultra Low Sulfur Diesel Fuel: In accordance with the provisions of Section 24-163.3 of the Administrative Code, the **Contractor** specifically agrees as follows:

5.4.1 Definitions. For purposes of this Article 5.4, the following definitions apply:

5.4.1(a) “**Contractor**” means any person or entity that enters into a Public Works Contract with a **City Agency**, or any person or entity that enters into an agreement with such person or entity, to perform work or provide labor or services related to such Public Works Contract.

5.4.1(b) “**Motor Vehicle**” means any self-propelled vehicle designed for transporting



persons or property on a street or highway.

5.4.1(c) “Nonroad Engine” means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.4.1(d) “Nonroad Vehicle” means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except that this term shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) horsepower or less and that are not used in any construction program or project.

5.4.1(e) “Public Works Contract” means a contract with a **City Agency** for a construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; a contract with a **City Agency** for the preparation for any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; or a contract with a **City Agency** for any final work involved in the completion of any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge.

5.4.1(f) “Ultra Low Sulfur Diesel Fuel” means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

#### 5.4.2 Ultra Low Sulfur Diesel Fuel

5.4.2(a) All **Contractors** shall use Ultra Low Sulfur Diesel Fuel in diesel-powered Nonroad Vehicles in the performance of this **Contract**.

5.4.2(b) Notwithstanding the requirements of Article 5.4.2(a), **Contractors** may use diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) to fulfill the requirements of this Article 5.4.2, where the Commissioner of the **City** Department of Environmental Protection (“DEP Commissioner”) has issued a determination that a sufficient quantity of Ultra Low Sulfur Diesel Fuel is not available to meet the needs of **Agencies** and **Contractors**. Any such determination shall expire after six (6) months unless renewed.

5.4.2(c) **Contractors** shall not be required to comply with this Article 5.4.2 where the **City Agency** letting this **Contract** makes a written finding, which is approved, in writing, by the DEP Commissioner, that a sufficient quantity of Ultra Low Sulfur Diesel Fuel, or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm) is not available to meet the requirements of Section 24-163.3 of the Administrative Code, provided that such **Contractor** in its fulfillment of the requirements of this **Contract**, to the extent practicable, shall use whatever quantity of Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per

million (30 ppm) is available. Any finding made pursuant to this Article 5.4.2(c) shall expire after sixty (60) **Days**, at which time the requirements of this Article 5.4.2 shall be in full force and effect unless the **City Agency** renews the finding in writing and such renewal is approved by the DEP Commissioner.

5.4.2(d) **Contractors** may check on determinations and approvals issued by the DEP Commissioner pursuant to Section 24-163.3 of the Administrative Code, if any, at [www.dep.nyc.gov](http://www.dep.nyc.gov) or by contacting the **City Agency** letting this **Contract**.

5.4.2(e) The requirements of this Article 5.4.2 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

#### 5.4.3 Best Available Technology

5.4.3(a) All **Contractors** shall utilize the best available technology for reducing the emission of pollutants for diesel-powered Nonroad Vehicles in the performance of this **Contract**. For determinations of best available technology for each type of diesel-powered Nonroad Vehicle, **Contractors** shall comply with the regulations of the **City Department of Environmental Protection**, as and when adopted, Chapter 14 of Title 15 of the Rules of the City of New York (RCNY). The **Contractor** shall fully document all steps in the best available technology selection process and shall furnish such documentation to the **City Agency** or the DEP Commissioner upon request. The **Contractor** shall retain all documentation generated in the best available technology selection process for as long as the selected best available technology is in use.

5.4.3(b) No **Contractor** shall be required to replace best available technology for reducing the emission of pollutants or other authorized technology utilized for a diesel-powered Nonroad Vehicle in accordance with the provisions of this Article 5.4.3 within three (3) years of having first utilized such technology for such vehicle.

5.4.3(c) This Article 5.4.3 shall not apply to any vehicle used to satisfy the requirements of a specific Public Works Contract for fewer than twenty (20) **Days**.

5.4.3(d) The **Contractor** shall not be required to comply with this Article 5.4.3 with respect to a diesel-powered Nonroad Vehicle under the following circumstances:

5.4.3(d)(i) Where the **City Agency** makes a written finding, which is approved, in writing, by the DEP Commissioner, that the best available technology for reducing the emission of pollutants as required by this Article 5.4.3 is unavailable for such vehicle, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle.

5.4.3(d)(ii) Where the DEP Commissioner has issued a written waiver based upon the Contractor having demonstrated to the DEP Commissioner that the use of the best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction, the **Contractor** shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle, which would not endanger the operator of such vehicle or those working near such vehicle.

5.4.3(d)(iii) In determining which technology to use for the purposes of Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above, the **Contractor** shall primarily consider the reduction in emissions of particulate matter and secondarily consider the reduction in emissions of nitrogen oxides associated with the use of such technology, which shall in no event result in an increase in the emissions of either such pollutant.

5.4.3(d)(iv) The **Contractor** shall submit requests for a finding or a waiver pursuant to this Article 5.4.3(d) in writing to the DEP Commissioner, with a copy to the **ACCO** of the **City Agency** letting this **Contract**. Any finding or waiver made or issued pursuant to Articles 5.4.3(d)(i) and 5.4.3(d)(ii) above shall expire after one hundred eighty (180) **Days**, at which time the requirements of Article 5.4.3(a) shall be in full force and effect unless the **City Agency** renews the finding, in writing, and the DEP Commissioner approves such finding, in writing, or the DEP Commissioner renews the waiver, in writing.

5.4.3(e) The requirements of this Article 5.4.3 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.4 Section 24-163 of the Administrative Code. The **Contractor** shall comply with Section 24-163 of the Administrative Code related to the idling of the engines of motor vehicles while parking.

#### 5.4.5 Compliance

5.4.5(a) The **Contractor's** compliance with Article 5.4 may be independently monitored. If it is determined that the **Contractor** has failed to comply with any provision of Article 5.4, any costs associated with any independent monitoring incurred by the **City** shall be reimbursed by the **Contractor**.

5.4.5(b) Any **Contractor** who violates any provision of Article 5.4, except as provided in Article 5.4.5(c) below, shall be liable for a civil penalty between the amounts of one thousand (\$1,000) and ten thousand (\$10,000) dollars, in addition to twice the amount of money saved by such **Contractor** for failure to comply with Article 5.4.

5.4.5(c) No **Contractor** shall make a false claim with respect to the provisions of Article 5.4 to a **City Agency**. Where a **Contractor** has been found to have done so, such **Contractor** shall be liable for a civil penalty of twenty thousand (\$20,000) dollars, in addition to twice the amount of money saved by such **Contractor** in association with having made such false claim.

#### 5.4.6 Reporting

5.4.6(a) For all Public Works Contracts covered by this Article 5.4, the **Contractor** shall report to the **City Agency** the following information:

5.4.6(a)(i) The total number of diesel-powered Nonroad Vehicles used to fulfill the requirements of this Public Works Contract;

5.4.6(a)(ii) The number of such Nonroad Vehicles that were powered by Ultra Low Sulfur Diesel Fuel;

5.4.6(a)(iii) The number of such Nonroad Vehicles that utilized the best available technology for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology;

5.4.6(a)(iv) The number of such Nonroad Vehicles that utilized such other authorized technology in accordance with Article 5.4.3, including a breakdown by vehicle model and the type of technology used for each such vehicle;

5.4.6(a)(v) The locations where such Nonroad Vehicles were used; and

5.4.6(a)(vi) Where a determination is in effect pursuant to Article 5.4.2(b) or 5.4.2(c), detailed information concerning the **Contractor's** efforts to obtain Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million (30 ppm).

5.4.6(b) The **Contractor** shall submit the information required by Article 5.4.6(a) at the completion of **Work** under the Public Works Contract and on a yearly basis no later than August 1 throughout the term of the Public Works Contract. The yearly report shall cover **Work** performed during the preceding fiscal year (July 1 - June 30).

5.5 Ultra Low Sulfur Diesel Fuel. In accordance with the Coordinated Construction Act for Lower Manhattan, as amended:

5.5.1 Definitions. For purposes of this Article 5.5, the following definitions apply:

5.5.1(a) "Lower Manhattan" means the area to the south of and within the following lines: a line beginning at a point where the United States pierhead line in the Hudson River as it exists now or may be extended would intersect with the southerly line of West Houston Street in the Borough of Manhattan extended, thence easterly along the southerly side of West Houston Street to the southerly side of Houston Street, thence easterly along the southerly side of Houston Street to the southerly side of East Houston Street, thence northeasterly along the southerly side of East Houston Street to the point where it would intersect with the United States pierhead line in the East River as it exists now or may be extended, including tax lots within or immediately adjacent thereto.

5.5.1(b) "Lower Manhattan Redevelopment Project" means any project in Lower Manhattan that is funded in whole or in part with federal or State funding, or any project intended to improve transportation between Lower Manhattan and the two air terminals in the **City** known as LaGuardia Airport and John F. Kennedy International Airport, or between Lower Manhattan and the air terminal in Newark known as Newark Liberty International Airport, and that is funded in whole or in part with federal funding.

5.5.1(c) "Nonroad Engine" means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under Section 7411 or Section 7521 of Title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.5.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty (50) horsepower (HP) and greater, and that is not a Motor Vehicle or a vehicle used

solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers, and similar equipment, except that this terms shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five (65) HP or less and that are not used in any construction program or project.

5.5.1(e) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million (15 ppm).

5.5.2 Requirements. **Contractors** and **Subcontractors** are required to use only Ultra Low Sulfur Diesel Fuel to power the diesel-powered Nonroad Vehicles with engine HP rating of fifty (50) HP and above used on a Lower Manhattan Redevelopment Project and, where practicable, to reduce the emission of pollutants by retrofitting such Nonroad Vehicles with oxidation catalysts, particulate filters, or technology that achieves lowest particulate matter emissions.

5.6 Pesticides. In accordance with Section 17-1209 of the Administrative Code, to the extent that the **Contractor** or any **Subcontractor** applies pesticides to any property owned or leased by the **City**, the **Contractor**, and any **Subcontractor** shall comply with Chapter 12 of the Administrative Code.

5.7 Waste Treatment, Storage, and Disposal Facilities and Transporters. In connection with the **Work**, the **Contractor** and any **Subcontractor** shall use only those waste treatment, storage, and disposal facilities and waste transporters that possess the requisite license, permit or other governmental approval necessary to treat, store, dispose, or transport the waste, materials or hazardous substances.

5.8 Environmentally Preferable Purchasing. The **Contractor** shall ensure that products purchased or leased by the **Contractor** or any **Subcontractor** for the **Work** that are not specified by the **City** or are submitted as equivalents to a product specified by the **City** comply with the requirements of the New York City Environmentally Preferable Purchasing Program contained in Chapter 11 of Title 43 of the RCNY, pursuant to Chapter 3 of Title 6 of the Administrative Code.

## **ARTICLE 6. INSPECTION**

6.1 During the progress of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall at all times afford the representatives of the **City** every reasonable, safe, and proper facility for inspecting all **Work** done or being done at the **Site** and also for inspecting the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

6.2 The **Contractor's** obligation hereunder shall include the uncovering or taking down of finished **Work** and its restoration thereafter; provided, however, that the order to uncover, take down and restore shall be in writing, and further provided that if **Work** thus exposed proves satisfactory, and if the **Contractor** has complied with Article 6.1, such uncovering or taking down and restoration shall be considered an item of **Extra Work** to be paid for in accordance with the provisions of Article 26. If the **Work** thus exposed proves unsatisfactory, the **City** has no obligation to compensate the **Contractor** for the uncovering, taking down or restoration.

6.3 Inspection and approval by the **Commissioner**, the **Engineer**, **Project Manager**, or **Resident Engineer**, of finished **Work** or of **Work** being performed, or of materials and equipment at the place of manufacture or preparation, shall not relieve the **Contractor** of its obligation to perform the **Work** in strict accordance with the **Contract**. Finished or unfinished **Work** not found to be in strict accordance with the

**Contract** shall be replaced as directed by the **Engineer**, even though such **Work** may have been previously approved and paid for. Such corrective **Work** is **Contract Work** and shall not be deemed **Extra Work**.

6.4 Rejected **Work** and materials shall be promptly taken down and removed from the **Site**, which must at all times be kept in a reasonably clean and neat condition.

**ARTICLE 7. PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION**

7.1 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall be under an absolute obligation to protect the finished and unfinished **Work** against any damage, loss, injury, theft and/or vandalism and in the event of such damage, loss, injury, theft and/or vandalism, it shall promptly replace and/or repair such **Work** at the **Contractor's** sole cost and expense, as directed by the **Resident Engineer**. The obligation to deliver finished **Work** in strict accordance with the **Contract** prior to **Final Acceptance** shall be absolute and shall not be affected by the **Resident Engineer's** approval of, or failure to prohibit, the **Means and Methods of Construction** used by the **Contractor**.

7.2 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall take all reasonable precautions to protect all persons and the property of the **City** and of others from damage, loss or injury resulting from the **Contractor's**, and/or its **Subcontractors'** operations under this **Contract**. The **Contractor's** obligation to protect shall include the duty to provide, place or replace, and adequately maintain at or about the **Site** suitable and sufficient protection such as lights, barricades, and enclosures.

7.3 The **Contractor** shall comply with the notification requirements set forth below in the event of any loss, damage or injury to **Work**, persons or property, or any accidents arising out of the operations of the **Contractor** and/or its **Subcontractors** under this **Contract**.

7.3.1 The **Contractor** shall make a full and complete report in writing to the **Resident Engineer** within three (3) **Days** after the occurrence.

7.3.2 The **Contractor** shall also send written notice of any such event to all insurance carriers that issued potentially responsive policies (including commercial general liability insurance carriers for events relating to the **Contractor's** own employees) no later than twenty (20) days after such event and again no later than twenty (20) days after the initiation of any claim and/or action resulting therefrom. Such notice shall contain the following information: the number of the insurance policy, the name of the Named Insured, the date and location of the incident, and the identity of the persons injured or property damaged. For any policy on which the **City** and/or the **Engineer, Architect, or Project Manager** are Additional Insureds, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Additional Insured, such other Additional Insureds, as well as the Named Insured."

7.3.2(a) Whenever such notice is sent under a policy on which the **City** is an Additional Insured, the **Contractor** shall provide copies of the notice to the **Comptroller, the Commissioner** and the **City Corporation Counsel**. The copy to the **Comptroller** shall be sent to the Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, New York, 10007. The copy to the **Commissioner** shall be sent to the address set forth in Schedule A of the General Conditions. The copy to the **City Corporation Counsel** shall be sent to Insurance Claims Specialist, Affirmative Litigation

Division, New York City Law Department, 100 Church Street, New York, New York 10007.

7.3.2(b) If the **Contractor** fails to provide any of the foregoing notices to any appropriate insurance carrier(s) in a timely and complete manner, the **Contractor** shall indemnify the **City** for all losses, judgments, settlements, and expenses, including reasonable attorneys' fees, arising from an insurer's disclaimer of coverage citing late notice by or on behalf of the **City**.

7.4 To the fullest extent permitted by law, the **Contractor** shall defend, indemnify, and hold the **City**, its employees, and officials (the "Indemnitees") harmless against any and all claims (including but not limited to claims asserted by any employee of the **Contractor** and/or its **Subcontractors**) and costs and expenses of whatever kind (including but not limited to payment or reimbursement of attorneys' fees and disbursements) allegedly arising out of or in any way related to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract** or from the **Contractor's** and/or its **Subcontractors'** failure to comply with any of the provisions of this **Contract** or of the **Law**. Such costs and expenses shall include all those incurred in defending the underlying claim and those incurred in connection with the enforcement of this Article 7.4 by way of cross-claim, third-party claim, declaratory action or otherwise. The parties expressly agree that the indemnification obligation hereunder contemplates (1) full indemnity in the event of liability imposed against the Indemnitees without negligence and solely by reason of statute, operation of **Law** or otherwise; and (2) partial indemnity in the event of any actual negligence on the part of the Indemnitees either causing or contributing to the underlying claim (in which case, indemnification will be limited to any liability imposed over and above that percentage attributable to actual fault whether by statute, by operation of **Law**, or otherwise). Where partial indemnity is provided hereunder, all costs and expenses shall be indemnified on a pro rata basis.

7.4.1 Indemnification under Article 7.4 or any other provision of the **Contract** shall operate whether or not **Contractor** or its **Subcontractors** have placed and maintained the insurance specified under Article 22.

7.5 The provisions of this Article 7 shall not be deemed to create any new right of action in favor of third parties against the **Contractor** or the **City**.

### CHAPTER III: TIME PROVISIONS

#### ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK

8.1 The **Contractor** shall commence the **Work** on the date specified in the **Notice to Proceed** or the **Order to Work**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in the **Notice to Proceed** or the **Order to Work**. **TIME BEING OF THE ESSENCE** to the **City**, the **Contractor** shall thereafter prosecute the **Work** diligently, using such **Means and Methods of Construction** as are in accord with Article 4 herein and as will assure its completion not later than the date specified in this **Contract**, or on the date to which the time for completion may be extended.

#### ARTICLE 9. PROGRESS SCHEDULES

9.1 To enable the **Work** to be performed in an orderly and expeditious manner, the **Contractor**, within fifteen (15) **Days** after the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Engineer**, shall submit to the **Engineer** a proposed progress schedule based on the Critical Path Method in the form of

a bar graph or in such other form as specified by the **Engineer**, and monthly cash flow requirements, showing:

9.1.1 The anticipated time of commencement and completion of each of the various operations to be performed under this **Contract**; and

9.1.2 The sequence and interrelation of each of these operations with the others and with those of other related contracts; and

9.1.3 The estimated time required for fabrication or delivery, or both, of all materials and equipment required for the **Work**, including the anticipated time for obtaining required approvals pursuant to Article 10; and

9.1.4 The estimated amount in dollars the **Contractor** will claim on a monthly basis.

9.2 The proposed schedule shall be revised as directed by the **Engineer**, until finally approved by the **Engineer**, and after such approval, subject to the provisions of Article 11, shall be strictly adhered to by the **Contractor**.

9.3 If the **Contractor** shall fail to adhere to the approved progress schedule, or to the schedule as revised pursuant to Article 11, it shall promptly adopt such other or additional **Means and Methods of Construction**, at its sole cost and expense, as will make up for the time lost and will assure completion in accordance with the approved progress schedule. The approval by the **City** of a progress schedule which is shorter than the time allotted under the **Contract** shall not create any liability for the **City** if the approved progress schedule is not met.

9.4 The **Contractor** will not receive any payments until the proposed progress schedule is submitted.

#### **ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL**

10.1 From time to time as the **Work** progresses and in the sequence indicated by the approved progress schedule, the **Contractor** shall submit to the **Engineer** a specific request in writing for each item of information or approval required by the **Contractor**. These requests shall state the latest date upon which the information or approval is actually required by the **Contractor**, and shall be submitted in a reasonable time in advance thereof to provide the **Engineer** a sufficient time to act upon such submissions, or any necessary re-submissions thereof.

10.2 The **Contractor** shall not have any right to an extension of time on account of delays due to the **Contractor's** failure to submit requests for the required information or the required approval in accordance with the above requirements.

#### **ARTICLE 11. NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY**

11.1 After the commencement of any condition which is causing or may cause a delay in completion of the **Work**, including conditions for which the **Contractor** may be entitled to an extension of time, the following notifications and submittals are required:

11.1.1 Within fifteen (15) **Days** after the **Contractor** becomes aware or reasonably should be



aware of each such condition, the **Contractor** must notify the **Resident Engineer** or **Engineer**, as directed by the **Commissioner**, in writing of the existence, nature and effect of such condition upon the approved progress schedule and the **Work**, and must state why and in what respects, if any, the condition is causing or may cause a delay. Such notice shall include a description of the construction activities that are or could be affected by the condition and may include any recommendations the **Contractor** may have to address the delay condition and any activities the **Contractor** may take to avoid or minimize the delay.

11.1.2 If the **Contractor** shall claim to be sustaining damages for delay as provided for in this Article 11, within forty-five (45) **Days** from the time such damages are first incurred for each such condition, the **Contractor** shall submit to the **Commissioner** a verified written statement of the details and estimates of the amounts of such damages, including categories of expected damages and projected monthly costs, together with documentary evidence of such damages as the **Contractor** may have at the time of submission (“statement of delay damages”), as further detailed in Article 11.6. The **Contractor** may submit the above statement within such additional time as may be granted by the **Commissioner** in writing upon written request therefor.

11.1.3 Articles 11.1.1 and 11.1.2 do not relieve the **Contractor** of its obligation to comply with the provisions of Article 44.

11.2 Failure of the **Contractor** to strictly comply with the requirements of Article 11.1.1 may, in the discretion of the **Commissioner**, be deemed sufficient cause to deny any extension of time on account of delay arising out of such condition. Failure of the **Contractor** to strictly comply with the requirements of both Articles 11.1.1 and 11.1.2 shall be deemed a conclusive waiver by the **Contractor** of any and all claims for damages for delay arising from such condition and no right to recover on such claims shall exist.

11.3 When appropriate and directed by the **Engineer**, the progress schedule shall be revised by the **Contractor** until finally approved by the **Engineer**. The revised progress schedule must be strictly adhered to by the **Contractor**.

#### 11.4 Compensable Delays

11.4.1 The **Contractor** agrees to make claim only for additional costs attributable to delay in the performance of this **Contract** necessarily extending the time for completion of the **Work** or resulting from acceleration directed by the **Commissioner** and required to maintain the progress schedule, occasioned solely by any act or omission to act of the **City** listed below. The **Contractor** also agrees that delay from any other cause shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**.

11.4.1.1 The failure of the **City** to take reasonable measures to coordinate and progress the **Work** to the extent required by the **Contract**, except that the **City** shall not be responsible for the **Contractor’s** obligation to coordinate and progress the **Work** of its **Subcontractors**.

11.4.1.2 Unreasonable delays attributable to the review of shop drawings, the issuance of change orders, or the cumulative impact of change orders that were not brought about by any act or omission of the **Contractor**.

11.4.1.3 The unavailability of the **Site** caused by acts or omissions of the **City**.

11.4.1.4 The issuance by the **Engineer** of a stop work order that was not brought about through any act or omission of the **Contractor**.

11.4.1.5 Differing site conditions or environmental hazards that were neither known nor reasonably ascertainable on a pre-bid inspection of the **Site** or review

of the bid documents or other publicly available sources, and that are not ordinarily encountered in the **Project's** geographical area or neighborhood or in the type of **Work** to be performed.

11.4.1.6 Delays caused by the **City's** bad faith or its willful, malicious, or grossly negligent conduct;

11.4.1.7 Delays not contemplated by the parties;

11.4.1.8 Delays so unreasonable that they constitute an intentional abandonment of the **Contract** by the **City**; and

11.4.1.9 Delays resulting from the **City's** breach of a fundamental obligation of the **Contract**.

11.4.2 No claim may be made for any alleged delay in **Substantial Completion** of the **Work** if the **Work** will be or is substantially completed by the date of **Substantial Completion** provided for in Schedule A unless acceleration has been directed by the **Commissioner** to meet the date of **Substantial Completion** set forth in Schedule A, or unless there is a provision in the **Contract** providing for additional compensation for early completion.

11.4.3 The provisions of this Article 11 apply only to claims for additional costs attributable to delay and do not preclude determinations by the **Commissioner** allowing reimbursements for additional costs for **Extra Work** pursuant to Articles 25 and 26 of this **Contract**. To the extent that any cost attributable to delay is reimbursed as part of a change order, no additional claim for compensation under this Article 11 shall be allowed.

11.5 Non-Compensable Delays. The **Contractor** agrees to make no claim for, and is deemed to have included in its bid prices for the various items of the **Contract**, the extra/additional costs attributable to any delays caused by or attributable to the items set forth below. For such items, the **Contractor** shall be compensated, if at all, solely by an extension of time to complete the performance of the **Work**, in accordance with the provisions of Article 13. Such extensions of time will be granted, if at all, pursuant to the grounds set forth in Article 13.3.

11.5.1 The acts or omissions of any third parties, including but not limited to **Other Contractors**, public/ governmental bodies (other than **City Agencies**), utilities or private enterprises, who are disclosed in the **Contract Documents** or are ordinarily encountered or generally recognized as related to the **Work**;

11.5.2 Any situation which was within the contemplation of the parties at the time of entering into the **Contract**, including any delay indicated or disclosed in the **Contract Documents** or that would be generally recognized by a reasonably prudent contractor as related to the nature of the **Work**, and/or the existence of any facility or appurtenance owned, operated or maintained by any third party, as indicated or disclosed in the **Contract Documents** or ordinarily encountered or generally recognized as related to the nature of the **Work**;

11.5.3 Restraining orders, injunctions or judgments issued by a court which were caused by a Contractor's submission, action or inaction or by a Contractor's **Means and Methods of Construction**, or by third parties, unless such order, injunction or judgment was the result of an act or omission by the **City**;

11.5.4 Any labor boycott, strike, picketing, lockout or similar situation;

11.5.5 Any shortages of supplies or materials, or unavailability of equipment, required by the **Contract Work**;

11.5.6 Climatic conditions, storms, floods, droughts, tidal waves, fires, hurricanes, earthquakes, landslides or other catastrophes or acts of God, or acts of war or of the public enemy or terrorist acts, including the **City's** reasonable responses thereto; and

11.5.7 **Extra Work** which does not significantly affect the overall completion of the **Contract**, reasonable delays in the review or issuance of change orders or field orders and/or in shop drawing reviews or approvals.

#### 11.6 Required Content of Submission of Statement of Delay Damages

11.6.1 In the verified written statement of delay damages required by Article 11.1.2, the following information shall be provided by the **Contractor**:

11.6.1.1 For each delay, the start and end dates of the claimed periods of delay and, in addition, a description of the operations that were delayed, an explanation of how they were delayed, and the reasons for the delay, including identifying the applicable act or omission of the City listed in Article 11.4.

11.6.1.2 A detailed factual statement of the claim providing all necessary dates, locations and items of **Work** affected by the claim.

11.6.1.3 The estimated amount of additional compensation sought and a breakdown of that amount into categories as described in Article 11.7.

11.6.1.4 Any additional information requested by the **Commissioner**.

#### 11.7 Recoverable Costs

11.7.1 Delay damages may be recoverable for the following costs actually and necessarily incurred in the performance of the **Work**:

11.7.1.1 Direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits, based on time and materials records;

11.7.1.2 Necessary materials (including transportation to the **Site**), based on time and material records;

11.7.1.3 Reasonable rental value of necessary plant and equipment other than small tools, plus fuel/energy costs according to the applicable formula set forth in Articles 26.2.4 and/or 26.2.8, based on time and material records;

11.7.1.4 Additional insurance and bond costs;

11.7.1.5 Extended **Site** overhead, field office rental, salaries of field office staff, on-site project managers and superintendents, field office staff vehicles, **Project**-specific storage, field office utilities and telephone, and field office consumables;

11.7.1.6 Labor escalation costs based on actual costs;

11.7.1.7 Materials and equipment escalation costs based on applicable industry indices unless documentation of actual increased cost is provided;

11.7.1.8 Additional material and equipment storage costs based on actual documented costs and additional costs necessitated by extended manufacturer warranty periods; and

11.7.1.9 Extended home office overhead calculated based on the following formula:  
(1) Subtract from the original **Contract** amount the amount earned by original contractual **Substantial Completion** date (not

- including change orders);
- (2) Remove 15% overhead and profit from the calculation in item (1) by dividing the results of item (1) by 1.15;
- (3) Multiply the result of item (2) by 7.25% for the total home office overhead;
- (4) Multiply the result of item (3) by 7.25% for the total profit; and
- (5) The total extended home office overhead will be the total of items (3) and (4).

11.7.2 Recoverable Subcontractor Costs. When the **Work** is performed by a **Subcontractor**, the **Contractor** may be paid the actual and necessary costs of such subcontracted **Work** as outlined above in Articles 11.7.1.1 through 11.7.1.8, and an additional overhead of 5% of the costs outlined in Articles 11.7.1.1 through 11.7.1.3.

11.7.3 Non-Recoverable Costs. The parties agree that the **City** will have no liability for the following items and the **Contractor** agrees it shall make no claim for the following items:

- 11.7.3.1 Profit, or loss of anticipated or unanticipated profit, except as provided in Article 11.7.1.9;
- 11.7.3.2 Consequential damages, including, but not limited to, construction or bridge loans or interest paid on such loans, loss of bonding capacity, bidding opportunities, or interest in investment, or any resulting insolvency;
- 11.7.3.3 Indirect costs or expenses of any nature except those included in Article 11.7.1;
- 11.7.3.4 Direct or indirect costs attributable to performance of **Work** where the **Contractor**, because of situations or conditions within its control, has not progressed the **Work** in a satisfactory manner; and
- 11.7.3.5 Attorneys' fees and dispute and claims preparation expenses.

11.8 Any claims for delay under this Article 11 are not subject to the jurisdiction of the Contract Dispute Resolution Board pursuant to the dispute resolution process set forth in Article 27.

11.9 Any compensation provided to the **Contractor** in accordance with this Article 11 will be made pursuant to a claim filed with the **Comptroller**. Nothing in this Article 11 extends the time for the **Contractor** to file an action with respect to a claim within six months after **Substantial Completion** pursuant to Article 56.

## **ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS**

12.1 During the progress of the **Work**, **Other Contractors** may be engaged in performing other work or may be awarded other contracts for additional work on this **Project**. In that event, the **Contractor** shall coordinate the **Work** to be done hereunder with the work of such **Other Contractors** and the **Contractor** shall fully cooperate with such **Other Contractors** and carefully fit its own **Work** to that provided under other contracts as may be directed by the **Engineer**. The **Contractor** shall not commit or permit any act which will interfere with the performance of work by any **Other Contractors**.

12.2 If the **Engineer** determines that the **Contractor** is failing to coordinate its **Work** with the work of **Other Contractors** as the **Engineer** has directed, then the **Commissioner** shall have the right to withhold any payments otherwise due hereunder until the **Contractor** completely complies with the **Engineer's** directions.

12.3 The **Contractor** shall notify the **Engineer** in writing if any **Other Contractor** on this **Project** is failing to coordinate its work with the **Work** of this **Contract**. If the **Engineer** finds such charges to be true, the **Engineer** shall promptly issue such directions to the **Other Contractor** with respect thereto as the situation may require. The **City** shall not, however, be liable for any damages suffered by any **Other Contractor's** failure to coordinate its work with the **Work** of this **Contract** or by reason of the **Other Contractor's** failure to promptly comply with the directions so issued by the **Engineer**, or by reason of any **Other Contractor's** default in performance, it being understood that the **City** does not guarantee the responsibility or continued efficiency of any contractor. The **Contractor** agrees to make no claim against the **City** for any damages relating to or arising out of any directions issued by the **Engineer** pursuant to this Article 12 (including but not limited to the failure of any **Other Contractor** to comply or promptly comply with such directions), or the failure of any **Other Contractor** to coordinate its work, or the default in performance of any **Other Contractor**.

12.4 The **Contractor** shall indemnify and hold the **City** harmless from any and all claims or judgments for damages and from costs and expenses to which the **City** may be subjected or which it may suffer or incur by reason of the **Contractor's** failure to comply with the **Engineer's** directions promptly; and the **Comptroller** shall have the right to exercise the powers reserved in Article 23 with respect to any claims which may be made for damages due to the **Contractor's** failure to comply with the **Engineer's** directions promptly. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.5 Should the **Contractor** sustain any damage through any act or omission of any **Other Contractor** having a contract with the **City** for the performance of work upon the **Site** or of work which may be necessary to be performed for the proper prosecution of the **Work** to be performed hereunder, or through any act or omission of a subcontractor of such **Other Contractor**, the **Contractor** shall have no claim against the **City** for such damage, but shall have a right to recover such damage from the **Other**

12.5 **Contractor** under the provision similar to the following provisions which apply to this Contract and have been or will be inserted in the contracts with such Other Contractors:

12.5.1 Should any **Other Contractor** having or who shall hereafter have a contract with the **City** for the performance of work upon the **Site** sustain any damage through any act or omission of the **Contractor** hereunder or through any act or omission of any **Subcontractor** of the **Contractor**, the **Contractor** agrees to reimburse such **Other Contractor** for all such damages and to defend at its own expense any action based upon such claim and if any judgment or claim (even if the allegations of the action are without merit) against the **City** shall be allowed the **Contractor** shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and agrees to indemnify and hold the **City** harmless from all such claims. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.6 The **City's** right to indemnification hereunder shall in no way be diminished, waived or discharged by its recourse to assessment of liquidated damages as provided in Article 15, or by the exercise of any other remedy provided for by **Contract** or by **Law**.

### **ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE**

13.1 If performance by the **Contractor** is delayed for a reason set forth in Article 13.3, the **Contractor** may be allowed a reasonable extension of time in conformance with this Article 13 and the **PPB**

Rules.

13.2 Any extension of time may be granted only by the **ACCO** or by the Board for the Extension of Time (hereafter “Board”) (as set forth below) upon written application by the **Contractor**.

13.3 Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the **Work** caused solely:

13.3.1 By the acts or omissions of the **City**, its officials, agents or employees; or

13.3.2 By the act or omissions of **Other Contractors** on this **Project**; or

13.3.3 By supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, acts of God or the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the **Contractor**).

13.3.4 The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **ACCO** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

13.4 The **Contractor** shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the **Work** as determined by the **ACCO** or the Board, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the **Contractor** or of its **Subcontractors** or **Materialmen**, and would of itself (irrespective of the concurrent causes) have delayed the **Work**, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

13.5 The determination made by the **ACCO** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The **ACCO** or the Board acting entirely within their discretion may grant an application for an extension of time for causes of delay other than those herein referred.

13.7 Permitting the **Contractor** to continue with the **Work** after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the **Contractor** after such time, shall in no way operate as a waiver on the part of the **City** of any of its rights under this **Contract**.

13.8 Application for Extension of Time:

13.8.1 Before the **Contractor’s** time extension request will be considered, the **Contractor** shall notify the **ACCO** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **ACCO** identifying:

13.8.1(a) The **Contractor**; the registration number; and **Project** description;

13.8.1(b) Liquidated damage assessment rate, as specified in the **Contract**;

13.8.1(c) Original total bid price;

13.8.1(d) The original **Contract** start date and completion date;

13.8.1(e) Any previous time extensions granted (number and duration); and

13.8.1(f) The extension of time requested.

13.8.2 In addition, the application for extension of time shall set forth in detail:

13.8.2(a) The nature of each alleged cause of delay in completing the **Work**;

13.8.2(b) The date upon which each such cause of delay began and ended and the number of **Days** attributable to each such cause;

13.8.2(c) A statement that the **Contractor** waives all claims except for those delineated in the application, and the particulars of any claims which the **Contractor** does not agree to waive. For time extensions for **Substantial Completion** and final completion payments, the application shall include a detailed statement of the dollar amounts of each element of claim item reserved; and

13.8.2(d) A statement indicating the **Contractor's** understanding that the time extension is granted only for purposes of permitting continuation of **Contract** performance and payment for **Work** performed and that the **City** retains its right to conduct an investigation and assess liquidated damages as appropriate in the future.

13.9 Analysis and Approval of Time Extensions:

13.9.1 For time extensions for partial payments, a written determination shall be made by the **ACCO** who may, for good and sufficient cause, extend the time for the performance of the **Contract** as follows:

13.9.1(a) If the **Work** is to be completed within six (6) months, the time for performance may be extended for sixty (60) **Days**;

13.9.1(b) If the **Work** is to be completed within less than one (1) year but more than six (6) months, an extension of ninety (90) **Days** may be granted;

13.9.1(c) If the **Contract** period exceeds one (1) year, besides the extension granted in Article 13.9.1(b), an additional thirty (30) **Days** may be granted for each multiple of six (6) months involved beyond the one (1) year period; or

13.9.1(d) If exceptional circumstances exist, the **ACCO** may extend the time for performance beyond the extensions in Articles 13.9.1(a), 13.9.1(b), and 13.9.1(c). In that event, the **ACCO** shall file with the Mayor's Office of Contract Services a written explanation of the exceptional circumstances.

13.9.2 For extensions of time for **Substantial Completion** and final completion payments, the **Engineer**, in consultation with the **ACCO**, shall prepare a written analysis of the delay (including a preliminary determination of the causes of delay, the beginning and end dates for each such cause of delay, and whether the delays are excusable under the terms of this **Contract**). The report shall be subject to review by and approval of the Board, which shall have authority to question its analysis and determinations and request additional facts or documentation. The report as reviewed and made final by the Board shall be made a part of the **Agency** contract file. Neither the report itself nor anything contained therein shall operate as a

waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

13.9.3 Approval Mechanism for Time Extensions for **Substantial Completion** or Final Completion Payments: An extension shall be granted only with the approval of the Board which is comprised of the **ACCO** of the **Agency**, the **City** Corporation Counsel, and the **Comptroller**, or their authorized representatives.

13.9.4 Neither the granting of any application for an extension of time to the **Contractor** or any **Other Contractor** on this **Project** nor the papers, records or reports related to any application for or grant of an extension of time or determination related thereto shall be referred to or offered in evidence by the **Contractor** or its attorneys in any action or proceeding.

13.10 No Damage for Delay: The **Contractor** agrees to make no claim for damages for delay in the performance of this **Contract** occasioned by any act or omission to act of the **City** or any of its representatives, except as provided for in Article 11.

#### **ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK**

14.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed in Schedule A of the General Conditions, or within the time to which such **Substantial Completion** may be extended.

14.2 Determining the Date of **Substantial Completion**: The **Work** will be deemed to be substantially complete when the two conditions set forth below have been met.

14.2.1 Inspection: The **Engineer** or **Resident Engineer**, as applicable, has inspected the **Work** and has made a written determination that it is substantially complete.

14.2.2 Approval of **Final Approved Punch List** and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer/Resident Engineer** shall furnish the **Contractor** with a final punch list, specifying all items of **Work** to be completed and proposing dates for the completion of each specified item of **Work**. The **Contractor** shall then submit in writing to the **Engineer/Resident Engineer** within ten (10) **Days** of the **Engineer/Resident Engineer** furnishing the final punch list either acceptance of the dates or proposed alternative dates for the completion of each specified item of **Work**. If the **Contractor** neither accepts the dates nor proposes alternative dates within ten (10) **Days**, the schedule proposed by the **Engineer/Resident Engineer** shall be deemed accepted. If the **Contractor** proposes alternative dates, then, within a reasonable time after receipt, the **Engineer/Resident Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, the **Engineer/Resident Engineer** shall establish dates for the completion of each item of **Work**. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 Date of **Substantial Completion**. The date of approval of the **Final Approved Punch List**, shall be the date of **Substantial Completion**. The date of approval of the **Final Approved Punch List** shall be either (a) if the **Contractor** approves the final punch list and proposed dates for completion furnished by the **Engineer/Resident Engineer**, the date of the **Contractor's** approval; or (b) if the **Contractor** neither accepts the dates nor proposes alternative dates, ten (10) **Days** after the **Engineer/Resident Engineer** furnishes the **Contractor** with a final punch list and proposed dates for completion; or (c) if the **Contractor** proposes alternative dates, the date that the **Engineer/Resident Engineer** sends written notification to the



**Contractor** either approving the **Contractor's** proposed alternative dates or establishing dates for the completion for each item of **Work**.

14.4 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of the **Engineer's/Resident Engineer's** inspection if, upon such inspection, the **Engineer/Resident Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

14.5 Request for Inspection: Inspection of the **Work** by the **Engineer/Resident Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within fourteen (14) **Days** after receipt of the **Contractor's** written request therefor.

14.6 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer/Resident Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **Engineer/Resident Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **Engineer/Resident Engineer** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.7 Initiation of Inspection by the **Engineer/Resident Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer/Resident Engineer** may initiate such inspection or re-inspection.

#### **ARTICLE 15. LIQUIDATED DAMAGES**

15.1 In the event the **Contractor** fails to substantially complete the **Work** within the time fixed for such **Substantial Completion** in Schedule A of the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in Schedule A of the General Conditions, for each and every **Day** that the time consumed in substantially completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the **Substantial Completion** of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This Article 15 shall also apply to the **Contractor** whether or not the **Contractor** is defaulted pursuant to Chapter X of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

15.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

15.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

## **ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION**

16.1 Unless otherwise provided for in the **Specifications**, the **Commissioner** may take over, use, occupy or operate any part of the **Work** at any time prior to **Final Acceptance**, upon written notification to the **Contractor**. The **Engineer** or **Resident Engineer**, as applicable, shall inspect the part of the **Work** to be taken over, used, occupied, or operated, and will furnish the **Contractor** with a written statement of the **Work**, if any, which remains to be performed on such part. The **Contractor** shall not object to, nor interfere with, the **Commissioner's** decision to exercise the rights granted by Article 16. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Engineer/Resident Engineer** shall issue a written determination of **Substantial Completion** with respect to such part of the **Work**;

16.1.2 the **Contractor** shall be relieved of its absolute obligation to protect such part of the unfinished **Work** in accordance with Article 7;

16.1.3 the **Contractor's** guarantee on such part of the **Work** shall begin on the date of such use by the **City**; and;

16.1.4 the **Contractor** shall be entitled to a return of so much of the amount retained in accordance with Article 21 as it relates to such part of the **Work**, except so much thereof as may be retained under Articles 24 and 44.

## **CHAPTER IV: SUBCONTRACTS AND ASSIGNMENTS**

### **ARTICLE 17. SUBCONTRACTS**

17.1 The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price fixed in Schedule A of the General Conditions, without prior written permission from the **Commissioner**. All subcontracts made by the **Contractor** shall be in writing. No **Work** may be performed by a **Subcontractor** prior to the **Contractor** entering into a written subcontract with the **Subcontractor** and complying with the provisions of this Article 17.

17.2 Before making any subcontracts, the **Contractor** shall submit a written statement to the **Commissioner** giving the name and address of the proposed **Subcontractor**; the portion of the **Work** and materials which it is to perform and furnish; the cost of the subcontract; the VENDEX questionnaire if required; the proposed subcontract if requested by the **Commissioner**; and any other information tending to prove that the proposed **Subcontractor** has the necessary facilities, skill, integrity, past experience, and financial resources to perform the **Work** in accordance with the terms and conditions of this **Contract**.

17.3 In addition to the requirements in Article 17.2, **Contractor** is required to list the **Subcontractor** in the web based Subcontractor Reporting System through the City's Payee Information Portal (PIP), available at [www.nyc.gov/pip](http://www.nyc.gov/pip).<sup>1</sup> For each **Subcontractor** listed, **Contractor** is required to provide the following information: maximum contract value, description of **Subcontractor's** Work, start and end date of the subcontract and identification of the **Subcontractor's** industry. Thereafter, **Contractor** will be required to report in the system the payments made to each **Subcontractor** within 30 days of making the

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<sup>1</sup> In order to use the new system, a PIP account will be required. Detailed instructions on creating a PIP account and using the new system are also available at [www.nyc.gov/pip](http://www.nyc.gov/pip). Additional assistance with PIP may be obtained by emailing the Financial Information Services Agency Help Desk at [pip@fisa.nyc.gov](mailto:pip@fisa.nyc.gov).

payment. If any of the required information changes throughout the Term of the **Contract**, **Contractor** will be required to revise the information in the system.

Failure of the **Contractor** to list a **Subcontractor** and/or to report **Subcontractor** payments in a timely fashion may result in the **Commissioner** declaring the **Contractor** in default of the **Contract** and will subject **Contractor** to liquidated damages in the amount of \$100 per day for each day that the **Contractor** fails to identify a **Subcontractor** along with the required information about the **Subcontractor** and/or fails to report payments to a **Subcontractor**, beyond the time frames set forth herein or in the notice from the **City**. Article 15 shall govern the issue of liquidated damages.

17.4 If an approved **Subcontractor** elects to subcontract any portion of its subcontract, the proposed sub-subcontract shall be submitted in the same manner as directed above.

17.5 The **Commissioner** will notify the **Contractor** in writing whether the proposed **Subcontractor** is approved. If the proposed **Subcontractor** is not approved, the **Contractor** may submit another proposed **Subcontractor** unless the **Contractor** decides to do the **Work**. No **Subcontractor** shall be permitted to enter or perform any work on the **Site** unless approved.

17.6 Before entering into any subcontract hereunder, the **Contractor** shall provide the proposed **Subcontractor** with a complete copy of this document and inform the proposed **Subcontractor** fully and completely of all provisions and requirements of this **Contract** relating either directly or indirectly to the **Work** to be performed and the materials to be furnished under such subcontract, and every such **Subcontractor** shall expressly stipulate that all labor performed and materials furnished by the **Subcontractor** shall strictly comply with the requirements of this **Contract**.

17.7 Documents given to a prospective **Subcontractor** for the purpose of soliciting the **Subcontractor's** bid shall include either a copy of the bid cover or a separate information sheet setting forth the **Project** name, the **Contract** number (if available), the **Agency** (as noted in Article 2.1.6), and the **Project's** location.

17.8 The **Commissioner's** approval of a **Subcontractor** shall not relieve the **Contractor** of any of its responsibilities, duties, and liabilities hereunder. The **Contractor** shall be solely responsible to the **City** for the acts or defaults of its **Subcontractor** and of such **Subcontractor's** officers, agents, and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the **Contractor** to the extent of its subcontract.

17.9 If the **Subcontractor** fails to maintain the necessary facilities, skill, integrity, past experience, and financial resources (other than due to the **Contractor's** failure to make payments where required) to perform the **Work** in accordance with the terms and conditions of this **Contract**, the **Contractor** shall promptly notify the **Commissioner** and replace such **Subcontractor** with a newly approved **Subcontractor** in accordance with this Article 17.

17.10 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** maintain all insurance required by **Law**.

17.11 The **Contractor** shall promptly, upon request, file with the **Engineer** a conformed copy of the subcontract and its cost. The subcontract shall provide the following:

17.11.1 Payment to **Subcontractors**: The agreement between the **Contractor** and its **Subcontractor** shall contain the same terms and conditions as to method of payment for **Work**, labor, and materials, and as to retained percentages, as are contained in this **Contract**.

17.11.2 Prevailing Rate of Wages: The agreement between the **Contractor** and its **Subcontractor** shall include the prevailing wage rates and supplemental benefits to be paid in accordance with Labor Law Section 220.

17.11.3 Section 6-123 of the Administrative Code: Pursuant to the requirements of Section 6-123 of the Administrative Code, every agreement between the **Contractor** and a **Subcontractor** in excess of fifty thousand (\$50,000) dollars shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in Title VIII of the Administrative Code (Section 8-101 *et seq.*).

17.11.4 All requirements required pursuant to federal and/or state grant agreement(s), if applicable to the **Work**.

17.12 The **Commissioner** may deduct from the amounts certified under this **Contract** to be due to the **Contractor**, the sum or sums due and owing from the **Contractor** to the **Subcontractors** according to the terms of the said subcontracts, and in case of dispute between the **Contractor** and its **Subcontractor**, or **Subcontractors**, as to the amount due and owing, the **Commissioner** may deduct and withhold from the amounts certified under this **Contract** to be due to the **Contractor** such sum or sums as may be claimed by such **Subcontractor**, or **Subcontractors**, in a sworn affidavit, to be due and owing until such time as such claim or claims shall have been finally resolved.

17.13 On contracts where performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount, including retainage, to be paid to the **Subcontractor** for **Work** included in the requisition.

17.14 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all **Work** performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition.

## ARTICLE 18. ASSIGNMENTS

18.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

18.2 Such assignment, transfer, conveyance or other disposition of this **Contract** shall not be valid until filed in the office of the **Commissioner** and the **Comptroller**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

18.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment,

transfer, conveyance or other disposition, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sublessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

18.4 The provisions of this clause shall not hinder, prevent, or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

18.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

## CHAPTER V: CONTRACTOR'S SECURITY AND GUARANTEE

### ARTICLE 19. SECURITY DEPOSIT

19.1 If performance and payment bonds are required, the **City** shall retain the bid security to ensure that the successful bidder executes the **Contract** and furnishes the required payment and performance security within ten (10) **Days** after notice of the award of the **Contract**. If the successful bidder fails to execute the **Contract** and furnish the required payment and performance security, the **City** shall retain such bid security as set forth in the Information for Bidders. If the successful bidder executes the **Contract** and furnishes the required payment and performance security, the **City** shall return the bid security within a reasonable time after the furnishing of such bonds and execution of the **Contract** by the **City**.

19.2 If performance and payment bonds are not required, the bid security shall be retained by the **City** as security for the **Contractor's** faithful performance of the **Contract**. If partial payments are provided, the bid security will be returned to the **Contractor** after the sum retained under Article 21 equals the amount of the bid security, subject to other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the **City** for payment.

19.3 If the **Contractor** is declared in default under Article 48 prior to the return of the deposit, or if any claim is made such as referred to in Article 23, the amount of such deposit, or so much thereof as the **Comptroller** may deem necessary, may be retained and then applied by the **Comptroller**:

19.3.1 To compensate the **City** for any expense, loss or damage suffered or incurred by reason of or resulting from such default, including the cost of re-letting and liquidated damages; or

19.3.2 To indemnify the **City** against any and all claims.

### ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where one hundred (100%) percent performance bonds and payment bonds are executed, this Article 20 does not apply.

20.2 In the event the terms of this **Contract** do not require the **Contractor** to provide a payment bond or where the **Contract** does not require a payment bond for one hundred (100%) percent of the **Contract** price, the **City** shall, in accordance with the terms of this Article 20, guarantee payment of all lawful claims for:

20.2.1 Wages and compensation for labor performed and/or services rendered; and

20.2.2 Materials, equipment, and supplies provided, whether incorporated into the **Work** or not, when demands have been filed with the **City** as provided hereinafter by any person, firm, or corporation which furnished labor, material, equipment, supplies, or any combination thereof, in connection with the **Work** performed hereunder (hereinafter referred to as the “beneficiary”) at the direction of the **City** or the **Contractor**.

20.3 The provisions of Article 20.2 are subject to the following limitations and conditions:

20.3.1 If the **Contractor** provides a payment bond for a value that is less than one hundred (100%) percent of the value of the **Contract Work**, the payment bond provided by the **Contractor** shall be primary (and non-contributing) to the payment guarantee provided under this Article 20.

20.3.2 The guarantee is made for the benefit of all beneficiaries as defined in Article 20.2 provided that those beneficiaries strictly adhere to the terms and conditions of Article 20.3.4 and 20.3.5.

20.3.3 Nothing in this Article 20 shall prevent a beneficiary providing labor, services or material for the **Work** from suing the **Contractor** for any amounts due and owing the beneficiary by the **Contractor**.

20.3.4 Every person who has furnished labor or material, to the **Contractor** or to a **Subcontractor** of the **Contractor**, in the prosecution of the **Work** and who has not been paid in full therefor before the expiration of a period of ninety (90) **Days** after the date on which the last of the labor was performed or material was furnished by him/her for which the claim is made, shall have the right to sue on this payment guarantee in his/her own name for the amount, or the balance thereof, unpaid at the time of commencement of the action; provided, however, that a person having a direct contractual relationship with a **Subcontractor** of the **Contractor** but no contractual relationship express or implied with the **Contractor** shall not have a right of action upon the guarantee unless he/she shall have given written notice to the **Contractor** within one hundred twenty (120) **Days** from the date on which the last of the labor was performed or the last of the material was furnished, for which his/her claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the material was furnished or for whom the labor was performed. The notice shall be served by delivering the same personally to the **Contractor** or by mailing the same by registered mail, postage prepaid, in an envelope addressed to the **Contractor** at any place where it maintains an office or conducts its business; provided, however, that where such notice is actually received by the **Contractor** by other means, such notice shall be deemed sufficient.

20.3.5 Except as provided in Labor Law Section 220-g, no action on this payment guarantee shall be commenced after the expiration of the one-year limitations period set forth in Section 137(4)(b) of the State Finance Law.

20.3.6 The **Contractor** shall promptly forward to the **City** any notice or demand received pursuant to Article 20.3.4. The **Contractor** shall inform the **City** of any defenses to the notice or demand and shall forward to the **City** any documents the **City** requests concerning the notice or demand.

20.3.7 All demands made against the **City** by a beneficiary of this payment guarantee shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems reasonably appropriate or necessary, which may include, but shall not be

limited to: the subcontract; any invoices presented to the **Contractor** for payment; the notarized statement of the beneficiary that the demand is due and payable, that a request for payment has been made of the **Contractor** and that the demand has not been paid by the **Contractor** within the time allowed for such payment by the subcontract; and copies of any correspondence between the beneficiary and the **Contractor** concerning such demand. The **City** shall notify the **Contractor** that a demand has been made. The **Contractor** shall inform the **City** of any defenses to the demand and shall forward to the **City** any documents the **City** requests concerning the demand.

20.3.8 The **City** shall make payment only if, after considering all defenses presented by the **Contractor**, it determines that the payment is due and owing to the beneficiary making the demand.

20.3.9 No beneficiary shall be entitled to interest from the **City**, or to any other costs, including, but not limited to, attorneys' fees, except to the extent required by State Finance Law Section 137.

20.3.10

20.4 Upon the receipt by the **City** of a demand pursuant to this Article 20, the **City** may withhold from any payment otherwise due and owing to the **Contractor** under this **Contract** an amount sufficient to satisfy the demand.

20.4.1 In the event the **City** determines that the demand is valid, the **City** shall notify the **Contractor** of such determination and the amount thereof and direct the **Contractor** to immediately pay such amount to the beneficiary. In the event the **Contractor**, within seven (7) **Days** of receipt of such notification from the **City**, fails to pay the beneficiary, such failure shall constitute an automatic and irrevocable assignment of payment by the **Contractor** to the beneficiary for the amount of the demand determined by the **City** to be valid. The **Contractor**, without further notification or other process, hereby gives its unconditional consent to such assignment of payment to the beneficiary and authorizes the **City**, on its behalf, to take all necessary actions to implement such assignment of payment, including without limitation the execution of any instrument or documentation necessary to effectuate such assignment.

20.4.2 In the event that the amount otherwise due and owing to the **Contractor** by the **City** is insufficient to satisfy such demand, the **City** may, at its option, require payment from the **Contractor** of an amount sufficient to cover such demand and exercise any other right to require or recover payment which the **City** may have under **Law** or **Contract**.

20.4.3 In the event the **City** determines that the demand is invalid, any amount withheld pending the **City**'s review of such demand shall be paid to the **Contractor**; provided, however, no lien has been filed. In the event a claim or an action has been filed, the terms and conditions set forth in Article 23 shall apply. In the event a lien has been filed, the parties will be governed by the provisions of the Lien Law of the State of New York.

20.5 The provisions of this Article 20 shall not prevent the **City** and the **Contractor** from resolving disputes in accordance with the **PPB** Rules, where applicable.

20.6 In the event the **City** determines that the beneficiary is entitled to payment pursuant to this Article 20, such determination and any defenses and counterclaims raised by the **Contractor** shall be taken into account in evaluating the **Contractor**'s performance.

20.7 Nothing in this Article 20 shall relieve the **Contractor** of the obligation to pay the claims of all

persons with valid and lawful claims against the **Contractor** relating to the **Work**.

20.8 The **Contractor** shall not require any performance, payment or other bonds of any **Subcontractor** if this **Contract** does not require such bonds of the **Contractor**.

20.9 The payment guarantee made pursuant to this Article 20 shall be construed in a manner consistent with Section 137 of the State Finance Law and shall afford to persons furnishing labor or materials to the **Contractor** or its **Subcontractors** in the prosecution of the **Work** under this **Contract** all of the rights and remedies afforded to such persons by such section, including but not limited to, the right to commence an action against the **City** on the payment guarantee provided by this Article 20 within the one-year limitations period set forth in Section 137(4)(b).

## ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires one hundred (100%) percent performance and payment security, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.2 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded does not exceed one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded exceeds one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, up to ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher. The percentage to be retained is set forth in Schedule A of the General Conditions.

## ARTICLE 22. INSURANCE

22.1 Types of Insurance: The **Contractor** shall procure and maintain the following types of insurance if, and as indicated, in Schedule A of the General Conditions (with the minimum limits and special conditions specified in Schedule A). Such insurance shall be maintained from the date the **Contractor** is required to provide Proof of Insurance pursuant to Article 22.3.1 through the date of completion of all required **Work** (including punch list work as certified in writing by the **Resident Engineer**), except for insurance required pursuant to Article 22.1.4, which may terminate upon **Substantial Completion** of the **Contract**. All insurance shall meet the requirements set forth in this Article 22. Wherever this Article requires that insurance coverage be “at least as broad” as a specified form (including all ISO forms), there is no obligation that the form itself be used, provided that the **Contractor** can demonstrate that the alternative form or endorsement contained in its policy provides coverage at least as broad as the specified form.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide Commercial General Liability Insurance covering claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this insurance shall be at least as broad as that provided by the latest edition of Insurance



Services Office (“ISO”) Form CG 0001. Such insurance shall be “occurrence” based rather than “claims-made” and include, without limitation, the following types of coverage: premises operations; products and completed operations; contractual liability (including the tort liability of another assumed in a contract); broad form property damage; independent contractors; explosion, collapse and underground (XCU); construction means and methods; and incidental malpractice. Such insurance shall contain a “per project” aggregate limit, as specified in Schedule A, that applies separately to operations under this **Contract**.

22.1.1(a) Such Commercial General Liability Insurance shall name the **City** as an Additional Insured. Coverage for the City shall specifically include the **City’s** officials and employees, be at least as broad as the latest edition of ISO Form CG 20 10 and provide completed operations coverage at least as broad as the latest edition of ISO Form CG 20 37.

22.1.1(b) Such Commercial General Liability Insurance shall name all other entities designated as additional insureds in Schedule A but only for claims arising from the **Contractor’s** operations under this **Contract**, with coverage at least as broad as the latest edition of ISO Form CG 20 26.

22.1.1(c) If the **Work** requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, the **Contractor** shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08 or greater limits required by the Agency in accordance with Schedule A. If the **Work** does not require such a permit, the minimum limits shall be those provided for in Schedule A.

22.1.1(d) If any of the **Work** includes repair of a waterborne vessel owned by or to be delivered to the **City**, such Commercial General Liability shall include, or be endorsed to include, Ship Repairer’s Legal Liability Coverage to protect against, without limitation, liability arising from navigation of such vessels prior to delivery to and acceptance by the **City**.

22.1.2 Workers’ Compensation Insurance, Employers’ Liability Insurance, and Disability Benefits Insurance: The **Contractor** shall provide, and shall cause its **Subcontractors** to provide, Workers Compensation Insurance, Employers’ Liability Insurance, and Disability Benefits Insurance in accordance with the **Laws** of the State of New York on behalf of all employees providing services under this **Contract** (except for those employees, if any, for which the **Laws** require insurance only pursuant to Article 22.1.3).

22.1.3 United States Longshoremen’s and Harbor Workers Act and/or Jones Act Insurance: If specified in Schedule A of the General Conditions or if required by **Law**, the **Contractor** shall provide insurance in accordance with the United States Longshoremen’s and Harbor Workers Act and/or the Jones Act, on behalf of all qualifying employees providing services under this **Contract**.

22.1.4 Builders Risk Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall provide Builders Risk Insurance on a completed value form for the total value of the **Work** through **Substantial Completion** of the **Work** in its entirety. Such insurance shall be provided on an All Risk basis and include coverage, without limitation, for windstorm (including named windstorm), storm surge, flood and earth movement. Unless waived by the **Commissioner**, it shall include coverage for ordinance and law, demolition and increased costs of construction, debris removal, pollutant clean up and removal, and expediting costs. Such insurance shall cover, without limitation, (a) all buildings and/or structures involved in the

**Work**, as well as temporary structures at the **Site**, and (b) any property that is intended to become a permanent part of such building or structure, whether such property is on the **Site**, in transit or in temporary storage. Policies shall name the **Contractor** as Named Insured and list the **City** as both an Additional Insured and a Loss Payee as its interest may appear.

22.1.4(a) Policies of such insurance shall specify that, in the event a loss occurs at an occupied facility, occupancy of such facility is permitted without the consent of the issuing insurance company.

22.1.4(b) Such insurance may be provided through an Installation Floater, at the **Contractor's** option, if it otherwise conforms with the requirements of this Article 22.1.4.

22.1.5 Commercial Automobile Liability Insurance: The **Contractor** shall provide Commercial Automobile Liability Insurance for liability arising out of ownership, maintenance or use of any owned (if any), non-owned and hired vehicles to be used in connection with this **Contract**. Coverage shall be at least as broad as the latest edition of ISO Form CA0001. If vehicles are used for transporting hazardous materials, the Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.

22.1.6 Contractors Pollution Liability Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Contractors Pollution Liability Insurance covering bodily injury and property damage. Such insurance shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants (including asbestos), including any loss, cost or expense incurred as a result of any cleanup of pollutants (including asbestos) or in the investigation, settlement or defense of any claim, action, or proceedings arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured and any other entity specified in Schedule A. Coverage shall include, without limitation, (a) loss of use of damaged property or of property that has not been physically injured, (b) transportation, and (c) non-owned disposal sites.

22.1.6(a) Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees and be at least as broad as provided to the **Contractor** for this **Project**.

22.1.6(b) If such insurance is written on a claims-made policy, such policy shall have a retroactive date on or before the effective date of this **Contract**, and continuous coverage shall be maintained, or an extended discovery period exercised, for a period of not less than three (3) years from the time the **Work** under this **Contract** is completed.

22.1.7 Marine Insurance:

22.1.7(a) Marine Protection and Indemnity Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Protection and Indemnity Insurance with coverage at least as broad as Form SP-23. The insurance shall provide coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured for bodily injury and property damage arising from marine operations under this

**Contract.** Coverage shall include, without limitation, injury or death of crew members (if not fully provided through other insurance), removal of wreck, damage to piers, wharves and other fixed or floating objects and loss of or damage to any other vessel or craft, or to property on such other vessel or craft.

22.1.7(b) Hull and Machinery Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Hull and Machinery Insurance with coverage for the **Contractor** or **Subcontractor** (whichever is doing this Work) and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the latest edition of American Institute Tug Form for all tugs used under this **Contract** and Collision Liability at least as broad as the latest edition of American Institute Hull Clauses.

22.1.7(c) Marine Pollution Liability Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such Work to maintain, Marine Pollution Liability Insurance covering itself (or the Subcontractor doing such Work) as Named Insured and the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured. Coverage shall be at least as broad as that provided by the latest edition of Water Quality Insurance Syndicate Form and include, without limitation, liability arising from the discharge or substantial threat of a discharge of oil, or from the release or threatened release of a hazardous substance including injury to, or economic losses resulting from, the destruction of or damage to real property, personal property or natural resources.

22.1.8 The **Contractor** shall provide such other types of insurance, at such minimum limits and with such conditions, as are specified in Schedule A of the General Conditions.

## 22.2 General Requirements for Insurance Coverage and Policies:

22.2.1 All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A-/VII or a Standard and Poor's rating of at least A, unless prior written approval is obtained from the **City** Corporation Counsel.

22.2.2 The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the **City** is an insured under the policy.

22.2.3 In his/her sole discretion, the **Commissioner** may, subject to the approval of the **Comptroller** and the **City** Corporation Counsel, accept Letters of Credit and/or custodial accounts in lieu of required insurance.

22.2.4 The **City's** limits of coverage for all types of insurance required pursuant to Schedule A of the General Conditions shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to the **Contractor** as Named Insured under all primary, excess, and umbrella policies of that type of coverage.

22.2.5 The **Contractor** may satisfy its insurance obligations under this Article 22 through primary policies or a combination of primary and excess/umbrella policies, so long as all policies provide the scope of coverage required herein.

22.2.6 Policies of insurance provided pursuant to this Article 22 shall be primary and non-contributing to any insurance or self-insurance maintained by the **City**.

### 22.3 Proof of Insurance:

22.3.1 For all types of insurance required by Article 22.1 and Schedule A, except for insurance required by Articles 22.1.4 and 22.1.7, the **Contractor** shall file proof of insurance in accordance with this Article 22.3 within ten (10) **Days** of award. For insurance provided pursuant to Articles 22.1.4 and 22.1.7, proof shall be filed by a date specified by the **Commissioner** or ten (10) **Days** prior to the commencement of the portion of the **Work** covered by such policy, whichever is earlier.

22.3.2 For Workers' Compensation Insurance provided pursuant to Article 22.1.2, the **Contractor** shall submit one of the following forms: C-105.2 Certificate of Workers' Compensation Insurance; U-26.3 - State Insurance Fund Certificate of Workers' Compensation Insurance; Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. For Disability Benefits Insurance provided pursuant to Article 22.1.2, the Contractor shall submit DB-120.1 - Certificate Of Insurance Coverage Under The NYS Disability Benefits Law, Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. ACORD forms are not acceptable.

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the **Contractor** shall submit one or more Certificates of Insurance on forms acceptable to the **Commissioner**. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the **City** and any other entity specified in Schedule A is an Additional Insured thereunder; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the City is an Additional Insured thereunder; (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number); and (e) the number assigned to the **Contract** by the **City**. All such Certificates of Insurance shall be accompanied by either a duly executed "Certification by Insurance Broker or Agent" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

22.3.4 Documentation confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such proofs of insurance shall comply with the requirements of Articles 22.3.2 and 22.3.3.

22.3.5 The **Contractor** shall be obligated to provide the **City** with a copy of any policy of insurance provided pursuant to this Article 22 upon the demand for such policy by the **Commissioner** or the **City** Corporation Counsel.

### 22.4 Operations of the **Contractor**:

22.4.1 The **Contractor** shall not commence the **Work** unless and until all required certificates have been submitted to and accepted by the **Commissioner**. Acceptance by the

**Commissioner** of a certificate does not excuse the **Contractor** from securing insurance consistent with all provisions of this Article 22 or of any liability arising from its failure to do so.

22.4.2 The **Contractor** shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this **Contract** and shall be authorized to perform **Work** only during the effective period of all required coverage.

22.4.3 In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, the **Contractor** shall immediately stop all **Work**, and shall not recommence **Work** until authorized in writing to do so by the **Commissioner**. Upon quitting the **Site**, except as otherwise directed by the **Commissioner**, the **Contractor** shall leave all plant, materials, equipment, tools, and supplies on the **Site**. **Contract** time shall continue to run during such periods and no extensions of time will be granted. The **Commissioner** may also declare the **Contractor** in default for failure to maintain required insurance.

22.4.4 In the event the **Contractor** receives notice, from an insurance company or other person, that any insurance policy required under this Article 22 shall be cancelled or terminated (or has been cancelled or terminated) for any reason, the **Contractor** shall immediately forward a copy of such notice to both the **Commissioner** and the New York City Comptroller, attn: Office of Contract Administration, Municipal Building, One Centre Street, room 1005, New York, New York 10007. Notwithstanding the foregoing, the **Contractor** shall ensure that there is no interruption in any of the insurance coverage required under this Article 22.

22.4.5 Where notice of loss, damage, occurrence, accident, claim or suit is required under an insurance policy maintained in accordance with this Article 22, the **Contractor** shall notify in writing all insurance carriers that issued potentially responsive policies of any such event relating to any operations under this **Contract** (including notice to Commercial General Liability insurance carriers for events relating to the **Contractor**'s own employees) no later than 20 days after such event. For any policy where the **City** is an Additional Insured, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Insured as well as the Named Insured." Such notice shall also contain the following information: the number of the insurance policy, the name of the named insured, the date and location of the damage, occurrence, or accident, and the identity of the persons or things injured, damaged or lost. The **Contractor** shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

22.4.6 In the event of any loss, accident, claim, action, or other event that does or can give rise to a claim under any insurance policy required under this Article 22, the **Contractor** shall at all times fully cooperate with the **City** with regard to such potential or actual claim.

22.5 **Subcontractor Insurance**: In the event the **Contractor** requires any **Subcontractor** to procure insurance with regard to any operations under this **Contract** and requires such **Subcontractor** to name the **Contractor** as an **Additional Insured** thereunder, the **Contractor** shall ensure that the **Subcontractor** name the **City**, including its officials and employees, as an Additional Insured with coverage at least as broad as the most recent edition of ISO Form CG 20 26.

22.6 Wherever reference is made in Article 7 or this Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Schedule A of the General Conditions. In the event no address is set forth in Schedule A, such documents

are to be sent to the **Commissioner's** address as provided elsewhere in this **Contract**.

22.7 Apart from damages or losses covered by insurance provided pursuant to Articles 22.1.2, 22.1.3, or 22.1.5, the **Contractor** waives all rights against the **City**, including its officials and employees, for any damages or losses that are covered under any insurance required under this Article 22 (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of the **Contractor** and/or its employees, agents, or **Subcontractors**.

22.8 In the event the **Contractor** utilizes a self-insurance program to satisfy any of the requirements of this Article 22, the **Contractor** shall ensure that any such self-insurance program provides the **City** with all rights that would be provided by traditional insurance under this Article 22, including but not limited to the defense and indemnification obligations that insurers are required to undertake in liability policies.

22.9 Materiality/Non-Waiver: The **Contractor's** failure to secure policies in complete conformity with this Article 22, or to give an insurance company timely notice of any sort required in this **Contract** or to do anything else required by this Article 22 shall constitute a material breach of this **Contract**. Such breach shall not be waived or otherwise excused by any action or inaction by the **City** at any time.

22.10 Pursuant to General Municipal Law Section 108, this **Contract** shall be void and of no effect unless **Contractor** maintains Workers' Compensation Insurance for the term of this **Contract** to the extent required and in compliance with the New York State Workers' Compensation Law.

22.11 Other Remedies: Insurance coverage provided pursuant to this Article 22 or otherwise shall not relieve the **Contractor** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions available to it under any other provisions of this **Contract** or **Law**.

### **ARTICLE 23. MONEY RETAINED AGAINST CLAIMS**

23.1 If any claim shall be made by any person or entity (including **Other Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City** for any of the following:

- (a) An alleged loss, damage, injury, theft or vandalism of any of the kinds referred to in Articles 7 and 12, plus the reasonable costs of defending the **City**, which in the opinion of the **Comptroller** may not be paid by an insurance company (for any reason whatsoever); or
- (b) An infringement of copyrights, patents or use of patented articles, tools, etc., as referred to in Article 57; or
- (c) Damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**,

the amount of such claim, or so much thereof as the **Comptroller** may deem necessary, may be withheld by the **Comptroller**, as security against such claim, from any money due hereunder. The **Comptroller**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

23.2 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**,

or both, shall have been established therein by a final judgment of a court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Comptroller** shall pay such judgment or admitted claim out of the monies retained by the **Comptroller** under the provisions of this Article 23, and return the balance, if any, without interest, to the **Contractor**.

#### **ARTICLE 24. MAINTENANCE AND GUARANTY**

24.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Substantial Completion** (or use and occupancy in accordance with Article 16), except where other periods of maintenance and guaranty are provided for in Schedule A.

24.2 As security for the faithful performance of its obligations hereunder, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to one (1%) percent of the price (or the amount fixed in Schedule A of the General Conditions) in cash or certified check upon a state or national bank and trust company or a check of such bank and trust company signed by a duly authorized officer thereof and drawn to the order of the **Comptroller**, or obligations of the **City**, which the **Comptroller** may approve as of equal value with the sum so required.

24.3 In lieu of the above, the **Contractor** may make such security payment to the **City** by authorizing the **Commissioner** in writing to deduct the amount from the **Substantial Completion** payment which shall be deemed the deposit required above.

24.4 If the **Contractor** has faithfully performed all of its obligations hereunder the **Commissioner** shall so certify to the **Comptroller** within five (5) **Days** after the expiration of one (1) year from the date of **Substantial Completion** and acceptance of the **Work** or within thirty (30) **Days** after the expiration of the guarantee period fixed in the **Specifications**. The security payment shall be repaid to the **Contractor** without interest within thirty (30) **Days** after certification by the **Commissioner** to the **Comptroller** that the **Contractor** has faithfully performed all of its obligations hereunder.

24.5 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than ten (10) **Days** subsequent to the expiration of the one (1) year period or other periods provided for herein.

24.6 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others in the same manner as provided for in the completion of a defaulted **Contract**, under Article 51.

24.7 If the security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

24.8 The **Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

24.9 The **Contractor** shall obtain all manufacturers' warranties and guaranties of all equipment and materials required by this **Contract** in the name of the **City** and shall deliver same to the **Commissioner**. All of the **City's** rights and title and interest in and to said manufacturers' warranties and guaranties may be assigned by the **City** to any subsequent purchasers of such equipment and materials or lessees of the

premises into which the equipment and materials have been installed.

## **CHAPTER VI: CHANGES, EXTRA WORK, AND DOCUMENTATION OF CLAIM**

### **ARTICLE 25. CHANGES**

25.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Law** and this **Contract**. All such changes, modifications, and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

25.2 **Contract** changes will be made only for **Work** necessary to complete the **Work** included in the original scope of the **Contract** and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work** in the **Contract**.

25.3 The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the following ways:

25.3.1 By applicable unit prices specified in the **Contract**; and/or

25.3.2 By agreement of a fixed price; and/or

25.3.3 By time and material records; and/or

25.3.4 In any other manner approved by the **CCPO**.

25.4 All payments for change orders are subject to pre-audit by the **Engineering Audit Officer** and may be post-audited by the **Comptroller** and/or the **Agency**.

### **ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK**

26.1 **Overrun of Unit Price Item**: An overrun is any quantity of a unit price item which the **Contractor** is directed to provide which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule.

26.1.1 For any unit price item, the **Contractor** will be paid at the unit price bid for any quantity up to one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule. If during the progress of the **Work**, the actual quantity of any unit price item required to complete the **Work** approaches the estimated quantity for that item, and for any reason it appears that the actual quantity of any unit price item necessary to complete the **Work** will exceed the estimated quantity for that item by twenty-five (25%) percent, the **Contractor** shall immediately notify the **Engineer** of such anticipated overrun. The **Contractor** shall not be compensated for any quantity of a unit price item provided which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule without written authorization from the **Engineer**.

26.1.2 If the actual quantity of any unit price item necessary to complete the **Work** will exceed one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule, the **City** reserves the right and the **Contractor** agrees to negotiate a new unit price for such item. In no event shall such negotiated new unit price exceed the unit bid price. If the **City** and **Contractor** cannot agree on a new unit price, then the **City** shall order the **Contractor** and the **Contractor** agrees to provide additional quantities of the item on the



basis of time and material records for the actual and reasonable cost as determined under Article 26.2, but in no event at a unit price exceeding the unit price bid.

26.2 **Extra Work:** For **Extra Work** where payment is by agreement on a fixed price in accordance with Article 25.3.2, the price to be paid for such **Extra Work** shall be based on the fair and reasonable estimated cost of the items set forth below. For **Extra Work** where payment is based on time and material records in accordance with Article 25.3.3, the price to be paid for such **Extra Work** shall be the actual and reasonable cost of the items set forth below, calculated in accordance with the formula specified therein, if any.

26.2.1 Necessary materials (including transportation to the **Site**); plus

26.2.2 Necessary direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits; plus

26.2.3 Sales and personal property taxes, if any, required to be paid on materials not incorporated into such **Extra Work**; plus

26.2.4 Reasonable rental value of **Contractor**-owned (or **Subcontractor**-owned, as applicable), necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per operating hour:  $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$ . Reasonable rental value is defined as the lower of either seventy-five percent of the monthly prorated rental rates established in "The AED Green Book, Rental Rates and Specifications for Construction Equipment" published by Equipment Watch (the "Green Book"), or seventy-five percent of the monthly prorated rental rates established in the "Rental Rate Blue Book for Construction Equipment" published by Equipment Watch (the "Blue Book") (the applicable Blue Book rate being for rental only without the addition of any operational costs listed in the Blue Book). The reasonable rental value is deemed to be inclusive of all operating costs except for fuel/energy consumption and equipment operator's wages/costs. For multiple shift utilization, reimbursement shall be calculated as follows: first shift shall be seventy-five (75%) percent of such rental rates; second shift shall be sixty (60%) percent of the first shift rate; and third shift shall be forty (40%) percent of the first shift rate. Equipment on standby shall be reimbursed at one-third (1/3) the prorated monthly rental rate. **Contractor**-owned (or **Subcontractor**-owned, as applicable) equipment includes equipment from rental companies affiliated with or controlled by the **Contractor** (or **Subcontractor**, as applicable), as determined by the **Commissioner**. In establishing cost reimbursement for non-operating **Contractor**-owned (or **Subcontractor**-owned, as applicable) equipment (scaffolding, sheeting systems, road plates, etc.), the **City** may restrict reimbursement to a purchase-salvage/life cycle basis if less than the computed rental costs; plus

26.2.5 Necessary installation and dismantling of such plant and equipment, including transportation to and from the **Site**, if any, provided that, in the case of non-**Contractor**-owned (or non-**Subcontractor**-owned, as applicable) equipment rented from a third party, the cost of installation and dismantling are not allowable if such costs are included in the rental rate; plus

26.2.6 Necessary fees charged by governmental entities; plus

26.2.7 Necessary construction-related service fees charged by non-governmental entities, such as landfill tipping fees; plus

26.2.8 Reasonable rental costs of non-**Contractor**-owned (or non-**Subcontractor**-owned, as applicable) necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per hour of operation:  $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$ . In lieu of renting, the **City** reserves the right to direct the purchase of non-operating equipment (scaffolding, sheeting systems, road plates, etc.), with payment on a purchase-salvage/life cycle basis, if less than the projected rental costs; plus

26.2.9 Workers' Compensation Insurance, and any insurance coverage expressly required by the **City** for the performance of the **Extra Work** which is different than the types of insurance required by Article 22 and Schedule A of the General Conditions. The cost of Workers' Compensation Insurance is subject to applicable payroll limitation caps and shall be based upon the carrier's Manual Rate for such insurance derived from the applicable class Loss Cost ("LC") and carrier's Lost Cost Multiplier ("LCM") approved by the New York State Department of Financial Services, and with the exception of experience rating, rate modifiers as promulgated by the New York Compensation Insurance Rating Board ("NYCIRB"); plus

26.2.10 Additional costs incurred as a result of the **Extra Work** for performance and payment bonds; plus

26.2.11 Twelve percent (12%) percent of the total of items in Articles 26.2.1 through 26.2.5 as compensation for overhead, except that no percentage for overhead will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes. Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, small tools, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance; plus

26.2.12 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus the items in Article 26.2.11, as compensation for profit, except that no percentage for profit will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes; plus

26.2.13 Five (5%) percent of the total of items in Articles 26.2.6 through 26.2.10 as compensation for overhead and profit.

26.3 Where the **Extra Work** is performed in whole or in part by other than the **Contractor's** own forces pursuant to Article 26.2, the **Contractor** shall be paid, subject to pre-audit by the **Engineering Audit Officer**, the cost of such **Work** computed in accordance with Article 26.2 above, plus an additional allowance of five (5%) percent to cover the **Contractor's** overhead and profit.

26.4 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted, subject to pre-audit by the **EAO**, in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**.

26.5 Where the **Contractor** and the **Commissioner** can agree upon a fixed price for **Extra Work** in accordance with Article 25.3.2 or another method of payment for **Extra Work** in accordance with Article 25.3.4, or for **Extra Work** ordered in connection with omitted **Work**, such method, subject to pre-audit by the **EAO**, may, at the option of the **Commissioner**, be substituted for the cost plus a percentage method provided in Article 26.2; provided, however, that if the **Extra Work** is performed by a **Subcontractor**, the **Contractor** shall not be entitled to receive more than an additional allowance of five (5%) percent for overhead and profit over

the cost of such **Subcontractor's Work** as computed in accordance with Article 26.2.

## ARTICLE 27. RESOLUTION OF DISPUTES

27.1 All disputes between the **City** and the **Contractor** of the kind delineated in this Article 27.1 that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this Article 27 and the **PPB** Rules. This procedure for resolving all disputes of the kind delineated herein shall be the exclusive means of resolving any such disputes.

27.1.1 This Article 27 shall not apply to disputes concerning matters dealt with in other sections of the **PPB** Rules, or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software.

27.1.2 This Article 27 shall apply only to disputes about the scope of **Work** delineated by the **Contract**, the interpretation of **Contract** documents, the amount to be paid for **Extra Work** or disputed work performed in connection with the **Contract**, the conformity of the **Contractor's Work** to the **Contract**, and the acceptability and quality of the **Contractor's Work**; such disputes arise when the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** makes a determination with which the **Contractor** disagrees.

27.2 All determinations required by this Article 27 shall be made in writing clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this Article 27 shall be deemed a non-determination without prejudice that will allow application to the next level.

27.3 During such time as any dispute is being presented, heard, and considered pursuant to this Article 27, the **Contract** terms shall remain in force and the **Contractor** shall continue to perform **Work** as directed by the **ACCO** or the **Engineer**. Failure of the **Contractor** to continue **Work** as directed shall constitute a waiver by the **Contractor** of its claim.

### 27.4 Presentation of Disputes to **Commissioner**.

Notice of Dispute and Agency Response. The **Contractor** shall present its dispute in writing ("Notice of Dispute") to the **Commissioner** within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the **Contract**. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the **Contractor** relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the **Contractor** in the dispute was arrived at. Within thirty (30) Days after receipt of the detailed written submission comprising the complete Notice of Dispute, the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** shall submit to the **Commissioner** all materials he or she deems pertinent to the dispute. Following initial submissions to the **Commissioner**, either party may demand of the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the **Commissioner** whose decision shall be final. Willful failure of the **Contractor** to produce any requested material whose relevancy the **Contractor** has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the **Contractor** of its claim.

27.4.1 **Commissioner Inquiry.** The **Commissioner** shall examine the material and may, in his or her discretion, convene an informal conference with the **Contractor**, the **ACCO**, and the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** to resolve the issue by mutual consent prior to reaching a determination. The **Commissioner** may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The **Commissioner's** ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the dispute presented, whether or not the **Commissioner** participated therein. The **Commissioner** may or, at the request of any party to the dispute, shall compel the participation of any **Other Contractor** with a contract related to the **Work** of this **Contract**, and that **Contractor** shall be bound by the decision of the **Commissioner**. Any **Other Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this Article 27 as the **Contractor** initiating the dispute.

27.4.2 **Commissioner Determination.** Within thirty (30) **Days** after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the **Commissioner** shall make his or her determination and shall deliver or send a copy of such determination to the **Contractor**, the **ACCO**, and **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner**, as applicable, together with a statement concerning how the decision may be appealed.

27.4.3 **Finality of Commissioner's Decision.** The **Commissioner's** decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board pursuant to this Article 27. The **City** may not take a petition to the Contract Dispute Resolution Board. However, should the **Contractor** take such a petition, the **City** may seek, and the Contract Dispute Resolution Board may render, a determination less favorable to the **Contractor** and more favorable to the **City** than the decision of the **Commissioner**.

27.5 **Presentation of Dispute to the Comptroller.** Before any dispute may be brought by the **Contractor** to the Contract Dispute Resolution Board, the **Contractor** must first present its claim to the **Comptroller** for his or her review, investigation, and possible adjustment.

27.5.1 **Time, Form, and Content of Notice.** Within thirty (30) **Days** of its receipt of a decision by the **Commissioner**, the **Contractor** shall submit to the **Comptroller** and to the **Commissioner** a Notice of Claim regarding its dispute with the **Agency**. The Notice of Claim shall consist of (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written decision of the **Commissioner**; and (iii) a copy of all materials submitted by the **Contractor** to the **Agency**, including the Notice of Dispute. The **Contractor** may not present to the **Comptroller** any material not presented to the **Commissioner**, except at the request of the **Comptroller**.

27.5.2 Response. Within thirty (30) **Days** of receipt of the Notice of Claim, the **Agency** shall make available to the **Comptroller** a copy of all material submitted by the **Agency** to the **Commissioner** in connection with the dispute. The **Agency** may not present to the **Comptroller** any material not presented to the **Commissioner** except at the request of the **Comptroller**.

27.5.3 **Comptroller** Investigation. The **Comptroller** may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in Sections 7-201 and 7-203 of the Administrative Code. In addition, the **Comptroller** may demand of either party, and such party shall provide, whatever additional material the **Comptroller** deems pertinent to the claim, including original business records of the **Contractor**. Willful failure of the **Contractor** to produce within fifteen (15) **Days** any material requested by the **Comptroller** shall constitute a waiver by the **Contractor** of its claim. The **Comptroller** may also schedule an informal conference to be attended by the **Contractor**, **Agency** representatives, and any other personnel desired by the **Comptroller**.

27.5.4 Opportunity of **Comptroller** to Compromise or Adjust Claim. The **Comptroller** shall have forty-five (45) **Days** from his or her receipt of all materials referred to in Article 27.5.3 to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the **Contractor** and the **Comptroller**, to a maximum of ninety (90) **Days** from the **Comptroller's** receipt of all materials. The **Contractor** may not present its petition to the Contract Dispute Resolution Board until the period for investigation and compromise delineated in this Article 27.5.4 has expired. In compromising or adjusting any claim hereunder, the **Comptroller** may not revise or disregard the terms of the **Contract** between the parties.

27.6 Contract Dispute Resolution Board. There shall be a Contract Dispute Resolution Board composed of:

27.6.1 The chief administrative law judge of the Office of Administrative Trials and Hearings (OATH) or his/her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this Article 27 as may be necessary in the execution of the Contract Dispute Resolution Board's functions, including, but not limited to, granting extensions of time to present or respond to submissions;

27.6.2 The **CCPO** or his/her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

27.6.3 A person with appropriate expertise who is not an employee of the **City**. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established and administered by OATH with appropriate background to act as decision-makers in a dispute. Such individual may not have a contract or dispute with the **City** or be an officer or employee of any company or organization that does, or regularly represents persons, companies, or organizations having disputes with the **City**.

27.7 Petition to the Contract Dispute Resolution Board. In the event the claim has not been settled or adjusted by the **Comptroller** within the period provided in this Article 27, the **Contractor**, within thirty (30) **Days** thereafter, may petition the Contract Dispute Resolution Board to review the

**Commissioner's determination.**

27.7.1 Form and Content of Petition by **Contractor**. The **Contractor** shall present its dispute to the Contract Dispute Resolution Board in the form of a petition, which shall include (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written Decision of the **Commissioner**, (iii) copies of all materials submitted by the **Contractor** to the Agency; (iv) a copy of the written decision of the **Comptroller**, if any, and (v) copies of all correspondence with, or written material submitted by the **Contractor**, to the **Comptroller**. The **Contractor** shall concurrently submit four (4) complete sets of the Petition: one set to the **City** Corporation Counsel (Attn: Commercial and Real Estate Litigation Division) and three (3) sets to the Contract Dispute Resolution Board at OATH's offices with proof of service on the **City** Corporation Counsel. In addition, the **Contractor** shall submit a copy of the written statement of the substance of the dispute, cited in (i) above, to both the **Commissioner** and the **Comptroller**.

27.7.2 **Agency Response**. Within thirty (30) **Days** of its receipt of the Petition by the **City** Corporation Counsel, the **Agency** shall respond to the brief written statement of the **Contractor** and make available to the Contract Dispute Resolution Board all material it submitted to the **Commissioner** and **Comptroller**. Three (3) complete copies of the **Agency** response shall be provided to the Contract Dispute Resolution Board and one to the **Contractor**. Extensions of time for submittal of the **Agency** response shall be given as necessary upon a showing of good cause or, upon consent of the parties, for an initial period of up to thirty (30) **Days**.

27.7.3 Further Proceedings. The Contract Dispute Resolution Board shall permit the **Contractor** to present its case by submission of memoranda, briefs, and oral argument. The Contract Dispute Resolution Board shall also permit the **Agency** to present its case in response to the **Contractor** by submission of memoranda, briefs, and oral argument. If requested by the **City** Corporation Counsel, the **Comptroller** shall provide reasonable assistance in the preparation of the **Agency's** case. Neither the **Contractor** nor the **Agency** may support its case with any documentation or other material that was not considered by the **Comptroller**, unless requested by the Contract Dispute Resolution Board. The Contract Dispute Resolution Board, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The Contract Dispute Resolution Board, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

27.7.4 Contract Dispute Resolution Board Determination. Within forty-five (45) **Days** of the conclusion of all written submissions and oral arguments, the Contract Dispute Resolution Board shall render a written decision resolving the dispute. In an unusually complex case, the Contract Dispute Resolution Board may render its decision in a longer period, not to exceed ninety (90) **Days**, and shall so advise the parties at the commencement of this period. The Contract Dispute Resolution Board's decision must be consistent with the terms of the **Contract**. Decisions of the Contract Dispute Resolution Board shall only resolve matters before the Contract Dispute Resolution Board and shall not have precedential effect with respect to matters not before the Contract Dispute Resolution Board.

27.7.5 Notification of Contract Dispute Resolution Board Decision. The Contract Dispute Resolution Board shall send a copy of its decision to the **Contractor**, the **ACCO**, the Engineer, the **Comptroller**, the **City** Corporation Counsel, the CCPO, and the **PPB**. A decision in favor of the **Contractor** shall be subject to the prompt payment provisions of the **PPB** Rules. The

Required Payment Date shall be thirty (30) Days after the date the parties are formally notified of the Contract Dispute Resolution Board's decision.

27.7.6 Finality of Contract Dispute Resolution Board Decision. The Contract Dispute Resolution Board's decision shall be final and binding on all parties. Any party may seek review of the Contract Dispute Resolution Board's decision solely in the form of a challenge, filed within four (4) months of the date of the Contract Dispute Resolution Board's decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Law and Rules. Such review by the court shall be limited to the question of whether or not the Contract Dispute Resolution Board's decision was made in violation of lawful procedure, was affected by an error of **Law**, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the Contract Dispute Resolution Board in accordance with this Article 27.

27.8 Any termination, cancellation, or alleged breach of the **Contract** prior to or during the pendency of any proceedings pursuant to this Article 27 shall not affect or impair the ability of the **Commissioner** or Contract Dispute Resolution Board to make a binding and final decision pursuant to this Article 27.

## **ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK OR WORK ON A TIME & MATERIALS BASIS**

28.1 While the **Contractor** or any of its **Subcontractors** is performing **Work** on a time and material basis or **Extra Work** on a time and material basis ordered by the **Commissioner** under Article 25, or where the **Contractor** believes that it or any of its **Subcontractors** is performing **Extra Work** but a final determination by **Agency** has not been made, or the **Contractor** or any of its **Subcontractors** is performing disputed **Work** (whether on or off the **Site**), or complying with a determination or order under protest in accordance with Articles 11, 27, and 30, in each such case the **Contractor** shall furnish the **Resident Engineer** daily with three (3) copies of written statements signed by the **Contractor's** representative at the **Site** showing:

28.1.1 The name, trade, and number of each worker employed on such **Work** or engaged in complying with such determination or order, the number of hours employed, and the character of the **Work** each is doing; and

28.1.2 The nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such **Work** or compliance with such determination or order, and from whom purchased or rented.

28.2 A copy of such statement will be countersigned by the **Resident Engineer**, noting thereon any items not agreed to or questioned, and will be returned to the **Contractor** within two (2) **Days** after submission.

28.3 The **Contractor** and its **Subcontractors**, when required by the **Commissioner**, or the **Comptroller**, shall also produce for inspection, at the office of the **Contractor** or **Subcontractor**, any and all of its books, bid documents, financial statements, vouchers, records, daily job diaries and reports, and cancelled checks, and any other documents relating to showing the nature and quantity of the labor, materials, plant and equipment actually used in the performance of such **Work**, or in complying with such determination or order, and the amounts expended therefor, and shall permit the **Commissioner** and the

**Comptroller** to make such extracts therefrom, or copies thereof, as they or either of them may desire.

28.4 In connection with the examination provided for herein, the **Commissioner**, upon demand therefor, will produce for inspection by the **Contractor** such records as the **Agency** may have with respect to such **Extra Work** or disputed **Work** performed under protest pursuant to order of the **Commissioner**, except those records and reports which may have been prepared for the purpose of determining the accuracy and validity of the **Contractor's** claim.

28.5 Failure to comply strictly with these requirements shall constitute a waiver of any claim for extra compensation or damages on account of the performance of such **Work** or compliance with such determination or order.

#### **ARTICLE 29. OMITTED WORK**

29.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant to Article 33, the **Contract** price, subject to audit by the EAO, shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted subject to Article 29.4. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be the determining factor.

29.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in Article 29.4.

29.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to Article 29.4.

29.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated into the **Work**, the **Contractor** shall be paid for such material and/or equipment in accordance with Article 64.2.1(b); provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

29.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted **Work**.

#### **ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS**

30.1 If the **Contractor** shall claim to be sustaining damages by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter to the extent additional damages are being incurred for the same condition, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to strictly comply with



the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action or dispute resolution procedure arising under or by reason of this **Contract** shall not be different from or in excess of the statements and documentation made pursuant to this Article 30. This Article 30.1 does not apply to claims submitted to the **Commissioner** pursuant to Article 11 or to claims disputing a determination under Article 27.

30.2 In addition to the foregoing statements, the **Contractor** shall, upon notice from the **Commissioner**, produce for examination at the **Contractor's** office, by the **Engineer, Architect or Project Manager**, all of its books of account, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**, and submit itself and persons in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.3 In addition to the statements required under Article 28 and this Article 30, the **Contractor** and/or its **Subcontractor** shall, within thirty (30) **Days** upon notice from the **Commissioner** or **Comptroller**, produce for examination at the **Contractor's** and/or **Subcontractor's** office, by a representative of either the **Commissioner** or **Comptroller**, all of its books of account, bid documents, financial statements, accountant workpapers, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**. Further, the **Contractor** and/or its **Subcontractor** shall submit any person in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.4 Unless the information and examination required under Article 30.3 is provided by the **Contractor** and/or its **Subcontractor** upon thirty (30) **Days'** notice from the **Commissioner** or **Comptroller**, or upon the **Commissioner's** or **Comptroller's** written authorization to extend the time to comply, the **City** shall be released from all claims arising under, relating to or by reason of this **Contract**, except for sums certified by the **Commissioner** to be due under the provisions of this **Contract**. It is further stipulated and agreed that no person has the power to waive any of the foregoing provisions and that in any action or dispute resolution procedure against the **City** to recover any sum in excess of the sums certified by the **Commissioner** to be due under or by reason of this **Contract**, the **Contractor** must allege in its complaint and prove, at trial or during such dispute resolution procedure, compliance with the provisions of this Article 30.

30.5 In addition, after the commencement of any action or dispute resolution procedure by the **Contractor** arising under or by reason of this **Contract**, the **City** shall have the right to require the **Contractor** to produce for examination under oath, up until the trial of the action or hearing before the Contract Dispute Resolution Board, the books and documents described in Article 30.3 and submit itself and all persons in its employ for examination under oath. If this Article 30 is not complied with as required, then the **Contractor** hereby consents to the dismissal of the action or dispute resolution procedure.

## **CHAPTER VII: POWERS OF THE RESIDENT ENGINEER, THE ENGINEER OR ARCHITECT AND THE COMMISSIONER**

### **ARTICLE 31. THE RESIDENT ENGINEER**

31.1 The **Resident Engineer** shall have the power to inspect, supervise, and control the performance

of the **Work**, subject to review by the **Commissioner**. The **Resident Engineer** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

### **ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER**

32.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner**:

32.1.1 To determine the amount, quality, and location of the **Work** to be paid for hereunder; and

32.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings, Specifications, and Addenda**, and to resolve all patent inconsistencies or ambiguities therein; and

32.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of **Other Contractors** engaged simultaneously on this **Project**, including the power to suspend any part of the **Work**, but not the whole thereof; and

32.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in the cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

32.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

32.2 The foregoing enumeration shall not imply any limitation upon the power of the **Engineer** or **Architect** or **Project Manager**, for it is the intent of this **Contract** that all of the **Work** shall generally be subject to his/her determination, direction, and approval, except where the determination, direction or approval of someone other than the **Engineer** or **Architect** or **Project Manager** is expressly called for herein.

32.3 The **Engineer** or **Architect** or **Project Manager** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

### **ARTICLE 33. THE COMMISSIONER**

33.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

33.1.1 To review and make determinations on any and all questions in relation to this **Contract** and its performance; and

33.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** (subject, however, to the limitations specified in Article 25) or the omission of **Contract Work**; and

33.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

33.1.3(a) In the interest of the **City** generally; or

33.1.3(b) To coordinate the **Work** of the various contractors engaged on this **Project** pursuant to the provisions of Article 12; or

33.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

#### **ARTICLE 34. NO ESTOPPEL**

34.1 Neither the **City** nor any **Agency**, official, agent or employee thereof, shall be bound, precluded or estopped by any determination, decision, approval, order, letter, payment or certificate made or given under or in connection with this **Contract** by the **City**, the **Commissioner**, the **Engineer**, the **Resident Engineer**, or any other official, agent or employee of the **City**, either before or after the final completion and acceptance of the **Work** and payment therefor:

34.1.1 From showing the true and correct classification, amount, quality or character of the **Work** actually done; or that any such determination, decision, order, letter, payment or certificate was untrue, incorrect or improperly made in any particular, or that the **Work**, or any part thereof, does not in fact conform to the requirements of this **Contract**; and

34.1.2 From demanding and recovering from the **Contractor** any overpayment made to it, or such damages as the **City** may sustain by reason of the **Contractor's** failure to perform each and every part of its **Contract**.

### **CHAPTER VIII: LABOR PROVISIONS**

#### **ARTICLE 35. EMPLOYEES**

35.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

35.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed; and whenever the **Commissioner** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it; or

35.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or by **Other Contractors** or their **Subcontractors** pursuant to other contracts, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to take action against it as set forth in Chapter X of this **Contract**, or such other article of this **Contract** as the Commissioner may deem proper; or

35.1.3 In accordance with Section 220.3-e of the Labor Law of the State of New York (hereinafter “Labor Law”), the **Contractor** and its **Subcontractors** shall not employ on the **Work** any apprentice, unless he/she is a registered individual, under a bona fide program registered with the New York State Department of Labor. The allowable ratio of apprentices to journey-level workers in any craft classification shall not be greater than the ratio permitted to the **Contractor** as to its work force on any job under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the **Comptroller** of the **City** for the classification of **Work** actually performed. The **Contractor** or **Subcontractor** will be required to furnish written evidence of the registration of its program and apprentices as well as all the appropriate ratios and wage rates, for the area of the construction prior to using any apprentices on the **Contract Work**.

35.2 If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, all laborers, workers, and mechanics employed in the performance of the **Contract** on the public work site, either by the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by the **Contract**, shall be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor’s Occupational Safety and Health Administration that is at least ten (10) hours in duration.

35.3 In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the Administrative Code, respectively,

35.3.1 The **Contractor** shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this **Contract** to (a) the Commissioner of the Department of Investigation, (b) a member of the New York City Council, the Public Advocate, or the **Comptroller**, or (c) the **CCPO**, **ACCO**, **Agency** head, or **Commissioner**.

35.3.2 If any of the **Contractor**’s officers or employees believes that he or she has been the subject of an adverse personnel action in violation of Article 35.3.1, he or she shall be entitled to bring a cause of action against the **Contractor** to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (a) an injunction to restrain continued retaliation, (b) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (c) reinstatement of full fringe benefits and seniority rights, (d) payment of two times back pay, plus interest, and (e) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney’s fees.

35.3.3 The **Contractor** shall post a notice provided by the **City** in a prominent and accessible place on any site where work pursuant to the **Contract** is performed that contains information about:

35.3.3(a) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the **Contract**; and

35.3.3(b) the rights and remedies afforded to its employees under Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the

reporting of allegations of fraud, false claims, criminality or corruption in connection with the **Contract**.

35.3.4 For the purposes of this Article 35.3, “adverse personnel action” includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.

35.3.5 This Article 35.3 is applicable to all of the **Contractor’s Subcontractors** having subcontracts with a value in excess of \$100,000; accordingly, the **Contractor** shall include this rider in all subcontracts with a value a value in excess of \$100,000.

35.4 Article 35.3 is not applicable to this **Contract** if it is valued at \$100,000 or less. Articles 35.3.1, 35.3.2, 35.3.4, and 35.3.5 are not applicable to this **Contract** if it was solicited pursuant to a finding of an emergency.

### 35.5 Paid Sick Leave Law.

#### 35.5.1 Introduction and General Provisions.

35.5.1(a) The Earned Sick Time Act, also known as the Paid Sick Leave Law (“PSLL”), requires covered employees who annually perform more than 80 hours of work in New York City to be provided with paid sick time<sup>2</sup>. Contractors of the **City** or of other governmental entities may be required to provide sick time pursuant to the PSLL.

35.5.1(b) The PSLL became effective on April 1, 2014, and is codified at Title 20, Chapter 8, of the New York City Administrative Code. It is administered by the City’s Department of Consumer Affairs (“DCA”); DCA’s rules promulgated under the PSLL are codified at Chapter 7 of Title 6 of the Rules of the City of New York (“Rules”).

35.5.1(c) The **Contractor** agrees to comply in all respects with the PSLL and the Rules, and as amended, if applicable, in the performance of this **Contract**. The **Contractor** further acknowledges that such compliance is a material term of this **Contract** and that failure to comply with the PSLL in performance of this **Contract** may result in its termination.

35.5.1(d) The **Contractor** must notify the **Agency Chief Contracting Officer** of the **Agency** with whom it is contracting in writing within ten (10) days of receipt of a complaint (whether oral or written) regarding the PSLL involving the performance of this **Contract**. Additionally, the **Contractor** must cooperate with DCA’s education efforts and must comply with DCA’s subpoenas and other document demands as set forth in the PSLL and Rules.

35.5.1(e) The PSLL is summarized below for the convenience of the **Contractor**. The **Contractor** is advised to review the PSLL and Rules in their entirety. On the

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<sup>2</sup> Pursuant to the PSLL, if fewer than five employees work for the same employer, as determined pursuant to New York City Administrative Code § 20-912(g), such employer has the option of providing such employees uncompensated sick time.

website [www.nyc.gov/PaidSickLeave](http://www.nyc.gov/PaidSickLeave) there are links to the PSL and the associated Rules as well as additional resources for employers, such as Frequently Asked Questions, timekeeping tools and model forms, and an event calendar of upcoming presentations and webinars at which the **Contractor** can get more information about how to comply with the PSL. The **Contractor** acknowledges that it is responsible for compliance with the PSL notwithstanding any inconsistent language contained herein.

#### 35.5.2 Pursuant to the PSL and the Rules: Applicability, Accrual, and Use.

35.5.2(a) An employee who works within the City of New York for more than eighty hours in any consecutive 12-month period designated by the employer as its “calendar year” pursuant to the PSL (“Year”) must be provided sick time. Employers must provide a minimum of one hour of sick time for every 30 hours worked by an employee and compensation for such sick time must be provided at the greater of the employee’s regular hourly rate or the minimum wage. Employers are not required to provide more than 40 hours of sick time to an employee in any Year.

35.5.2(b) An employee has the right to determine how much sick time he or she will use, provided that employers may set a reasonable minimum increment for the use of sick time not to exceed four hours per **Day**. In addition, an employee may carry over up to 40 hours of unused sick time to the following Year, provided that no employer is required to allow the use of more than forty hours of sick time in a Year or carry over unused paid sick time if the employee is paid for such unused sick time and the employer provides the employee with at least the legally required amount of paid sick time for such employee for the immediately subsequent Year on the first **Day** of such Year.

35.5.2(c) An employee entitled to sick time pursuant to the PSL may use sick time for any of the following:

- i. such employee’s mental illness, physical illness, injury, or health condition or the care of such illness, injury, or condition or such employee’s need for medical diagnosis or preventive medical care;
- ii. such employee’s care of a family member (an employee’s child, spouse, domestic partner, parent, sibling, grandchild or grandparent, or the child or parent of an employee’s spouse or domestic partner) who has a mental illness, physical illness, injury or health condition or who has a need for medical diagnosis or preventive medical care;
- iii. closure of such employee’s place of business by order of a public official due to a public health emergency; or
- iv. such employee’s need to care for a child whose school or childcare provider has been closed due to a public health emergency.

35.5.2(d) An employer must not require an employee, as a condition of taking sick time, to search for a replacement. However, an employer may require an employee to provide: reasonable notice of the need to use sick time; reasonable documentation that the use of sick time was needed for a reason above if for an absence of more than three consecutive work days; and/or written confirmation that an employee used sick time pursuant to the PSL. However, an employer may not require documentation specifying the nature of a medical condition or otherwise require disclosure of the details of a medical condition as a condition of providing sick time and health information obtained solely due to an employee’s use of sick time pursuant to the PSL must be treated by the

employer as confidential.

35.5.2(e) If an employer chooses to impose any permissible discretionary requirement as a condition of using sick time, it must provide to all employees a written policy containing those requirements, using a delivery method that reasonably ensures that employees receive the policy. If such employer has not provided its written policy, it may not deny sick time to an employee because of non-compliance with such a policy.

35.5.2(f) Sick time to which an employee is entitled must be paid no later than the payday for the next regular payroll period beginning after the sick time was used.

35.5.3 Exemptions and Exceptions. Notwithstanding the above, the PSLL does not apply to any of the following:

35.5.3(a) an independent contractor who does not meet the definition of employee under section 190(2) of the New York State Labor Law;

35.5.3(b) an employee covered by a valid collective bargaining agreement in effect on April 1, 2014, until the termination of such agreement;

35.5.3(c) an employee in the construction or grocery industry covered by a valid collective bargaining agreement if the provisions of the PSLL are expressly waived in such collective bargaining agreement;

35.5.3(d) an employee covered by another valid collective bargaining agreement if such provisions are expressly waived in such agreement and such agreement provides a benefit comparable to that provided by the PSLL for such employee;

35.5.3(e) an audiologist, occupational therapist, physical therapist, or speech language pathologist who is licensed by the New York State Department of Education and who calls in for work assignments at will, determines his or her own schedule, has the ability to reject or accept any assignment referred to him or her, and is paid an average hourly wage that is at least four times the federal minimum wage;

35.5.3(f) an employee in a work study program under Section 2753 of Chapter 42 of the United States Code;

35.5.3(g) an employee whose work is compensated by a qualified scholarship program as that term is defined in the Internal Revenue Code, Section 117 of Chapter 20 of the United States Code; or

35.5.3(h) a participant in a Work Experience Program (WEP) under section 336-c of the New York State Social Services Law.

35.5.4 Retaliation Prohibited. An employer may not threaten or engage in retaliation against an employee for exercising or attempting in good faith to exercise any right provided by the PSLL. In addition, an employer may not interfere with any investigation, proceeding, or hearing pursuant to the PSLL.

35.5.5 Notice of Rights.

35.5.5(a) An employer must provide its employees with written notice of their rights pursuant to the PSLL. Such notice must be in English and the primary language spoken

by an employee, provided that DCA has made available a translation into such language. Downloadable notices are available on DCA's website at <http://www.nyc.gov/html/dca/html/law/PaidSickLeave.shtml>.

35.5.5(b) Any person or entity that willfully violates these notice requirements is subject to a civil penalty in an amount not to exceed fifty dollars for each employee who was not given appropriate notice.

35.5.6 Records. An employer must retain records documenting its compliance with the PSLL for a period of at least three years, and must allow DCA to access such records in furtherance of an investigation related to an alleged violation of the PSLL.

35.5.7 Enforcement and Penalties.

35.5.7(a) Upon receiving a complaint alleging a violation of the PSLL, DCA has the right to investigate such complaint and attempt to resolve it through mediation. Within **30 Days** of written notification of a complaint by DCA, or sooner in certain circumstances, the employer must provide DCA with a written response and such other information as DCA may request. If DCA believes that a violation of the PSLL has occurred, it has the right to issue a notice of violation to the employer.

35.5.7(b) DCA has the power to grant an employee or former employee all appropriate relief as set forth in New York City Administrative Code § 20-924(d). Such relief may include, among other remedies, treble damages for the wages that should have been paid, damages for unlawful retaliation, and damages and reinstatement for unlawful discharge. In addition, DCA may impose on an employer found to have violated the PSLL civil penalties not to exceed \$500 for a first violation, \$750 for a second violation within two years of the first violation, and \$1,000 for each succeeding violation within two years of the previous violation.

35.5.8 More Generous Policies and Other Legal Requirements. Nothing in the PSLL is intended to discourage, prohibit, diminish, or impair the adoption or retention of a more generous sick time policy, or the obligation of an employer to comply with any contract, collective bargaining agreement, employment benefit plan or other agreement providing more generous sick time. The PSLL provides minimum requirements pertaining to sick time and does not preempt, limit or otherwise affect the applicability of any other law, regulation, rule, requirement, policy or standard that provides for greater accrual or use by employees of sick leave or time, whether paid or unpaid, or that extends other protections to employees. The PSLL may not be construed as creating or imposing any requirement in conflict with any federal or state law, rule or regulation.

35.6 HireNYC: Hiring and Reporting Requirements. This Article 35.6 applies to construction contracts of \$1,000,000 or more. The **Contractor** shall comply with the requirements of Articles 35.6.1-35.6.5 for all non-trades jobs (e.g., for an administrative position arising out of **Work** ant located in New York City). The **Contractor** shall reasonably cooperate with SBS and the **City** on specific outreach events, including "Hire-on-the-Spot" events, for the hiring of trades workers in connection with the **Work**. If provided elsewhere in this **Contract**, this **Contract** is subject to a project labor agreement.

35.6.1 Enrollment. The **Contractor** shall enroll with the HireNYC system, found at [www.nyc.gov/sbs](http://www.nyc.gov/sbs), within thirty (30) days after the registration of this **Contract** pursuant to Section 328 of the New York City Charter. The **Contractor** shall provide information about the business, designate a primary contact and say whether it intends to hire for any entry



to mid-level job opportunities arising from this **Contract** and located in New York City, and, if so, the approximate start date of the first hire.

#### 35.6.2 Job Posting Requirements.

35.6.2(a) Once enrolled in HireNYC, the **Contractor** agrees to update the HireNYC portal with all entry to mid-level job opportunities arising from this **Contract** and located in New York City, if any, which shall be defined as jobs requiring no more than an associate degree, as provided by the New York State Department of Labor (see Column F of <https://labor.ny.gov/stats/2012-2022-NYS-Employment-Prospects.xls>). The information to be updated includes the types of entry and mid-level positions made available from the work arising from the **Contract** and located in New York City, the number of positions, the anticipated schedule of initiating the hiring process for these positions, and the contact information for the **Contractor's** representative charged with overseeing hiring. The **Contractor** must update the HireNYC portal with any hiring needs arising from the contract and located in New York City, and the requirements of the jobs to be filled, no less than three weeks prior to the intended first day of employment for each new position, except with the permission of SBS, not to be unreasonably withheld, and must also update the HireNYC portal as set forth below.

35.6.2(b) After enrollment through HireNYC and submission of relevant information, SBS will work with the **Contractor** to develop a recruitment plan which will outline the candidate screening process, and will provide clear instructions as to when, where, and how interviews will take place. HireNYC will screen applicants based on employer requirements and refer applicants whom it believes are qualified to the **Contractor** for interviews. The **Contractor** must interview referred applicants whom it believes are qualified.

35.6.2(c) After completing an interview of a candidate referred by HireNYC, the **Contractor** must provide feedback via the portal within twenty (20) business days to indicate which candidates were interviewed and hired, if any. In addition, the **Contractor** shall provide the start date of new hires, and additional information reasonably related to such hires, within twenty (20) business days after the start date. In the event the **Contractor** does not have any job openings covered by this Rider in any given year, the **Contractor** shall be required to provide an annual update to HireNYC to that effect. For this purpose, the reporting year shall run from the date of the registration of the **Contract** pursuant to Charter section 328 and each anniversary date.

35.6.2(d) These requirements do not limit the **Contractor's** ability to assess the qualifications of prospective workers, and to make final hiring and retention decisions. No provision of this Article 35.6 shall be interpreted so as to require the **Contractor** to employ any particular worker.

35.6.2(e) In addition, the provisions of this Article 35.6 shall not apply to positions that the **Contractor** intends to fill with employees employed pursuant to the job retention provision of Section 22-505 of the Administrative Code of the City of New York. The **Contractor** shall not be required to report such openings with HireNYC. However, the **Contractor** shall enroll with the HireNYC system pursuant to Article 35.6.1, above, and, if such positions subsequently become open, then the remaining provisions of this Article 35.6 will apply.

35.6.3 Breach and Liquidated Damages. If the **Contractor** fails to comply with the terms of the **Contract** and this Article 35.6 (1) by not enrolling its business with HireNYC; (2) by not informing HireNYC, as required, of open positions; or (3) by failing to interview a qualified candidate, the **Agency** may assess liquidated damages in the amount of two-thousand five hundred dollars (\$2,500) per breach. For all other events of noncompliance with the terms of this Article 35.6, the **Agency** may assess liquidated damages in the amount of five hundred dollars (\$500) per breach. Furthermore, in the event the **Contractor** breaches the requirements of this Article 35.6 during the term of the **Contract**, the **City** may hold the **Contractor** in default of this **Contract**.

35.6.4 Audit Compliance. In addition to the auditing requirements set forth in other parts of the **Contract**, the **Contractor** shall permit SBS and the **City** to inspect any and all records concerning or relating to job openings or the hiring of individuals for work arising from the **Contract** and located in New York City. The **Contractor** shall permit an inspection within seven (7) business days of the request.

35.6.5 Other Reporting Requirements. The **Contractor** shall report to the **City**, on a monthly basis, all information reasonably requested by the **City** that is necessary for the **City** to comply with any reporting requirements imposed by **Law**, including any requirement that the **City** maintain a publicly accessible database. In addition, the **Contractor** agrees to comply with all reporting requirements imposed by **Law**, or as otherwise requested by the **City**.

35.6.6 Federal Hiring Requirements. If this **Contract** is federally funded (as indicated elsewhere in this **Contract**), the **Contractor** shall comply with all federal hiring requirements as may be set forth in this **Contract**, including, as applicable: (a) Section 3 of the HUD Act of 1968, which requires, to the greatest extent feasible, economic opportunities for 30 percent of new hires be given to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing and Executive Order 11246, which prohibits discrimination in employment due to race, color, religion, sex or national origin, and requires the implementation of goals for minority and female participation for work involving any construction trade.

## ARTICLE 36. NO DISCRIMINATION

36.1 The **Contractor** specifically agrees, as required by Labor Law Section 220-e, as amended, that:

36.1.1 In the hiring of employees for the performance of **Work** under this **Contract** or any subcontract hereunder, neither the **Contractor**, **Subcontractor**, nor any person acting on behalf of such **Contractor** or **Subcontractor**, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the **Work** to which the employment relates;

36.1.2 Neither the **Contractor**, **Subcontractor**, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of **Work** under this **Contract** on account of race, creed, color or national origin;

36.1.3 There may be deducted from the amount payable to the **Contractor** by the **City** under this **Contract** a penalty of fifty (\$50.00) dollars for each person for each **Day** during which such person was discriminated against or intimidated in violation of the provisions of this

**Contract;** and

36.1.4 This **Contract** may be cancelled or terminated by the **City** and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this Article 36.

36.1.5 This Article 36 covers all construction, alteration and repair of any public building or public work occurring in the State of New York and the manufacture, sale, and distribution of materials, equipment, and supplies to the extent that such operations are performed within the State of New York pursuant to this **Contract**.

36.2 The **Contractor** specifically agrees, as required by Section 6-108 of the Administrative Code, as amended, that:

36.2.1 It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a **Contract** with the **City** or engaged in the manufacture, sale or distribution of materials, equipment or supplies pursuant to a **Contract** with the **City** to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

36.2.2 It shall be unlawful for any person or any servant, agent or employee of any person, described in Article 36.1.2, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color or creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

36.2.3 Breach of the foregoing provisions shall be deemed a violation of a material provision of this **Contract**.

36.2.4 Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this Article 36.2 shall, upon conviction thereof, be punished by a fine of not more than one hundred (\$100.00) dollars or by imprisonment for not more than thirty (30) **Days**, or both.

36.3 This **Contract** is subject to the requirements of Executive Order No. 50 (1980) (“E.O. 50”), as revised, and the rules and regulations promulgated thereunder. No contract will be awarded unless and until these requirements have been complied with in their entirety. By signing this **Contract**, the **Contractor** agrees that it:

36.3.1 Will not engage in any unlawful discrimination against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment; and

36.3.2 Will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner’s race, color, creed, national origin, sex, age, disability, marital status or sexual orientation; and

36.3.3 Will state in all solicitations or advertisements for employees placed by or on behalf of the **Contractor** that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, creed, color, national origin, sex, age, citizens status,

disability, marital status, sexual orientation, or that it is an equal employment opportunity employer; and

36.3.4 Will send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or memorandum of understanding, written notification of its equal employment opportunity commitments under E.O. 50 and the rules and regulations promulgated thereunder; and

36.3.5 Will furnish, before the award of the **Contract**, all information and reports, including an employment report, that are required by E.O. 50, the rules and regulations promulgated thereunder, and orders of the **City** Department of Business Services, Division of Labor Services (**DLS**) and will permit access to its books, records, and accounts by the **DLS** for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

36.4 The **Contractor** understands that in the event of its noncompliance with the nondiscrimination clauses of this **Contract** or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this **Contract** and noncompliance with E.O. 50 and the rules and regulations promulgated thereunder. After a hearing held pursuant to the rules of the **DLS**, the Director of the **DLS** may direct the **Commissioner** to impose any or all of the following sanctions:

36.4.1 Disapproval of the **Contractor**; and/or

36.4.2 Suspension or termination of the **Contract**; and/or

36.4.3 Declaring the **Contractor** in default; and/or

36.4.4 In lieu of any of the foregoing sanctions, the Director of the **DLS** may impose an employment program.

In addition to any actions taken under this **Contract**, failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in a **City Agency** declaring the **Contractor** to be non-responsible in future procurements. The **Contractor** further agrees that it will refrain from entering into any **Contract** or **Contract** modification subject to E.O. 50 and the rules and regulations promulgated thereunder with a **Subcontractor** who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder.

36.5 The **Contractor** specifically agrees, as required by Section 6-123 of the Administrative Code, that:

36.5.1 The **Contractor** will not engage in any unlawful discriminatory practice in violation of Title 8 of the Administrative Code; and

36.5.2 Any failure to comply with this Article 36.5 may subject the **Contractor** to the remedies set forth in Section 6-123 of the Administrative Code, including, where appropriate, sanctions such as withholding of payment, imposition of an employment program, finding the **Contractor** to be in default, cancellation of the **Contract**, or any other sanction or remedy provided by **Law** or **Contract**.

### **ARTICLE 37. LABOR LAW REQUIREMENTS**

37.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as

amended. Such compliance is a material term of this **Contract**.

37.2 The **Contractor** specifically agrees, as required by Labor Law Sections 220 and 220-d, as amended, that:

37.2.1 Hours of **Work**: No laborer, worker, or mechanic in the employ of the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) **Day**, or more than five (5) **Days** in any one (1) week, except as provided in the Labor Law and in cases of extraordinary emergency including fire, flood, or danger to life or property, or in the case of national emergency when so proclaimed by the President of the United States of America.

37.2.2 In situations in which there are not sufficient laborers, workers, and mechanics who may be employed to carry on expeditiously the **Work** contemplated by this **Contract** as a result of such restrictions upon the number of hours and **Days** of labor, and the immediate commencement or prosecution or completion without undue delay of the **Work** is necessary for the preservation of the **Site** and/or for the protection of the life and limb of the persons using the same, such laborers, workers, and mechanics shall be permitted or required to work more than eight (8) hours in any one (1) **Day**; or five (5) **Days** in any one (1) week; provided, however, that upon application of any **Contractor**, the **Commissioner** shall have first certified to the Commissioner of Labor of the State of New York (hereinafter "Commissioner of Labor") that such public **Work** is of an important nature and that a delay in carrying it to completion would result in serious disadvantage to the public; and provided, further, that such Commissioner of Labor shall have determined that such an emergency does in fact exist as provided in Labor Law Section 220.2.

37.2.3 Failure of the **Commissioner** to make such a certification to the Commissioner of Labor shall not entitle the **Contractor** to damages for delay or for any cause whatsoever.

37.2.4 Prevailing Rate of Wages: The wages to be paid for a legal day's **Work** to laborers, workers, or mechanics employed upon the **Work** contemplated by this **Contract** or upon any materials to be used thereon shall not be less than the "prevailing rate of wage" as defined in Labor Law Section 220, and as fixed by the **Comptroller** in the attached Schedule of Wage Rates and in updated schedules thereof. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

37.2.5 Requests for interpretation or correction in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the **Work** under this **Contract**. In the event that a trade not listed in the **Contract** is in fact employed during the performance of this **Contract**, the **Contractor** shall be required to obtain from the **Agency** the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this **Contract** at the price at which the **Contract** was awarded.

37.2.6 Minimum Wages: Except for employees whose wage is required to be fixed pursuant to Labor Law Section 220, all persons employed by the **Contractor** and any **Subcontractor** in the manufacture or furnishing of the supplies, materials, or equipment, or the furnishing of work, labor, or services, used in the performance of this **Contract**, shall be paid, without subsequent deduction or rebate unless expressly authorized by **Law**, not less than the sum mandated by **Law**.

37.3 Working Conditions: No part of the **Work**, labor or services shall be performed or rendered by

the **Contractor** in any plants, factories, buildings or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary, and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this Article 37.3.

37.4 Prevailing Wage Enforcement: The **Contractor** agrees to pay for all costs incurred by the **City** in enforcing prevailing wage requirements, including the cost of any investigation conducted by or on behalf of the **Agency** or the **Comptroller**, where the **City** discovers a failure to comply with any of the requirements of this Article 37 by the **Contractor** or its **Subcontractor(s)**. The **Contractor** also agrees that, should it fail or refuse to pay for any such investigation, the **Agency** is hereby authorized to deduct from a **Contractor's** account an amount equal to the cost of such investigation.

37.4.1 The Labor Law Section 220 and Section 220-d, as amended, provide that this **Contract** shall be forfeited and no sum paid for any **Work** done hereunder on a second conviction for willfully paying less than:

37.4.1(a) The stipulated prevailing wage scale as provided in Labor Law section 220, as amended, or

37.4.1(b) The stipulated minimum hourly wage scale as provided in Labor Law section 220-d, as amended.

37.4.2 For any breach or violation of either working conditions (Article 37.3) or minimum wages (Article 37.2.6) provisions, the party responsible therefor shall be liable to the **City** for liquidated damages, which may be withheld from any amounts due on any contracts with the **City** of such party responsible, or may be recovered in actions brought by the **City** Corporation Counsel in the name of the **City**, in addition to damages for any other breach of this **Contract**, for a sum equal to the amount of any underpayment of wages due to any employee engaged in the performance of this **Contract**. In addition, the **Commissioner** shall have the right to cancel contracts and enter into other contracts for the completion of the original contract, with or without public letting, and the original **Contractor** shall be liable for any additional cost. All sums withheld or recovered as deductions, rebates, refunds, or underpayment of wages hereunder, shall be held in a special deposit account and shall be paid without interest, on order of the **Comptroller**, directly to the employees who have been paid less than minimum rates of pay as set forth herein and on whose account such sums were withheld or recovered, provided that no claims by employees for such payments shall be entertained unless made within two (2) years from the date of actual notice to the **Contractor** of the withholding or recovery of such sums by the **City**.

37.4.3 A determination by the **Comptroller** that a **Contractor** and/or its **Subcontractor** willfully violated Labor Law Section 220 will be forwarded to the **City's** five District Attorneys for review.

37.4.4 The **Contractor's** or **Subcontractor's** noncompliance with this Article 37.4 and Labor Law Section 220 may result in an unsatisfactory performance evaluation and the **Comptroller** may also find and determine that the **Contractor** or **Subcontractor** willfully violated the New York Labor **Law**.

37.4.4(a) An unsatisfactory performance evaluation for noncompliance with this Article 37.4 may result in a determination that the **Contractor** is a non-responsible bidder on subsequent procurements with the **City** and thus a rejection of a future award

of a contract with the **City**, as well as any other sanctions provided for by **Law**.

37.4.4(b) Labor Law Section 220-b, as amended, provides that when two (2) final determinations have been rendered against a **Contractor** or **Subcontractor** within any consecutive six (6) year period determining that such **Contractor** or **Subcontractor** has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with the Labor Law and this Article 37.4, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public works projects are rendered simultaneously, such **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public works contract with the **City** for a period of five (5) years from the second final determination. If the final determination involves the falsification of payroll records or the kickback of wages or supplements, the **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public works contract with the **City** for a period of five (5) years from the first final determination.

37.4.4(c) Labor Law Section 220, as amended, provides that the **Contractor** or **Subcontractor** found to have violated this Article 37.4 may be directed to make payment of wages or supplements including interest found to be due, and the **Contractor** or **Subcontractor** may be directed to make payment of a further sum as a civil penalty in an amount not exceeding twenty-five (25%) percent of the total amount found to be due.

37.5 The **Contractor** and its **Subcontractors** shall within ten (10) **Days** after mailing of a Notice of Award or written order, post in prominent and conspicuous places in each and every plant, factory, building, and structure where employees of the **Contractor** and its **Subcontractors** engaged in the performance of this **Contract** are employed, notices furnished by the **City**, in relation to prevailing wages and supplements, minimum wages, and other stipulations contained in Sections 220 and 220-h of the Labor Law, and the **Contractor** and its **Subcontractors** shall continue to keep such notices posted in such prominent and conspicuous places until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services required to be furnished or rendered under this **Contract**.

37.6 The **Contractor** shall strictly comply with all of the provisions of Articles 37.6.1 through 37.6.5, and provide for all workers, laborers or mechanics in its employ, the following:

37.6.1 Notices Posted At **Site**: Post, in a location designated by the **City**, schedules of prevailing wages and supplements for this **Project**, a copy of all re-determinations of such schedules for the **Project**, the Workers' Compensation **Law** Section 51 notice, all other notices required by **Law** to be posted at the **Site**, the **City** notice that this **Project** is a public works project on which each worker is entitled to receive the prevailing wages and supplements for the occupation at which he or she is working, and all other notices which the **City** directs the **Contractor** to post. The **Contractor** shall provide a surface for such notices which is satisfactory to the **City**. The **Contractor** shall maintain and keep current such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The **Contractor** shall post such notices before commencing any **Work** on the **Site** and shall maintain such notices until all **Work** on the **Site** is complete; and

37.6.2 Daily **Site** Sign-in Sheets: Maintain daily **Site** sign-in sheets, and require that **Subcontractors** maintain daily **Site** sign-in sheets for its employees, which include blank spaces for an employee's name to be both printed and signed, job title, date started and Social Security number, the time the employee began work and the time the employee left

work, until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services to be furnished or rendered under this **Contract** unless exception is granted by the **Comptroller** upon application by the **Agency**. In the alternative, subject to the approval of the **CCPO**, the **Contractor** and **Subcontractor** may maintain an electronic or biometric sign-in system, which provides the information required by this Article 37.6.2; and

37.6.3 Individual Employee Information Notices: Distribute a notice to each worker, laborer or mechanic employed under this **Contract**, in a form provided by the **Agency**, that this **Project** is a public works project on which each worker, laborer or mechanic is entitled to receive the prevailing rate of wages and supplements for the occupation at which he or she is working. If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, such notice shall also include a statement that each worker, laborer or mechanic must be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration. Such notice shall be distributed to each worker before he or she starts performing any **Work** of this **Contract** and with the first paycheck after July first of each year. "Worker, laborer or mechanic" includes employees of the **Contractor** and all **Subcontractors** and all employees of suppliers entering the **Site**. At the time of distribution, the **Contractor** shall have each worker, laborer or mechanic sign a statement, in a form provided by the **Agency**, certifying that the worker has received the notice required by this Article 37.6.3, which signed statement shall be maintained with the payroll records required by this **Contract**; and

37.6.3(a) The **Contractor** and each **Subcontractor** shall notify each worker, laborer or mechanic employed under this **Contract** in writing of the prevailing rate of wages for their particular job classification. Such notification shall be given to every worker, laborer, and mechanic on their first pay stub and with every pay stub thereafter; and

37.6.4 **Site Laminated Identification Badges**: The **Contractor** shall provide laminated identification badges which include a photograph of the worker's, laborer's or mechanic's face and indicate the worker's, laborer's or mechanic's name, trade, employer's name, and employment starting date (month/day/year). Further, the **Contractor** shall require as a condition of employment on the **Site**, that each and every worker, laborer or mechanic wear the laminated identification badge at all times and that it may be seen by any representative of the **City**. The **Commissioner** may grant a written waiver from the requirement that the laminated identification badge include a photograph if the **Contractor** demonstrates that the identity of an individual wearing a laminated identification badge can be easily verified by another method; and

37.6.5 **Language Other Than English Used On Site**: Provide the **ACCO** notice when three (3) or more employees (worker and/or laborer and/or mechanic) on the **Site**, at any time, speak a language other than English. The **ACCO** will then provide the **Contractor** the notices described in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under this Article 37; and

37.6.6 **Provision of Records**: The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such records as are required to be kept by this Article 37.6; and



37.6.7 The **Contractor** and **Subcontractor(s)** shall pay employees by check or direct deposit. If this **Contract** is for an amount greater than one million (\$1,000,000) dollars, checks issued by the **Contractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**). For any subcontract for an amount greater than seven hundred fifty thousand (\$750,000) dollars, checks issued by a **Subcontractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**); and

37.6.8 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 37.6.1 through 37.6.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.7 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor Law. The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of this Article 37.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.8 At the time the **Contractor** makes application for each partial payment and for final payment, the **Contractor** shall submit to the **Commissioner** a written payroll certification, in the form provided by this **Contract**, of compliance with the prevailing wage, minimum wage, and other provisions and stipulations required by Labor Law Section 220 and of compliance with the training requirements of Labor Law Section 220-h set forth in Article 35.2. This certification of compliance shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

37.9 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor Law from the award of the **Contract**.

37.10 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and grounds for cancellation thereof by the **City**.

### **ARTICLE 38. PAYROLL REPORTS**

38.1 The **Contractor** and its **Subcontractor(s)** shall maintain on the **Site** during the performance of the **Work** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain and shall submit such original payrolls or transcripts, subscribed and affirmed by it as true, within thirty (30) **Days** after issuance of its first payroll, and every thirty (30) **Days** thereafter, pursuant to Labor Law Section 220(3-a)(a)(iii). The **Contractor** and **Subcontractor(s)** shall submit such original payrolls or transcripts along with each and every payment requisition. If payment requisitions are not submitted at least once a month, the **Contractor** and its **Subcontractor(s)** shall submit original payrolls and transcripts both along with its payment requisitions and independently of its payment requisitions.

38.2 The **Contractor** shall maintain payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**. If such payrolls and transcripts are maintained outside of New York City after the completion of the **Work** and their production is required pursuant to this Article 38, the **Contractor** shall produce such records in New York City upon request by the **City**.

38.3 The **Contractor** and **Subcontractor(s)** shall comply with any written order, direction, or request made by the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law**

**Investigator(s)**, or the **Comptroller**, to provide to the requesting party any of the following information and/or records within five (5) **Days** of such written order, direction, or request:

38.3.1 Such original payrolls or transcripts thereof subscribed and affirmed by it as true and the statements signed by each worker pursuant to this Chapter VIII; and/or

38.3.2 Attendance sheets for each **Day** on which any employee of the **Contractor** and/or any of the **Subcontractor(s)** performed **Work** on the **Site**, which attendance sheet shall be in a form acceptable to the **Agency** and shall provide information acceptable to the **Agency** to identify each such employee; and/or

38.3.3 Any other information to satisfy the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)** or the **Comptroller**, that this Chapter VIII and the Labor Law, as to the hours of employment and prevailing rates of wages and/or supplemental benefits, are being observed.

38.4 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 38.1 and/or 38.2 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

### ARTICLE 39. DUST HAZARDS

39.1 Should a harmful dust hazard be created in performing the **Work** of this **Contract**, for the elimination of which appliances or methods have been approved by the Board of Standards and Appeals of the City of New York, such appliances and methods shall be installed, maintained, and effectively operated during the continuance of such harmful dust hazard. Failure to comply with this provision after notice shall make this **Contract** voidable at the sole discretion of the **City**.

## CHAPTER IX: PARTIAL AND FINAL PAYMENTS

### ARTICLE 40. CONTRACT PRICE

40.1 The **City** shall pay, and the **Contractor** agrees to accept, in full consideration for the **Contractor's** performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices for which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** under Article 25, less credit for any **Work** omitted pursuant to Article 29.

### ARTICLE 41. BID BREAKDOWN ON LUMP SUM

41.1 Within fifteen (15) **Days** after the commencement date specified in the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Resident Engineer**, the **Contractor** shall submit to the **Resident Engineer** a breakdown of its bid price, or of lump sums bid for items of the **Contract**, showing the various operations to be performed under the **Contract**, as directed in the progress schedule required under Article 9, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **Resident Engineer**.

41.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **Resident Engineer**.

41.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **Resident Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, or the **Engineer** for any purpose whatsoever.

#### **ARTICLE 42. PARTIAL PAYMENTS**

42.1 From time to time as the **Work** progresses satisfactorily, but not more often than once each calendar month (except where the **Commissioner** approves in writing the submission of invoices on a more frequent basis and for invoices relating to **Work** performed pursuant to a change order), the **Contractor** may submit to the **Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done during the payment period.

42.2 Partial payments may be made for materials, fixtures, and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

42.3 The **Contractor** shall also submit to the **Commissioner** in connection with every application for partial payment a verified statement in the form prescribed by the **Comptroller** setting forth the information required under Labor Law Section 220-a.

42.4 Within thirty (30) **Days** after receipt of a satisfactory payment application, and within sixty (60) **Days** after receipt of a satisfactory payment application in relation to **Work** performed pursuant to a change order, the **Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the terms of this **Contract** or by **Law**.

#### **ARTICLE 43. PROMPT PAYMENT**

43.1 The Prompt Payment provisions of the **PPB** Rules in effect at the time of the bid will be applicable to payments made under this **Contract**. The provisions require the payment to the **Contractor** of interest on payments made after the required payment date, except as set forth in the **PPB** Rules.

43.2 The **Contractor** shall submit a proper invoice to receive payment, except where the **Contract** provides that the **Contractor** will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

43.3 Determination of interest due will be made in accordance with the **PPB** Rules.

43.4 If the **Contractor** is paid interest, the proportionate share(s) of that interest shall be forwarded by the **Contractor** to its **Subcontractor(s)**.

43.5 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

43.5.1 If **Contractor** fails to make any payment to any **Subcontractor** or **Materialman** within seven (7) **Days** after receipt of payment by the **City** pursuant to this Article 43.5,

then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at the rate of interest in effect on the date such payment is made by the **Contractor** computed in accordance with Section 756-b (1)(b) of the New York General Business Law. Accrual of interest shall commence on the **Day** immediately following the expiration of the seventh **Day** following receipt of payment by the **Contractor** from the **City** and shall end on the date on which payment is made.

43.6 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or **Materialmen** for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

#### **ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT**

44.1 The **Contractor** shall submit with the **Substantial Completion** requisition:

44.1.1 A final verified statement of any pending Article 27 disputes in accordance with the **PPB** Rules and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay.

44.1.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City** Corporation Counsel shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 44.1.1(a) is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor** upon acceptance of the **Substantial Completion** payment pursuant to this Article 44, will have waived any such claims.

44.1.2 A **Final Approved Punch List**.

44.1.3 Where required, a request for an extension of time to achieve **Substantial Completion** or final extension of time.

44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, including monies retained under Article 21, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a partial and not a final payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** failed to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.3 No further partial payments shall be made to the **Contractor** after **Substantial Completion**, except the **Substantial Completion** payment and payment pursuant to any **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work** and/or release of retainage and deposits pursuant to Articles 21 and 24. Such waiver shall be in writing.

44.4 The **Contractor** acknowledges that nothing contained in this Article 44 is intended to or shall in any way diminish the force and effect of Article 13.

#### **ARTICLE 45. FINAL PAYMENT**

45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 24. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**, or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

45.2 Amended Verified Statement of Claims: The **Contractor** shall also submit with the final requisition any amendments to the final verified statement of any pending dispute resolution procedures in accordance with the **PPB** Rules and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) that have occurred subsequent to **Substantial Completion**, setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each such item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay. With reference to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City** Corporation Counsel shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 45.2, is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor**, upon acceptance of the Final Payment pursuant to Article 46, will have waived any such claims.

45.3 Preparation of Final Voucher: Upon determining the balance due hereunder other than on account of claims, the **Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

45.3.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **Engineer**

thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

45.3.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Comptroller** within thirty (30) **Days** after the filing of such voucher in his/her office.

45.4 The **Contractor** acknowledges that nothing contained in this Article 45 is intended to or shall in any way diminish the force and effect of Article 13.

#### **ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT**

46.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any court, or otherwise, shall constitute and operate as a release of the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on the part of the **City** or any of its officials, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any claims, not otherwise waived, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45.

46.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this Article 46, or those for amounts deducted by the **Commissioner** from the final requisition or from the final payment as certified by the **Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any official, agent or employee of the **City** to the contrary notwithstanding.

46.3 Should the **Contractor** refuse to accept the final payment as tendered by the **Comptroller**, it shall constitute a waiver of any right to interest thereon.

46.4 The **Contractor**, however, shall not be barred by this Article 46 from commencing an action for breach of **Contract** to the extent permitted by **Law** and by the terms of the **Contract** for any claims that are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45 or that arose after submission of the final payment requisition, provided that a detailed and verified statement of claim is served upon the contracting **Agency** and **Comptroller** not later than forty (40) **Days** after the making of such final payment by electronic funds transfer (EFT) or the mailing of such final payment. The statement shall specify the items upon which the claim will be based and any such claim shall be limited to such items.

#### **ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION**

47.1 All works of art, including paintings, mural decorations, stained glass, statues, bas-reliefs, and other sculptures, monuments, fountains, arches, and other structures of a permanent character intended for ornament or commemoration, and every design of the same to be used in the performance of this **Contract**, and the design of all bridges, approaches, buildings, gates, fences, lamps, or structures to be erected, pursuant

to the terms of this **Contract**, shall be submitted to the Art Commission, d/b/a the Public Design Commission of the City of New York, and shall be approved by the Public Design Commission prior to the erection or placing in position of the same. The final payment shall not become due or payable under this **Contract** unless and until the Public Design Commission shall certify that the design for the **Work** herein contracted for has been approved by the said Public Design Commission, and that the same has been executed in substantial accordance with the design so approved, pursuant to the provisions of Chapter 37, Section 854 of the **City Charter**, as amended.

## **CHAPTER X: CONTRACTOR'S DEFAULT**

### **ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT**

48.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

48.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner**; or if

48.1.2 The **Contractor** shall abandon the **Work**; or if

48.1.3 The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner**; or if

48.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner**, to complete the **Work** in accordance with the progress schedule; or if

48.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

48.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

48.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

48.1.8 A receiver or receivers are appointed to take charge of the **Contractor's** property or affairs; or if

48.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

48.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

48.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the

**Commissioner's** opinion, attributable to conditions within the **Contractor's** control; or if

48.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

48.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made; or if

48.1.14 The **Contractor** or any of its officers, directors, partners, five (5%) percent shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omissions specified as the grounds for debarment in the **PPB** Rules.

48.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days'** notice.

#### **ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT**

49.1 The right to declare the **Contractor** in default for any of the grounds specified or referred to in Article 48 shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

49.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final, and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence an action in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

#### **ARTICLE 50. QUITTING THE SITE**

50.1 Upon receipt of such notice the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools, and supplies then on the **Site**.

#### **ARTICLE 51. COMPLETION OF THE WORK**

51.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by contract with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools, and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

51.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its sureties, and any person claiming under the **Contractor**, as to the amount thereof.



51.3 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

#### **ARTICLE 52. PARTIAL DEFAULT**

52.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any **Other Contractor(s)** or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

52.2 The provisions of this Chapter relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools, and supplies as had been previously used by the **Contractor** on such part.

#### **ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK**

53.1 In completing the whole or any part of the **Work** under the provisions of this Chapter X, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in Article 51, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

#### **ARTICLE 54. OTHER REMEDIES**

54.1 In addition to the right to declare the **Contractor** in default pursuant to this Chapter X, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to be completed in the same manner as described in Articles 51 and 53, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List**. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of Article 50.

54.2 The expense of completion permitted under Article 54.1, including any and all related and incidental costs, as so certified by the **Commissioner**, shall be charged against and deducted out of monies which have been earned by the **Contractor** prior to the date of the exercise of the right set forth in Article 54.1; the balance of such monies, if any, subject to the other provisions of this **Contract**, to be paid to the **Contractor** without interest after such completion. Should the expense of such completion, as certified by

the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

54.3 The previous provisions of this Chapter X shall be in addition to any and all other remedies available under **Law** or in equity.

54.4 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

## **CHAPTER XI: MISCELLANEOUS PROVISIONS**

### **ARTICLE 55. CONTRACTOR'S WARRANTIES**

55.1 In consideration of, and to induce, the award of this **Contract** to the **Contractor**, the **Contractor** represents and warrants:

55.1.1 That it is financially solvent, sufficiently experienced and competent to perform the **Work**; and

55.1.2 That the facts stated in its bid and the information given by it pursuant to the Information for Bidders is true and correct in all respects; and

55.1.3 That it has read and complied with all requirements set forth in the **Contract**.

### **ARTICLE 56. CLAIMS AND ACTIONS THEREON**

56.1 Any claim, that is not subject to dispute resolution under the **PPB** Rules or this **Contract**, against the **City** for damages for breach of **Contract** shall not be made or asserted in any action, unless the **Contractor** shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims, as herein before provided.

56.2 Nor shall any action be instituted or maintained on any such claims unless such action is commenced within six (6) months after **Substantial Completion**; except that:

56.2.1 Any claims arising out of events occurring after **Substantial Completion** and before **Final Acceptance** of the **Work** shall be asserted within six (6) months of **Final Acceptance** of the **Work**;

56.2.2 If the **Commissioner** exercises his/her right to complete or cause to complete any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List** pursuant to Article 54, any such action shall be commenced within six (6) months from the date the **Commissioner** notifies the **Contractor** in writing that he/she has exercised such right. Any claims for monies deducted, retained or withheld under the provisions of this **Contract** shall be asserted within six (6) months after the date when such monies otherwise become due and payable hereunder; and

56.2.3 If the **Commissioner** exercises his/her right to terminate the **Contract** pursuant to Article 64, any such action shall be commenced within six (6) months of the date the **Commissioner** exercises said right.

## **ARTICLE 57. INFRINGEMENT**

57.1 The **Contractor** shall be solely responsible for and shall defend, indemnify, and hold the **City** harmless from any and all claims (even if the allegations of the lawsuit are without merit) and judgments for damages and from costs and expenses to which the **City** may be subject to or which it may suffer or incur allegedly arising out of or in connection with any infringement by the **Contractor** of any copyright, trade secrets, trademark or patent rights or any other property or personal right of any third party by the **Contractor** and/or its **Subcontractors** in the performance or completion of the **Work**. Insofar as the facts or **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent permitted by **Law**.

## **ARTICLE 58. NO CLAIM AGAINST OFFICIALS, AGENTS OR EMPLOYEES**

58.1 No claim whatsoever shall be made by the **Contractor** against any official, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connection with this **Contract**.

## **ARTICLE 59. SERVICE OF NOTICES**

59.1 The **Contractor** hereby designates the business address, fax number, and email address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Any notice, direction, or communication from either party to the other shall be in writing and shall be deemed to have been given when (i) delivered personally; (ii) sent by certified mail, return receipt requested; (iii) delivered by overnight or same day courier service in a properly addressed envelope with confirmation; or (iv) sent by fax or email and, unless receipt of the fax or e-mail is acknowledged by the recipient by fax or e-mail, deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage pre-paid envelope.

59.2 **Contractor's** notice address, email address, or fax number may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**.

59.3 Nothing herein contained shall, however, be deemed to preclude or render inoperative the service of any notice, direction or other communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

## **ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT**

60.1 If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without affecting the binding force of the remainder.

## **ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED**

61.1 It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

## **ARTICLE 62. TAX EXEMPTION**

62.1 The **City** is exempt from payment of Federal, State, and local taxes, including sales and compensating use taxes of the State of New York and its cities and counties on all tangible personal property sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor**, **Subcontractor** or **Materialman** or to tangible personal property which, even though it is consumed, is not incorporated into the completed **Work** (consumable supplies) and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**. The **Contractor** and its **Subcontractors** and **Materialmen** shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on such leased tools, machinery, equipment or other property and upon all such consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all tangible personal property, other than consumable supplies and other tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**, that is required, necessary or proper for or incidental to the construction of the **Project** covered by this **Contract**. The sum paid under this **Contract** for such tangible personal property shall be in full payment and consideration for the sale of such tangible personal property.

62.2.1 The **Contractor** agrees to construct the **Project** and to perform all **Work**, labor and services rendered, necessary, proper or incidental thereto for the sum shown in the bid for the performance of such **Work**, labor, and services, and the sum so paid pursuant to this **Contract** for such **Work**, labor, and services, shall be in full consideration for the performance by the **Contractor** of all its duties and obligations under this **Contract** in connection with said **Work**, labor, and services.

62.3 20 NYCRR Section 541.3(d) provides that a **Contractor's** purchases of tangible personal property that is either incorporated into real property owned by a governmental entity or purchased for and sold to a governmental entity are exempt from sales and use tax. The **City** shall not pay sales tax for any such tangible personal property that it purchases from the **Contractor** pursuant to the **Contract**. With respect to such tangible personal property, the **Contractor**, at the request of the **City**, shall furnish to the **City** such bills of sale and other instruments as may be required by the **City**, properly executed, acknowledged and delivered assuring to the **City** title to such tangible personal property, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such tangible personal property as the property of the **City**.

62.4 Title to all tangible personal property to be sold by the **Contractor** to the **City** pursuant to the provisions of the **Contract** shall immediately vest in and become the sole property of the **City** upon delivery of such tangible personal property to the **Site**. Notwithstanding such transfer of title, the **Contractor** shall

have the full and continuing responsibility to install such tangible personal property in accordance with the provisions of this **Contract**, protect it, maintain it in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional tangible personal property in place of any that may be lost, stolen or rendered unusable, without cost to the **City**, until such time as the **Work** covered by the **Contract** is fully accepted by the **City**. Such transfer of title shall in no way affect any of the **Contractor's** obligations hereunder. In the event that, after title has passed to the **City**, any of the tangible personal property is rejected as being defective or otherwise unsatisfactory, title to all such tangible personal property shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** or **Materialmen** of tangible personal property to be sold hereunder shall be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid sales and compensating use taxes, provided that the subcontracts and purchase agreements provide for the resale of such tangible personal property and that such subcontracts and purchase agreements are in a form similar to this **Contract** with respect to the separation of the sale of consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work** from the **Work** and labor, services, and any other matters to be provided, and provided further that the subcontracts and purchase agreements provide separate prices for tangible personal property and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for tangible personal property from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and **Materialmen** shall furnish a **Contractor** Exempt Purchase Certificate to all persons, firms or corporations from which they purchase tangible personal property for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this Article 62 shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this Article 62 shall control.

### **ARTICLE 63. INVESTIGATION(S) CLAUSE**

63.1 The parties to this **Contract** agree to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a United States, a State of New York (State) or a **City** governmental agency or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit or license that is the subject of the investigation, audit or inquiry.

63.2 If any person who has been advised that his/her statement, and any information from such statement, will not be used against him/her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the **City**, or any public benefit corporation organized under the **Laws** of the State of New York, or;

63.3 If any person refuses to testify for a reason other than the assertion of his/her privilege against self incrimination in an investigation, audit or inquiry conducted by a **City** or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest in, and is

seeking testimony concerning the award of, or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision thereof or any local development corporation within the **City**, then;

63.4 The **Commissioner** whose **Agency** is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license shall convene a hearing, upon not less than five (5) **Days**' written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

63.5 If any non-governmental party to the hearing requests an adjournment, the **Commissioner** who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit, or license, pending the final determination pursuant to Article 63.7 without the **City** incurring any penalty or damages for delay or otherwise.

63.6 The penalties which may attach after a final determination by the **Commissioner** may include but shall not exceed:

63.6.1 The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any contract, lease, permit or license with or from the **City**; and/or

63.6.2 The cancellation or termination of any and all such existing **City** contracts, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this **Contract**, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the **City** incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the **City**.

63.7 The **Commissioner** shall consider and address in reaching his/her determination and in assessing an appropriate penalty the factors in Articles 63.7.1 and 63.7.2. The **Commissioner** may also consider, if relevant and appropriate, the criteria established in Articles 63.7.3 and 63.7.4, in addition to any other information which may be relevant and appropriate:

63.7.1 The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

63.7.2 The relationship of the person who refused to testify to any entity that is a party to the hearing, including but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

63.7.3 The nexus of the testimony sought to the subject entity and its contracts, leases, permits or licenses with the **City**.

63.7.4 The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Article 63.6, provided that the party

or entity has given actual notice to the **Commissioner** upon the acquisition of the interest, or at the hearing called for in Article 63.4, gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity shall present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

#### 63.8 Definitions:

63.8.1 The term “license” or “permit” as used in this Article 63 shall be defined as a license, permit, franchise or concession not granted as a matter of right.

63.8.2 The term “person” as used in this Article 63 shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

63.8.3 The term “entity” as used in this Article 63 shall be defined as any firm, partnership, corporation, association, joint venture, or person that receives monies, benefits, licenses, leases, or permits from or through the **City** or otherwise transacts business with the **City**.

63.8.4 The term “member” as used in this Article 63 shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

63.9 In addition to and notwithstanding any other provision of this **Contract**, the **Commissioner** may in his/her sole discretion terminate this **Contract** upon not less than three (3) **Days**’ written notice in the event the **Contractor** fails to promptly report in writing to the **Commissioner** of the Department of Investigations (“DOI”) of the **City** any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the **City** or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this **Contract** by the **Contractor**, or affecting the performance of this **Contract**.

### **ARTICLE 64. TERMINATION BY THE CITY**

64.1 In addition to termination pursuant to any other article of this **Contract**, the **Commissioner** may, at any time, terminate this **Contract** by written notice to the **Contractor**. In the event of termination, the **Contractor** shall, upon receipt of such notice, unless otherwise directed by the **Commissioner**:

64.1.1 Stop **Work** on the date specified in the notice;

64.1.2 Take such action as may be necessary for the protection and preservation of the **City**’s materials and property;

64.1.3 Cancel all cancelable orders for material and equipment;

64.1.4 Assign to the **City** and deliver to the **Site** or another location designated by the **Commissioner**, any non-cancelable orders for material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract** and not incorporated in the **Work**;

64.1.5 Take no action which will increase the amounts payable by the **City** under this  
64.1.5 **Contract**.

64.2 In the event of termination by the **City** pursuant to this Article 64, payment to the **Contractor** shall be in accordance with Articles 64.2.1, 64.2.2 or 64.2.3, to the extent that each respective article applies.

64.2.1 Lump Sum Contracts or Items: On all lump sum **Contracts**, or on lump sum items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.1(a) and 64.2.1(b), less all payments previously made pursuant to this **Contract**. On lump sum **Contracts** only, the **City** will also pay the **Contractor** an additional sum as provided in Article 64.2.1(c).

64.2.1(a) For **Work** completed prior to the notice of termination, the **Contractor** shall be paid a pro rata portion of the lump sum bid amount, plus approved change orders, based upon the percent completion of the **Work**, as determined by the **Commissioner**. For the purpose of determining the pro rata portion of the lump sum bid amount to which the **Contractor** is entitled, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be dispositive. The **Commissioner's** determination hereunder shall be final, binding, and conclusive.

64.2.1(b) For non-cancelable material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated in the **Work**, the **Contractor** shall be paid the lesser of the following, less salvage value:

64.2.1(b)(i) The Direct Cost, as defined in Article 64.2.4; or

64.2.1(b)(ii) The fair and reasonable value, if less than Direct Cost, of such material and equipment, plus necessary and reasonable delivery costs.

64.2.1(b)(iii) In addition, the **Contractor** shall be paid five (5%) percent of the amount described in Article 64.2.1(b)(i) or Article 64.2.1(b)(ii), whichever applies.

64.2.1(c) Except as otherwise provided in Article 64.2.1(d), on all lump sum **Contracts**, the **Contractor** shall be paid the percentage indicated below applied to the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to Articles 64.2.1(a) and 64.2.1(b):

64.2.1(c)(i) Five (5%) percent of the first five million (\$5,000,000) dollars; and

64.2.1(c)(ii) Three (3%) percent of any amount between five million (\$5,000,000) dollars and fifteen million (\$15,000,000) dollars; plus

64.2.1(c)(iii) One (1%) percent of any amount over fifteen million (\$15,000,000) dollars.

64.2.1(d) In the event the **City** terminates a lump sum **Contract** pursuant to this Article 64 within ninety (90) **Days** after registration of the **Contract** with the **Comptroller**, the **Contractor** shall be paid one (1%) percent of the difference between the lump sum bid amount and the total of all payments made pursuant to this Article 64.2.

64.2.2 Unit Price Contracts or Items: On all unit price **Contracts**, or on unit price items in a



**Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.2(a) and 64.2.2(b), less all payments previously made pursuant to this **Contract**:

64.2.2(a) For all completed units, the unit price stated in the **Contract**, and

64.2.2(b) For units that have been ordered but are only partially completed, the **Contractor** will be paid:

64.2.2(b)(i) A pro rata portion of the unit price stated in the **Contract** based upon the percent completion of the unit and

64.2.2(b)(ii) For non-cancelable material and equipment, payment will be made pursuant to Article 64.2.1(b).

64.2.3 Time and Materials Contracts or Items Based on Time and Material Records: On all **Contracts** or items in a **Contract** where payment for the **Work** is based on time and material records, the **Contractor** shall be paid in accordance with Article 26, less all payments previously made pursuant to this **Contract**.

64.2.4 Direct Costs: Direct Costs as used in this Article 64.2 shall mean:

64.2.4(a) The actual purchase price of material and equipment, plus necessary and reasonable delivery costs,

64.2.4(b) The actual cost of labor involved in construction and installation at the **Site**, and

64.2.4(c) The actual cost of necessary bonds and insurance purchased pursuant to requirements of this **Contract** less any amounts that have been or should be refunded by the **Contractor's** sureties or insurance carriers.

64.2.4(d) Direct Costs shall not include overhead.

64.3 In no event shall any payments under this Article 64 exceed the **Contract** price for such items.

64.4 All payments pursuant to Article 64 shall be in the nature of liquidated damages and shall be accepted by the **Contractor** in full satisfaction of all claims against the **City**.

64.5 The **City** may deduct or set off against any sums due and payable pursuant to this Article 64, any deductions authorized by this **Contract** or by **Law** (including but not limited to liquidated damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this Article 64 shall not impair or otherwise effect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

64.6 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to Articles 29 and 33, in which case a change order will be issued to reflect an appropriate reduction in the **Contract** sum, or if the amount is determined after final payment, such amount shall be paid by the **Contractor**.

## **ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE**

65.1 This **Contract** shall be deemed to be executed in the **City** regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable.

65.2 The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York (“New York State Courts”) located in the **City** and County of New York. To effect this **Contract** and intent, the **Contractor** agrees:

65.2.1 If the **City** initiates any action against the **Contractor** in Federal court or in a New York State Court, service of process may be made on the **Contractor** either in person, wherever such **Contractor** may be found, or by registered mail addressed to the **Contractor** at its address as set forth in this **Contract**, or to such other address as the **Contractor** may provide to the **City** in writing; and

65.2.2 With respect to any action between the **City** and the **Contractor** in a New York State Court, the **Contractor** hereby expressly waives and relinquishes any rights it might otherwise have:

65.2.2(a) To move to dismiss on grounds of forum non conveniens;

65.2.2(b) To remove to Federal Court; and

65.2.2(c) To move for a change of venue to a New York State Court outside New York County.

65.2.3 With respect to any action brought by the **City** against the **Contractor** in a Federal Court located in the **City**, the **Contractor** expressly waives and relinquishes any right it might otherwise have to move to transfer the action to a Federal Court outside the **City**.

65.2.4 If the **Contractor** commences any action against the **City** in a court located other than in the **City** and County of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a New York State Court of competent jurisdiction located in the **City** and County of New York or, if the Court where the action is initially brought will not or cannot transfer the action, the **Contractor** shall consent to dismiss such action without prejudice and may thereafter reinstate the action in a New York State Court of competent jurisdiction in New York County.

65.3 If any provision(s) of this Article 65 is held unenforceable for any reason, each and all other provision(s) shall nevertheless remain in full force and effect.

## **ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT**

66.1 The **Contractor** agrees that neither the **Contractor** nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the Federal Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce (Commerce Department) promulgated thereunder.

66.2 Upon the final determination by the Commerce Department or any other agency of the United States as to, or conviction of the **Contractor** or a substantially-owned affiliated company thereof for participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the **Comptroller** may, at his/her option, render forfeit and void this **Contract**.

66.3 The **Contractor** shall comply in all respects, with the provisions of Section 6-114 of the Administrative Code and the rules and regulations issued by the **Comptroller** thereunder.

## **ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM**

67.1 This **Contract** is subject to the requirements of Section 6-108.1 of the Administrative Code and regulations promulgated thereunder. No construction contract shall be awarded unless and until these requirements have been complied with in their entirety; however, compliance with this Article 67 is not required if the Agency sets Subcontractor Participation Goals for Minority- and Women-Owned Business Enterprises (M/WBEs).

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the **City** Department of Business Services, if any portion of the **Contract** is subcontracted, not less than ten (10%) percent of the total dollar amount of the **Contract** shall be awarded to locally based enterprises (LBEs); except that where less than ten (10%) percent of the total dollar amount of the **Contract** is subcontracted, such lesser percentage shall be so awarded.

67.3 The **Contractor** shall not require performance and payment bonds from LBE **Subcontractors**.

67.4 If the **Contractor** has indicated prior to award that no **Work** will be subcontracted, no **Work** shall be subcontracted without the prior approval of the **Commissioner**, which shall be granted only if the **Contractor** makes a good faith effort beginning at least six (6) weeks before the **Work** is to be performed to obtain LBE **Subcontractors** to perform the **Work**.

67.5 If the **Contractor** has not identified sufficient LBE **Subcontractors** prior to award, it shall sign a letter of compliance stating that it complies with Section 6-108.1 of the Administrative Code, recognizes that achieving the LBE requirement is a condition of its **Contract**, and shall submit documentation demonstrating its good faith efforts to obtain LBEs. After award, the **Contractor** shall begin to solicit LBE's to perform subcontracted **Work** at least six (6) weeks before the date such **Work** is to be performed and shall demonstrate that a good faith effort has been made to obtain LBEs on each subcontract until it meets the required percentage.

67.6 Failure of the **Contractor** to comply with the requirements of Section 6-108.1 of the Administrative Code and the regulations promulgated thereunder shall constitute a material breach of this **Contract**. Remedy for such breach may include the imposition of any or all of the following sanctions:

67.6.1 Reducing the **Contractor's** compensation by an amount equal to the dollar value of the percentage of the LBE subcontracting requirement not complied with;

67.6.2 Declaring the **Contractor** in default;

67.6.3 If the **Contractor** is an LBE, de-certifying and declaring the **Contractor** ineligible to participate in the LBE program for a period of up to three (3) years.

## ARTICLE 68. ANTITRUST

68.1 The **Contractor** hereby assigns, sells, and transfers to the **City** all right, title, and interest in and to any claims and causes of action arising under the antitrust **Laws** of New York State or of the United States relating to the particular goods or services purchased or procured by the **City** under this **Contract**.

## ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS

### 69.1 Notice To All Prospective **Contractors**:

69.1.1 Local Law No. 34 of 1991 became effective on September 10, 1991 and added Section 6-115.1 of the Administrative Code. The local **Law** provides for certain restrictions on **City Contracts** to express the opposition of the people of the **City** to employment discrimination practices in Northern Ireland to promote freedom of work-place opportunity.

69.1.2 Pursuant to Section 6-115.1, prospective **Contractors** for **Contracts** to provide goods or services involving an expenditure of an amount greater than ten thousand (\$10,000.) dollars, or for construction involving an amount greater than fifteen thousand (\$15,000.) dollars, are asked to sign a rider in which they covenant and represent, as a material condition of their **Contract**, that any business operations in Northern Ireland conducted by the **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** will be conducted in accordance with the MacBride Principles of nondiscrimination in employment.

69.1.3 Prospective **Contractors** are not required to agree to these conditions. However, in the case of **Contracts** let by competitive sealed bidding, whenever the lowest responsible bidder has not agreed to stipulate to the conditions set forth in this notice and another bidder who has agreed to stipulate to such conditions has submitted a bid within five (5%) percent of the lowest responsible bid for a **Contract** to supply goods, services or construction of comparable quality, the **Agency** shall refer such bids to the Mayor, the Speaker or other officials, as appropriate, who may determine, in accordance with applicable **Law**, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City** Charter.

69.1.4 In the case of **Contracts** let by other than competitive sealed bidding, if a prospective **Contractor** does not agree to these conditions, no **Agency**, elected official or the **City** Council shall award the **Contract** to that bidder unless the **Agency** seeking to use the goods, services or construction certifies in writing that the **Contract** is necessary for the **Agency** to perform its functions and there is no other responsible **Contractor** who will supply goods, services or construction of comparable quality at a comparable price.

69.2 In accordance with Section 6-115.1 of the Administrative Code, the **Contractor** stipulates that such **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** either:

69.2.1 Have no business operations in Northern Ireland, or

69.2.2 Shall take lawful steps in good faith to conduct any business operations they have in

Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

69.3 For purposes of this Article, the following terms shall have the following meanings:

69.3.1 “MacBride Principles” shall mean those principles relating to nondiscrimination in employment and freedom of work-place opportunity which require employers doing business in Northern Ireland to:

69.3.1(a) increase the representation of individuals from under-represented religious groups in the workforce, including managerial, supervisory, administrative, clerical and technical jobs;

69.3.1(b) take steps to promote adequate security for the protection of employees from under-represented religious groups both at the work-place and while traveling to and from **Work**;

69.3.1(c) ban provocative religious or political emblems from the workplace;

69.3.1(d) publicly advertise all job openings and make special recruitment efforts to attract applicants from under-represented religious groups;

69.3.1(e) establish layoff, recall, and termination procedures which do not in practice favor a particular religious group;

69.3.1(f) abolish all job reservations, apprenticeship restrictions and different employment criteria which discriminate on the basis of religion;

69.3.1(g) develop training programs that will prepare substantial numbers of current employees from under-represented religious groups for skilled jobs, including the expansion of existing programs and the creation of new programs to train, upgrade, and improve the skills of workers from under-represented religious groups;

69.3.1(h) establish procedures to assess, identify, and actively recruit employees from under-represented religious groups with potential for further advancement; and

69.3.1(i) appoint a senior management staff member to oversee affirmative action efforts and develop a timetable to ensure their full implementation.

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 69 is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another **Contractor** or **Contractors**. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in

accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of **Law**.

#### **ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB**

70.1 The **Contractor** shall electronically file all alteration type-2 and alteration type-3 applications via the New York City Development Hub Web site, except applications for the following types of minor alterations: enlargements, curb cuts, legalizations, fire alarms, builders pavement plans, and jobs filed on Landmark Preservation Commission calendared properties. All such filings must be professionally certified. Information about electronic filing via the New York City Development Hub is available on the **City** Department of Buildings Web site at [www.nyc.gov/buildings](http://www.nyc.gov/buildings).

#### **ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS**

71.1 Tropical hardwoods, as defined in Section 165 of the New York State Finance Law (Finance Law), shall not be utilized in the performance of this **Contract** except as expressly permitted by Section 165 of the Finance Law.

#### **ARTICLE 72. CONFLICTS OF INTEREST**

72.1 Section 2604 of the **City** Charter and other related provisions of the **City** Charter, the Administrative Code, and the Penal Law are applicable under the terms of this **Contract** in relation to conflicts of interest and shall be extended to **Subcontractors** authorized to perform **Work**, labor and services pursuant to this **Contract** and further, it shall be the duty and responsibility of the **Contractor** to so inform its respective **Subcontractors**. Notice is hereby given that, under certain circumstances, penalties may be invoked against the donor as well as the recipient of any form of valuable gift.

#### **ARTICLE 73. MERGER CLAUSE**

73.1 The written **Contract** herein, contains all the terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this **Contract** shall be deemed to exist or to bind any of the parties hereto, or to vary any of the terms contained herein.

#### **ARTICLE 74. STATEMENT OF WORK**

74.1 The **Contractor** shall furnish all labor and materials and perform all **Work** in strict accordance with the **Specifications** and **Addenda** thereto, numbered as shown in Schedule A.

## **ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR**

75.1 The **City** will pay and the **Contractor** will accept in full consideration for the performance of the **Contract**, subject to additions and deductions as provided herein, the total sum shown in Schedule A, this said sum being the amount at which the **Contract** was awarded to the **Contractor** at a public letting thereof, based upon the **Contractor's** bid for the **Contract**.

## **ARTICLE 76. ELECTRONIC FUNDS TRANSFER**

76.1 In accordance with Section 6-107.1 of the Administrative Code, the **Contractor** agrees to accept payments under this **Contract** from the **City** by electronic funds transfer (EFT). An EFT is any transfer of funds, other than a transaction originated by check, draft or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct or authorize a financial institution to debit or credit an account. Prior to the first payment made under this **Contract**, the **Contractor** shall designate one financial institution or other authorized payment agent and shall complete the attached "EFT Vendor Payment Enrollment Form" in order to provide the Commissioner of the **City** Department of Finance with information necessary for the **Contractor** to receive electronic funds transfer payments through a designated financial institution or authorized payment agent. The crediting of the amount of a payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the **Contractor** shall constitute full satisfaction by the **City** for the amount of the payment under this **Contract**. The account information supplied by the **Contractor** to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by **Law**.

76.2 The **Commissioner** may waive the application of the requirements of this Article 76 to payments on contracts entered into pursuant to Section 315 of the **City** Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to which the **Agency** may waive the requirements of this Article 76 for payments in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the **City**.

## **ARTICLE 77. RECORDS RETENTION**

77.1 The **Contractor** agrees to retain all books, records, and other documents relevant to this **Contract** for six years after the final payment or termination of this **Contract**, whichever is later. **City**, state, and federal auditors and any other persons duly authorized by the **City** shall have full access to and the right to examine any such books, records, and other documents during the retention period.

## **ARTICLE 78. EXAMINATION AND VIEWING OF SITE, CONSIDERATION OF OTHER SOURCES OF INFORMATION AND CHANGED SITE CONDITIONS**

78.1 Pre-Bidding (Investigation) Viewing of Site – Bidders must carefully view and examine the **Site** of the proposed **Work**, as well as its adjacent area, and seek other usual sources of information, for they will be conclusively presumed to have full knowledge of any and all conditions and hazards on, about or above the **Site** relating to or affecting in any way the performance of the **Work** to be done under the **Contract** that were or should have been known by a reasonably prudent bidder. To arrange a date for visiting the **Site**,

bidders are to contact the **Agency** contact person specified in the bid documents.

78.2 Should the **Contractor** encounter during the progress of the Work site conditions or environmental hazards at the **Site** materially differing from any shown on the **Contract Drawings** or indicated in the **Specifications** or such conditions or environmental hazards as could not reasonably have been anticipated by the **Contractor**, which conditions or hazards will materially affect the cost of the **Work** to be done under the **Contract**, the attention of the **Commissioner** must be called immediately to such conditions or hazards before they are disturbed. The **Commissioner** shall thereupon promptly investigate the conditions or hazards. If the **Commissioner** finds that they do so materially differ, and that they could not have been reasonably anticipated by the **Contractor**, the **Contract** may be modified with the **Commissioner's** written approval.

**ARTICLE 79. PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT**

**ARTICLE I. M/WBE PROGRAM**

Section 6-129 of the Administrative Code of the City of New York ("Section 6-129") establishes the program for participation in City procurement ("M/WBE Program") by minority-owned business enterprises ("MBEs") and women-owned business enterprises ("WBEs"), certified in accordance with Section 1304 of the New York City Charter. As stated in Section 6-129, the intent of the program is to address the impact of discrimination on the City's procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are pursuant to Section 6-129, and the rules of the Department of Small Business Services ("DSBS") promulgated thereunder.

If this Contract is subject to the M/WBE Program established by Section 6-129, the specific requirements of MBE and/or WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the "M/WBE Utilization Plan") and are detailed below.

The Contractor must comply with all applicable MBE and WBE requirements for this Contract.

All provisions of Section 6-129 are hereby incorporated in the Contract by reference and all terms used herein that are not defined herein shall have the meanings given such terms in Section 6-129.

References to MBEs or WBEs shall also include such businesses certified pursuant to the executive law where credit is required by section 311 of the New York City Charter or other provision of law.

Article I, Part A, below, sets forth provisions related to the participation goals for construction, standard and professional services contracts.

Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE Program.

**PART A: PARTICIPATION GOALS FOR CONSTRUCTION, STANDARD AND PROFESSIONAL SERVICES CONTRACTS OR TASK ORDERS**

1. The MBE and/or WBE Participation Goals established for this Contract or Task Orders issued pursuant to this Contract, ("Participation Goals"), as applicable, are set forth on Schedule B, Part 1 to this Contract (see Page 1, Line 1 Total Participation Goals) or will be set forth on Schedule B, Part 1 to Task Orders issued pursuant to this Contract, as applicable.



The Participation Goals represent a percentage of the total dollar value of the Contract or Task Order, as applicable, that may be achieved by awarding subcontracts to firms certified with DSBS as MBEs and/or WBEs, and/or by crediting the participation of prime contractors and/or qualified joint ventures as provided in Section 3 below, unless the goals have been waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

2. If Participation Goals have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be subject to the Participation Goals, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

3. If Participation Goals have been established for this Contract or Task Order issued pursuant to this Contract, a Contractor that is an MBE and/or WBE shall be permitted to count its own participation toward fulfillment of the relevant Participation Goal, provided that in accordance with Section 6-129 the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that the Contractor pays to direct subcontractors (as defined in Section 6-129(c)(13)), and provided further that a Contractor that is certified as both an MBE and a WBE may count its own participation either toward the goal for MBEs or the goal for WBEs, but not both.

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant Participation Goal. In accordance with Section 6-129, the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

4. A. If Participation Goals have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Utilization Plan, Part 2 (see Pages 1-2) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end; as well as the name, addresses, and telephone numbers of the M/WBE subcontractors if required by the solicitation; and (d) the prospective contractor's required certification and affirmations. In the event that this M/WBE Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to meet the Participation Goals, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

B. (i) If this Contract is for a master services agreement or other requirements type contract that will result in the issuance of Task Orders that will be individually registered ("Master Services Agreement") and is subject to M/WBE Participation Goals, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Participation Requirements for Master Services Agreements That Will Require Individually Registered Task Orders, Part 2 (page 2) indicating the prospective contractor's certification and required affirmations to make all reasonable good faith efforts to meet participation goals established on each individual Task Order issued pursuant to this Contract, or if a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms. In the event that the Schedule B indicates that the bidder or proposer, as applicable, does not intend to meet the Participation Goals that may be established on Task Orders issued pursuant to this Contract, the bid or proposal, as applicable, shall be deemed non-responsive.

(ii) Participation Goals on a Master Services Agreement will be established for individual Task Orders issued after the Master Services Agreement is awarded. If Participation Goals have been established on a Task Order, a contractor shall be required to submit a Schedule B – M/WBE Utilization Plan For Independently Registered Task Orders That Are Issued Pursuant to Master Services Agreements, Part 2 (see Pages 1-2) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end; as well as the name, addresses, and telephone numbers of the M/WBE subcontractors if required by the solicitation; and (d) the prospective contractor's required certification and affirmations. The contractor must engage in good faith efforts to meet the Participation Goals as established for the Task Order unless Agency has granted the contractor a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

**C. THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART 2). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART 3). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.**

5. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multi- year contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)). PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work. In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the Participation Goals. Such certification must occur prior to the firms' commencement of work. A list of city-certified MBE and WBE firms may be obtained from the DSBS website at [www.nyc.gov/buycertified](http://www.nyc.gov/buycertified), by emailing DSBS at [buyer@sbs.nyc.gov](mailto:buyer@sbs.nyc.gov), by calling (212) 513-6451, or by visiting or writing DSBS at One Liberty Plaza ., New York, New York, 10006, 11th floor. Eligible firms that have not yet

been certified may contact DSBS in order to seek certification by visiting [www.nyc.gov/getcertified](http://www.nyc.gov/getcertified), emailing [MWBE@sbs.nyc.gov](mailto:MWBE@sbs.nyc.gov), or calling the DSBS certification helpline at (212) 513-6311. A firm that is certified as both an MBE and a WBE may be counted either toward the goal for MBEs or the goal for WBEs, but not both. No credit shall be given for participation by a graduate MBE or graduate WBE, as defined in Section 6-129(c)(20).

7. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to, the total amount the Contractor paid to its direct subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount direct subcontractors paid to indirect subcontractors; the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor by the Contractor, and, where applicable, hired by any of the Contractor's direct subcontractors; and the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment: the total amount it paid to subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount its direct subcontractors paid directly to their indirect subcontractors; and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's M/WBE Utilization Plan, Agency shall take appropriate action, in accordance with Section 6-129 and Article II below, unless the Contractor has obtained a modification of its M/WBE Utilization Plan in accordance with Section 6-129 and Part A, Section 11 below.

9. Where an M/WBE Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds the greater of 10 percent of the Contract or Task Order, as applicable, or \$500,000, Agency shall review the scope of work for the Contract or Task Order, as applicable, and the scale and types of work involved in the change order, and determine whether the Participation Goals should be modified.

10. Pre-award waiver of the Participation Goals. (a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the Participation Goals in accordance with Section 6-129, which requests that Agency change one or more Participation Goals on the grounds that the Participation Goals are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

(b) To apply for a full or partial waiver of the Participation Goals, a bidder, proposer, or contractor, as applicable, must complete Part 3 of Schedule B **and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing by email at [MWBEModification@ddc.nyc.gov](mailto:MWBEModification@ddc.nyc.gov). Full or partial waiver requests that are received later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due may be rejected as untimely.** Bidders, proposers, or contractors, as applicable, who have submitted timely requests will receive an Agency response by no later than two (2) calendar days prior to the due date for bids, proposals, or Task Orders; provided, however, that if that date would fall on a weekend or holiday, an Agency response will be provided by close-of-business on the business day before such weekend or holiday date.

(c) If the Agency determines that the Participation Goals are unreasonable in light of the availability of certified firms to perform the services required, it shall revise the solicitation and extend the deadline for bids and proposals, or revise the Task Order, as applicable.

(d) Agency may grant a full or partial waiver of the Participation Goals to a bidder, proposer or contractor, as applicable, who demonstrates—before submission of the bid, proposal or Task Order, as applicable—that it has legitimate business reasons for proposing the level of subcontracting in its M/WBE Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited

to, whether the bidder, proposer or contractor, as applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts represented by the Participation Goals. In making such determination, Agency may consider whether the M/WBE Utilization Plan is consistent with past subcontracting practices of the bidder, proposer or contractor, as applicable, whether the bidder, proposer or contractor, as applicable, has made efforts to form a joint venture with a certified firm, and whether the bidder, proposer, or contractor, as applicable, has made good faith efforts to identify other portions of the Contract that it intends to subcontract.

11. Modification of M/WBE Utilization Plan. (a) A Contractor may request a modification of its M/WBE Utilization Plan after award of this Contract. PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its M/WBE Utilization Plan as part of its bid submission. The Agency may grant a request for Modification of a Contractor's M/WBE Utilization Plan if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the Participation Goals. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;
- (viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency's M/WBE officer shall provide written notice to the Contractor of the determination.

(b) The Agency may modify the Participation Goals when the scope of the work has been changed by the Agency in a manner that affects the scale and types of work that the Contractor indicated in its M/WBE Utilization Plan would be awarded to subcontractors.

12. If the Contractor was required to identify in its bid or proposal the MBEs and/or WBEs they intended to use in connection with the performance of the Contract or Task Order, substitutions to the identified firms may only be made with the approval of the Agency, which shall only be given when the Contractor has proposed to use a firm that would satisfy the Participation Goals to the same extent as the firm previously identified, unless the Agency determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts. In making such determination, the Agency shall require evidence of the

efforts listed in Section 11(a) above, as applicable, along with any other relevant factors.

13. If this Contract is for an indefinite quantity of construction, standard or professional services or is a requirements type contract and the Contractor has submitted an M/WBE Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the Participation Goals, the Contractor will not be deemed in violation of the M/WBE Program requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

14. If Participation Goals have been established for this Contract or a Task Order issued pursuant to this Contract, at least once annually during the term of the Contract or Task Order, as applicable, Agency shall review the Contractor's progress toward attainment of its M/WBE Utilization Plan, including but not limited to, by reviewing the percentage of work the Contractor has actually awarded to MBE and/or WBE subcontractors and the payments the Contractor made to such subcontractors.

15. If Participation Goals have been established for this Contract or a Task Order issued pursuant to this Contract, Agency shall evaluate and assess the Contractor's performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor's overall contract performance evaluation.

## PART B: MISCELLANEOUS

The Contractor shall take notice that, if this solicitation requires the establishment of a M/WBE Utilization Plan, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See §6-129(e)(10). Furthermore, such resulting contract may also be examined by the City's Comptroller to assess compliance with the M/WBE Utilization Plan.

1. Pursuant to DSBS rules, construction contracts that include a requirement for a M/WBE Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Section 6-108.1 of the Administrative Code of the City of New York.

2. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and/or WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and/or WBEs in contracts.

3. Prospective contractors are encouraged to enter into qualified joint venture agreements with MBEs and/or WBEs as defined by Section 6-129(c)(30).

4. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE Program requirements set forth herein and the pertinent provisions of Section 6-129, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE Program requirements of this Contract and pertinent provisions of Section 6-129, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of MBEs and/or WBEs to meet the required Participation Goals.

## ARTICLE II. ENFORCEMENT

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder's or proposer's prequalification status, if applicable.

2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129

or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any M/WBE Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering the Contractor an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.

3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to, any M/WBE Utilization Plan, Agency may determine that one of the following actions should be taken:

- (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- (c) making a finding that the Contractor is in default of the Contract;
- (d) terminating the Contract;
- (e) declaring the Contractor to be in breach of Contract;
- (f) withholding payment or reimbursement;
- (g) determining not to renew the Contract;
- (h) assessing actual and consequential damages;
- (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the M/WBE Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
- (j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
- (k) taking any other appropriate remedy.

4. If an M/WBE Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to fulfill its Participation Goals contained in its M/WBE Utilization Plan or the Participation Goals as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of work required to be awarded to MBE and/or WBE firms to meet the Participation Goals and the dollar amount the Contractor actually awarded and paid, and/or credited, to MBE and/or WBE firms. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the Participation Goals, the foregoing amount is hereby fixed and agreed as the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.

5. Whenever Agency has reason to believe that an MBE and/or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129(c)(8)), or has violated any provision of Section 6-129, Agency shall notify the Commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE and/or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.

7. The Contractor's record in implementing its M/WBE Utilization Plan shall be a factor in the evaluation of

its performance. Whenever Agency determines that a Contractor's compliance with an M/WBE Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief Procurement Officer, file an advice of caution form for inclusion in PASSPort as caution data.

**PERFORMANCE BOND #2**

Performance Bond #2 (4 pages): Use if the total contract price is more than \$5 Million.

**PERFORMANCE BOND #2 (Page 1)**

**PERFORMANCE BOND #2 KNOW ALL PERSONS BY THESE PRESENTS:**

That we, C.A.C. Industries, Inc

54-08 Vernon Blvd., Long Island City , NY 11101

hereinafter referred to as the "Principal,"  
and, Federal Insurance Company

202B Halls Mill Road, P.O. Box 1650, Whitehouse Station, NJ 08889-1600

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns in the penal sum of Fifty One Million Eight Hundred Twenty One Thousand Nine Hundred Seventy One and 92/100

(\$ 51,821,971.92 ) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal is about to enter, or has entered, into a Contract in writing with the City for

Project ID: HWQ274F2 - Reconstruction of Streets in Rosedale Area-Phase 2 Including Sewer, Water Main,

Street Lighting and Traffic Work, Borough of Queens, City of New York

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

**NOW, THEREFORE**, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.



PERFORMANCE BOND #2 (Page 2)

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to either (1) pay the full amount of the above penal sum in complete discharge and exoneration of this bond and of all the liabilities of the Surety relating to this bond, or (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof. The Surety (Sureties) further agrees, at its option, either to tender the penal sum or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to commence and to complete all Work as provided herein.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.

PERFORMANCE BOND #2 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

\_\_\_\_\_ 27th day of April 20 23 \_\_\_\_\_

(Seal)



C.A.C. Industries, Inc. (L.S.)

Principal

*[Handwritten signature]*

Surety  
Federal Insurance Company

By: *[Handwritten signature]*

Susan Lupski, Attorney-In-Fact

Surety

(Seal)

By: \_\_\_\_\_

Surety

(Seal)

By: \_\_\_\_\_

Surety

(Seal)

By: \_\_\_\_\_

Surety

(Seal)

By: \_\_\_\_\_

Bond Premium Rate 7.65/M Sliding Scale

Bond Premium Cost \$371,475.00

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.



**ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION**

State of New York County of Queens ss:

On this 1st day of MAY, 20 23 before me personally came RICHARD E GARIN,

to me known, who, being by me duly sworn did depose and say that he resides at MONTAUK NEW YORK; that he/she is the CFO of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

[Signature]  
Notary Public or Commissioner of Deeds.

DIANE C DERIN  
NOTARY PUBLIC, STATE OF NEW YORK  
Registration No. 01DE5048152  
QUALIFIED IN QUEENS COUNTY  
Commission Expires AUGUST 14, 2025

**ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP**

State of \_\_\_\_\_ County of \_\_\_\_\_ ss:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_ before me personally came \_\_\_\_\_,

to me known, who, being by me duly sworn did depose and say that he/she resides at \_\_\_\_\_; that he/she is \_\_\_\_\_ partner of \_\_\_\_\_, a limited/general partnership existing under the laws of the State of \_\_\_\_\_, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

\_\_\_\_\_  
Notary Public or Commissioner of Deeds

**ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL**

State of \_\_\_\_\_ County of \_\_\_\_\_ ss:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_ before me personally came \_\_\_\_\_,

to me known, who, being by me duly sworn did depose and say that he/she resides at \_\_\_\_\_, and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

\_\_\_\_\_  
Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

\*\*\*\*\*

Affix Acknowledgments and Justification of Sureties.

# CHUBB

## Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company  
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Katherine Acosta, Thomas Bean, George O. Brewster, Desiree Cardlin, Colette R. Chisholm, Dana Granice, Susan Lupski, Gerard S. Macholz, Camille Maitland, Robert T. Pearson, Nelly Renchiwich, Vincent A. Walsh, Michelle Wannamaker and Ian Williams of Uniondale, New York

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 7<sup>th</sup> day of March, 2023.

*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

*Stephen M. Haney*

Stephen M. Haney, Vice President



STATE OF NEW JERSEY  
County of Hunterdon

SS.

On this 7<sup>th</sup> day of March 2023 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Contursi  
NOTARY PUBLIC OF NEW JERSEY  
No 50202369  
Commission Expires August 22, 2027

*Albert Contursi*  
Notary Public

### CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this

April 27, 2023



*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:  
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

THE NATIONAL BUREAU OF FIRE UNDERWRITERS

INCORPORATED IN THE STATE OF NEW YORK

OFFICE OF THE PRESIDENT

100 WALL STREET, NEW YORK, N. Y.

MEMBER OF THE NATIONAL ASSOCIATION OF FIRE UNDERWRITERS

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ACKNOWLEDGEMENT OF SURETY COMPANY

STATE OF NEW YORK

COUNTY OF NASSAU

On this April 27, 2023, before me personally came Susan Lupski to me known, who, being by me duly sworn, did depose and say; that he/she resides in Nassau County, State of New York that he/she is the Attorney-In-Fact of the Federal Insurance Company the corporation described in which executed the above instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the Board of Directors of said corporation; and that he/she signed his/her name thereto by like order; and the affiant did further depose and say that the Superintendent of Insurance of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State of New York, issued to Federal Insurance Company (Surety) his/her certificate of qualification evidencing the qualification of said Company and its sufficiency under any law of the State of New York as surety and guarantor, and the propriety of accepting and approving it as such; and that such Certificate has not been revoked.



Notary Public

**LILIANA MAITLAND**  
**Notary Public-State of New York**  
**No. 01MA6434245**  
**Qualified in Nassau County**  
**Commission Expires 06/06/2028**

Commission Expires 08/03/2028  
Qualified in Nassau County  
No. 01M6824242  
Notary Public-State of New York  
JULIANA MANJILI



**FEDERAL INSURANCE COMPANY**  
**STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS**

Statutory Basis

December 31, 2022

(in thousands)

ASSETS		LIABILITIES AND SURPLUS TO POLICYHOLDERS	
Cash and Short Term Investments	\$ 123,147	Outstanding Losses and Loss Expenses	\$ 9,263,034
United States Government, State and Municipal Bonds	3,769,695	Reinsurance Payable on Losses and Expenses	1,723,796
Other Bonds	5,964,508	Unearned Premiums	2,632,590
Stocks	245,498	Ceded Reinsurance Premiums Payable	380,182
Other Invested Assets	<u>1,979,194</u>	Other Liabilities	<u>471,528</u>
<b>TOTAL INVESTMENTS</b>	<u><b>12,082,042</b></u>	<b>TOTAL LIABILITIES</b>	<u><b>14,471,130</b></u>
Investments in Affiliates		Capital Stock	20,980
Great Northern Ins. Co.	422,405	Paid-In Surplus	2,711,474
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Premiums Receivable	1,859,933		
Other Assets	<u>3,519,415</u>		
<b>TOTAL ADMITTED ASSETS</b>	<u><b>\$ 18,748,987</b></u>	<b>TOTAL LIABILITIES AND SURPLUS</b>	<u><b>\$ 18,748,987</b></u>

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners. At December 31, 2022, investments with a carrying value of \$512,747,632 were deposited with government authorities as required by law.



STATE OF PENNSYLVANIA  
COUNTY OF PHILADELPHIA

John Taylor, being duly sworn, says that he is Senior Vice President of Federal Insurance Company and that to the best of his knowledge and belief the foregoing is a true and correct statement of the said Company's financial condition as of the 31 st day of December, 2022.

Sworn before me this March 16, 2023

*John Taylor*  
Senior Vice President

*Jaime L. Yates*  
Notary Public

September 19, 2023  
My commission expires

Commonwealth of Pennsylvania - Notary Seal  
Jaime L. Yates, Notary Public  
Philadelphia County  
My commission expires September 19, 2023  
Commission number 1357070  
Member, Pennsylvania Association of Notaries

REPUBLIC OF THE PHILIPPINES

Department of Education  
Division Office - Marikina

Marikina, Rizal



Very truly yours,  
[Signature]

[Faint, illegible text]

[Faint, illegible text]

**PAYMENT BOND**

Bond No.: K41689596

Use for any contract for which a Payment Bond is required.

**PAYMENT BOND (Page 1)**

**PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS, That we, C.A.C. Industries, Inc.

54-08 Vernon Blvd., Long Island City , NY 11101

hereinafter referred to as the "Principal", and Federal Insurance Company

202B Halls Mill Road, P.O. Box 1650, Whitehouse Station, NJ 08889-1600

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns, in the penal sum of

Fifty One Million Eight Hundred Twenty One Thousand Nine Hundred Seventy One and 92/100

(\$51,821,971.92) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

Project ID: HWQ274F2 - Reconstruction of Streets in Rosedale Area-Phase 2 Including Sewer, Water Main,

Street Lighting and Traffic Work, Borough of Queens, City of New York

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto, whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

PAYMENT BOND (Page 2)

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be placed in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.

PAYMENT BOND (Page 3)

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this 27th day of April, 2023.

(Seal)

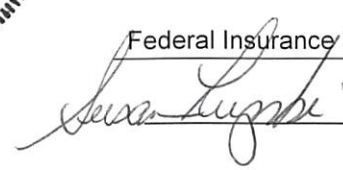


C.A.C. Industries, Inc. (L.S.) Principal

By: 

(Seal)

Federal Insurance Company Surety

By:  Susan Lupski, Attorney-In-Fact

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Surety

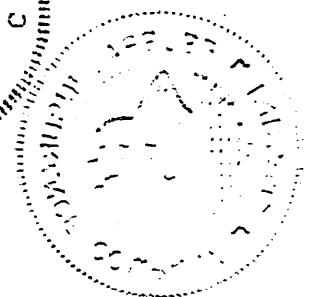
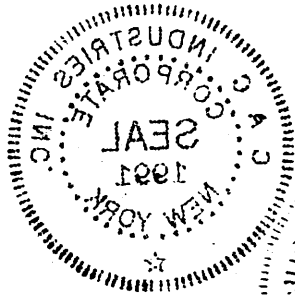
By: \_\_\_\_\_

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

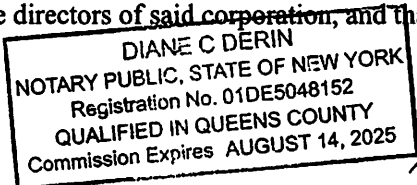
*[Faint handwritten signature]*



**ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION**

State of NEW YORK County of QUEENS ss:

On this 1st day of MAY, 2023, before me personally came RICHARD E GAVIN to me known, who, being by the duly sworn did depose and say that he resides at MONTAUK, NEW YORK that he is the CFO of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.



[Signature]  
Notary Public or Commissioner of Deeds

**ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP**

State of \_\_\_\_\_ County of \_\_\_\_\_ ss:

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me personally appeared \_\_\_\_\_ to me known, and known to me to be one of the members of the firm of \_\_\_\_\_ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

\_\_\_\_\_  
Notary Public or Commissioner of Deeds

**ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL**

State of \_\_\_\_\_ County of \_\_\_\_\_ ss:

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me personally appeared \_\_\_\_\_ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

\_\_\_\_\_  
Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

\*\*\*\*\*

Affix Acknowledgments and Justification of Sureties.

# CHUBB

## Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company  
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Katherine Acosta, Thomas Bean, George O. Brewster, Desiree Cardlin, Colette R. Chisholm, Dana Granice, Susan Lupski, Gerard S. Macholz, Camille Maitland, Robert T. Pearson, Nelly Renchiwicz, Vincent A. Walsh, Michelle Wannamaker and Ian Williams of Uniondale, New York

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 7th day of March, 2023.

*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

*Stephen M. Haney*

Stephen M. Haney, Vice President



STATE OF NEW JERSEY  
County of Hunterdon

SS.

On this 7th day of March 2023 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



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NOTARY PUBLIC OF NEW JERSEY  
No 50202369  
Commission Expires August 22, 2027

*Albert Contursi*  
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### CERTIFICATION

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- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

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- (ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this

April 27, 2023



*Dawn M. Chloros*

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:  
Telephone (908) 903- 3493 Fax (908) 903- 3656 e-mail: surety@chubb.com





ACKNOWLEDGEMENT OF SURETY COMPANY

STATE OF NEW YORK

COUNTY OF NASSAU

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**Notary Public-State of New York**  
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**Qualified in Nassau County**  
**Commission Expires 06/06/2026**

LILIANA MANTLAND  
Notary Public - State of New York  
No. 017MAG434242  
Qualified in Nassau County  
Commission Expires 08/08/2028

**FEDERAL INSURANCE COMPANY**  
**STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS**

Statutory Basis

December 31, 2022

(in thousands)

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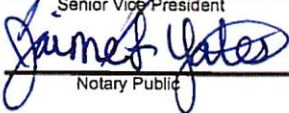
STATE OF PENNSYLVANIA

COUNTY OF PHILADELPHIA

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Sworn before me this March 16, 2023

  
 Senior Vice President

  
 Notary Public

September 19, 2023  
 My commission expires

Commonwealth of Pennsylvania - Notary Seal  
 Jaime L. Yates, Notary Public  
 Philadelphia County  
 My commission expires September 19, 2023  
 Commission number 1357070  
 Member, Pennsylvania Association of Notaries



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
04/27/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Construction Risk Partners  Campus View Plaza 1250 Route 28, Suite 201 Branchburg, NJ 08876	1-908-566-1010	CONTACT NAME: Kimberly Bernard PHONE (A/C No. Ext): 516-962-8170 E-MAIL ADDRESS: kbernard@constructionriskpartners.com	FAX (A/C No): 516-962-8180
INSURED C.A.C. Industries Inc.  54-08 Vernon Boulevard  Long Island City, NY 11101		INSURER(S) AFFORDING COVERAGE	
		INSURER A: TRAVELERS IND CO	NAIC # 25658
		INSURER B: TRAVELERS PROP CAS CO OF AMER	25674
		INSURER C: NAVIGATORS INS CO	42307
		INSURER D: INDIAN HARBOR INS CO	36940
		INSURER E:	
		INSURER F:	

**COVERAGES**

CERTIFICATE NUMBER: 68594976

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liab  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	X	X	VTC2K-CO-4E994751-IND-22	06/29/22	06/29/23	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 3,000,000 GENERAL AGGREGATE \$ 6,000,000 PRODUCTS - COMP/OP AGG \$ 6,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	X	X	VTC2J-CAP-7K029318-TIL-22	06/29/22	06/29/23	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			NY22EXCZ05LG1IV	06/29/22	06/29/23	EACH OCCURRENCE \$ 3,000,000 AGGREGATE \$ 3,000,000 \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N <input type="checkbox"/> N/A				<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
D	Professional			CEO744641305	06/29/22	06/29/23	Each Claim/Agg 5,000,000
B	BPP (Field Office)			QT-630-3S487259-TIL-22	06/29/22	06/29/23	Limit 40,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Project ID.: HWQ274F2; Reconstruction of Streets in Rosedale Area - Phase 2, Queens, New York  
 City of New York, including its officials and employees, Con Edison, National Grid, Verizon are additional insured as required by written contract.

Coverage is primary and non-contributory as required by written contract.

Waiver of subrogation is applicable where required by written contract and allowed by law.

**CERTIFICATE HOLDER**


New York City Department of Design and Construction  
  
30-30 Thomson Avenue  
  
Long Island City, NY 11101

USA

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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ACORD 25 (2016/03)

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JFine  
68594976

**CITY OF NEW YORK**  
**CERTIFICATION BY INSURANCE BROKER OR AGENT**

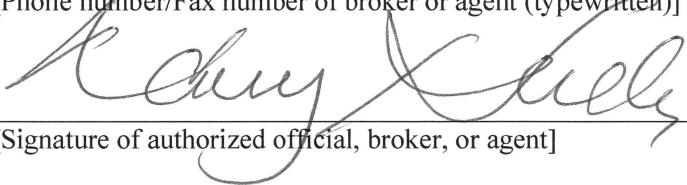
The undersigned insurance broker or agent represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

Construction Risk Partners LLC  
[Name of broker or agent (typewritten)]

1250 Route 28, Suite 201, Branchburg, NJ 08876  
[Address of broker or agent (typewritten)]

certs@constructionriskpartners.com  
[Email address of broker or agent (typewritten)]

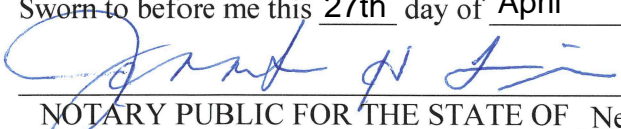
908-566-1010/908-566-1020  
[Phone number/Fax number of broker or agent (typewritten)]


  
[Signature of authorized official, broker, or agent]

Nancy Huddy, Certificates Lead  
[Name and title of authorized official, broker, or agent (typewritten)]

State of .....NJ.....)  
  ) ss.:  
County of ..Somerset.....)

Sworn to before me this 27th day of April 20 23

  
\_\_\_\_\_  
NOTARY PUBLIC FOR THE STATE OF New Jersey

	JENNIFER H FINE NOTARY PUBLIC STATE OF NEW JERSEY ID # 2428451 MY COMMISSION EXPIRES JAN. 03, 2028
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CERTIFICATE OF INSURANCE COVERAGE
NYS DISABILITY AND PAID FAMILY LEAVE BENEFITS LAW

PART 1. To be completed by NYS disability and Paid Family Leave benefits carrier or licensed insurance agent of that carrier

1a. Legal Name & Address of Insured (use street address only)
C.A.C Industries, Inc.
54 08 Vernon Blvd
Long Island City, NY 11101
1b. Business Telephone Number of Insured
718-729-3600
1c. Federal Employer Identification Number of Insured or Social Security Number
113082726

2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)
New York City Department of Design & Construction
30-30 Thomson Avenue
Long Island City, NY 11101
3a. Name of Insurance Carrier
Arch Insurance Company
3b. Policy Number of Entity Listed in Box 1a
11DBL2168000
3c. Policy Effective Period
1/1/2023 to 12/31/2023

4. Policy provides the following benefits:
[X] A. Both disability and Paid Family Leave benefits.
[ ] B. Disability benefits only.
[ ] C. Paid Family Leave benefits only.
5. Policy covers:
[X] A. All of the employer's employees eligible under the NYS Disability and Paid Family Leave Benefits Law.
[ ] B. Only the following class or classes of employer's employees:

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has NYS disability and/or Paid Family Leave benefits insurance coverage as described above.

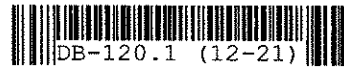
Date Signed 4/12/2023 By [Signature]
(Signature of insurance carrier's authorized representative or NYS licensed insurance agent of that insurance carrier)
Telephone Number 201-743-3937 Name and Title James Iannicelli, AVP Accident & Health

IMPORTANT: If Boxes 4A and 5A are checked, and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is COMPLETE. Mail it directly to the certificate holder.
If Box 4B, 4C or 5B is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd. 8 of the NYS Disability and Paid Family Leave Benefits Law. It must be emailed to PAU@wcb.ny.gov or it can be mailed for completion to the Workers' Compensation Board, Plans Acceptance Unit, PO Box 5200, Binghamton, NY 13902-5200.

PART 2. To be completed by the NYS Workers' Compensation Board (Only if Box 4B, 4C or 5B have been checked)

State of New York
Workers' Compensation Board
According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability and Paid Family Leave Benefits Law(Article 9 of the Workers' Compensation Law) with respect to all of their employees.
Date Signed \_\_\_\_\_ By \_\_\_\_\_
(Signature of Authorized NYS Workers' Compensation Board Employee)
Telephone Number \_\_\_\_\_ Name and Title \_\_\_\_\_

Please Note: Only insurance carriers licensed to write NYS disability and Paid Family Leave benefits insurance policies and NYS licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. Insurance brokers are NOT authorized to issue this form.





CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

Form with fields for: 1a. Legal Name & Address of Insured, 1b. Business Telephone Number of Insured, 1c. NYS Unemployment Insurance Employer Registration Number of Insured, 1d. Federal Employer Identification Number of Insured or Social Security Number, 2. Name and Address of Entity Requesting Proof of Coverage, 3a. Name of Insurance Carrier, 3b. Policy Number of Entity Listed in Box "1a", 3c. Policy effective period, 3d. The Proprietor, Partners or Executive Officers are included/excluded.

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law. (To use this form, New York (NY) must be listed under item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).

The insurance carrier must notify the above certificate holder and the Workers' Compensation Board within 10 days IF a policy is canceled due to nonpayment of premiums or within 30 days IF there are reasons other than nonpayment of premiums that cancel the policy or eliminate the insured from the coverage indicated on this Certificate.

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policy listed, nor does it confer any rights or responsibilities beyond those contained in the referenced policy.

This certificate may be used as evidence of a Workers' Compensation contract of insurance only while the underlying policy is in effect.

Please Note: Upon cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.

Approved by: Nancy Huddy (Print name of authorized representative or licensed agent of insurance carrier)
Approved by: [Signature] 4/27/2023 (Signature) (Date)
Title: Certificates Lead

Telephone Number of authorized representative or licensed agent of insurance carrier: 908-566-1010

Please Note: Only insurance carriers and their licensed agents are authorized to issue Form C-105.2. Insurance brokers are NOT authorized to issue it.



## **Workers' Compensation Law**

### **Section 57. Restriction on issue of permits and the entering into contracts unless compensation is secured.**

1. The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed.
2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **XTEND ENDORSEMENT FOR CONTRACTORS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**GENERAL DESCRIPTION OF COVERAGE** – This endorsement broadens coverage. However, coverage for any injury, damage or medical expenses described in any of the provisions of this endorsement may be excluded or limited by another endorsement to this Coverage Part, and these coverage broadening provisions do not apply to the extent that coverage is excluded or limited by such an endorsement. The following listing is a general coverage description only. Read all the provisions of this endorsement and the rest of your policy carefully to determine rights, duties, and what is and is not covered.

- |  |   |
|--|---|
| <p><b>A.</b> Who Is An Insured – Unnamed Subsidiaries</p> <p><b>B.</b> Blanket Additional Insured – Governmental Entities – Permits Or Authorizations Relating To Operations</p> | <p><b>C.</b> Incidental Medical Malpractice</p> <p><b>D.</b> Blanket Waiver Of Subrogation</p> <p><b>E.</b> Contractual Liability – Railroads</p> <p><b>F.</b> Damage To Premises Rented To You</p> |
|--|---|

### **PROVISIONS**

#### **A. WHO IS AN INSURED – UNNAMED SUBSIDIARIES**

The following is added to **SECTION II – WHO IS AN INSURED**:

Any of your subsidiaries, other than a partnership, joint venture or limited liability company, that is not shown as a Named Insured in the Declarations is a Named Insured if:

- a.** You are the sole owner of, or maintain an ownership interest of more than 50% in, such subsidiary on the first day of the policy period; and
- b.** Such subsidiary is not an insured under similar other insurance.

No such subsidiary is an insured for "bodily injury" or "property damage" that occurred, or "personal and advertising injury" caused by an offense committed:

- a.** Before you maintained an ownership interest of more than 50% in such subsidiary; or
- b.** After the date, if any, during the policy period that you no longer maintain an ownership interest of more than 50% in such subsidiary.

For purposes of Paragraph 1. of Section II – Who Is An Insured, each such subsidiary will be deemed to be designated in the Declarations as:

- a.** An organization other than a partnership, joint venture or limited liability company; or

- b.** A trust;

as indicated in its name or the documents that govern its structure.

#### **B. BLANKET ADDITIONAL INSURED – GOVERNMENTAL ENTITIES – PERMITS OR AUTHORIZATIONS RELATING TO OPERATIONS**

The following is added to **SECTION II – WHO IS AN INSURED**:

Any governmental entity that has issued a permit or authorization with respect to operations performed by you or on your behalf and that you are required by any ordinance, law, building code or written contract or agreement to include as an additional insured on this Coverage Part is an insured, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" arising out of such operations.

The insurance provided to such governmental entity does not apply to:

- a.** Any "bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the governmental entity; or
- b.** Any "bodily injury" or "property damage" included in the "products-completed operations hazard".

**C. INCIDENTAL MEDICAL MALPRACTICE**

1. The following replaces Paragraph **b.** of the definition of "occurrence" in the **DEFINITIONS** Section:

- b.** An act or omission committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to a person, unless you are in the business or occupation of providing professional health care services.

2. The following replaces the last paragraph of Paragraph **2.a.(1)** of **SECTION II – WHO IS AN INSURED**:

Unless you are in the business or occupation of providing professional health care services, Paragraphs **(1)(a)**, **(b)**, **(c)** and **(d)** above do not apply to "bodily injury" arising out of providing or failing to provide:

- (a)** "Incidental medical services" by any of your "employees" who is a nurse, nurse assistant, emergency medical technician or paramedic; or

- (b)** First aid or "Good Samaritan services" by any of your "employees" or "volunteer workers", other than an employed or volunteer doctor. Any such "employees" or "volunteer workers" providing or failing to provide first aid or "Good Samaritan services" during their work hours for you will be deemed to be acting within the scope of their employment by you or performing duties related to the conduct of your business.

3. The following replaces the last sentence of Paragraph **5.** of **SECTION III – LIMITS OF INSURANCE**:

For the purposes of determining the applicable Each Occurrence Limit, all related acts or omissions committed in providing or failing to provide "incidental medical services", first aid or "Good Samaritan services" to any one person will be deemed to be one "occurrence".

4. The following exclusion is added to Paragraph **2.**, **Exclusions**, of **SECTION I – COVERAGES – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

**Sale Of Pharmaceuticals**

"Bodily injury" or "property damage" arising out of the violation of a penal statute or ordinance relating to the sale of

pharmaceuticals committed by, or with the knowledge or consent of, the insured.

5. The following is added to the **DEFINITIONS** Section:

"Incidental medical services" means:

- a.** Medical, surgical, dental, laboratory, x-ray or nursing service or treatment, advice or instruction, or the related furnishing of food or beverages; or

- b.** The furnishing or dispensing of drugs or medical, dental, or surgical supplies or appliances.

6. The following is added to Paragraph **4.b.**, **Excess Insurance**, of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

This insurance is excess over any valid and collectible other insurance, whether primary, excess, contingent or on any other basis, that is available to any of your "employees" for "bodily injury" that arises out of providing or failing to provide "incidental medical services" to any person to the extent not subject to Paragraph **2.a.(1)** of Section **II – Who Is An Insured**.

**D. BLANKET WAIVER OF SUBROGATION**

The following is added to Paragraph **8.**, **Transfer Of Rights Of Recovery Against Others To Us**, of **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**:

If the insured has agreed in a contract or agreement to waive that insured's right of recovery against any person or organization, we waive our right of recovery against such person or organization, but only for payments we make because of:

- a.** "Bodily injury" or "property damage" that occurs; or

- b.** "Personal and advertising injury" caused by an offense that is committed;

subsequent to the execution of the contract or agreement.

**E. CONTRACTUAL LIABILITY – RAILROADS**

1. The following replaces Paragraph **c.** of the definition of "insured contract" in the **DEFINITIONS** Section:

- c.** Any easement or license agreement;

2. Paragraph **f.(1)** of the definition of "insured contract" in the **DEFINITIONS** Section is deleted.

**F. DAMAGE TO PREMISES RENTED TO YOU**

The following replaces the definition of "premises damage" in the **DEFINITIONS** Section:

"Premises damage" means "property damage" to:

- a. Any premises while rented to you or temporarily occupied by you with permission of the owner; or
- b. The contents of any premises while such premises is rented to you, if you rent such premises for a period of seven or fewer consecutive days.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**BLANKET ADDITIONAL INSURED**  
**(Includes Products-Completed Operations If Required By Contract)**

This endorsement modifies insurance provided under the following:  
 COMMERCIAL GENERAL LIABILITY COVERAGE PART

**PROVISIONS**

The following is added to **SECTION II – WHO IS AN INSURED**:

Any person or organization that you agree in a written contract or agreement to include as an additional insured on this Coverage Part is an insured, but only:

- a. With respect to liability for "bodily injury" or "property damage" that occurs, or for "personal injury" caused by an offense that is committed, subsequent to the signing of that contract or agreement and while that part of the contract or agreement is in effect; and
- b. If, and only to the extent that, such injury or damage is caused by acts or omissions of you or your subcontractor in the performance of "your work" to which the written contract or agreement applies. Such person or organization does not qualify as an additional insured with respect to the independent acts or omissions of such person or organization.

The insurance provided to such additional insured is subject to the following provisions:

- a. If the Limits of Insurance of this Coverage Part shown in the Declarations exceed the minimum limits required by the written contract or agreement, the insurance provided to the additional insured will be limited to such minimum required limits. For the purposes of determining whether this limitation applies, the minimum limits required by the written contract or agreement will be considered to include the minimum limits of any Umbrella or Excess liability coverage required for the additional insured by that written contract or agreement. This provision will not increase the limits of insurance described in Section III – Limits Of Insurance.
- b. The insurance provided to such additional insured does not apply to:

(1) Any "bodily injury", "property damage" or "personal injury" arising out of the providing, or failure to provide, any professional architectural, engineering or surveying services, including:

- (a) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders or change orders, or the preparing, approving, or failing to prepare or approve, drawings and specifications; and
- (b) Supervisory, inspection, architectural or engineering activities.

(2) Any "bodily injury" or "property damage" caused by "your work" and included in the "products-completed operations hazard" unless the written contract or agreement specifically requires you to provide such coverage for that additional insured during the policy period.

c. The additional insured must comply with the following duties:

- (1) Give us written notice as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, such notice should include:
  - (a) How, when and where the "occurrence" or offense took place;
  - (b) The names and addresses of any injured persons and witnesses; and
  - (c) The nature and location of any injury or damage arising out of the "occurrence" or offense.
- (2) If a claim is made or "suit" is brought against the additional insured:

## COMMERCIAL GENERAL LIABILITY

- (a) Immediately record the specifics of the claim or "suit" and the date received; and
  - (b) Notify us as soon as practicable and see to it that we receive written notice of the claim or "suit" as soon as practicable.
- (3) Immediately send us copies of all legal papers received in connection with the claim or "suit", cooperate with us in the investigation or settlement of the claim or defense against the "suit", and otherwise comply with all policy conditions.
- (4) Tender the defense and indemnity of any claim or "suit" to any provider of other insurance which would cover such additional insured for a loss we cover. However, this condition does not affect whether the insurance provided to such additional insured is primary to other insurance available to such additional insured which covers that person or organization as a named insured as described in Paragraph 4., Other Insurance, of Section IV – Commercial General Liability Conditions.

## COMMERCIAL GENERAL LIABILITY

**c. Method Of Sharing**

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

**d. Primary And Non-Contributory Insurance If Required By Written Contract**

If you specifically agree in a written contract or agreement that the insurance afforded to an insured under this Coverage Part must apply on a primary basis, or a primary and non-contributory basis, this insurance is primary to other insurance that is available to such insured which covers such insured as a named insured, and we will not share with that other insurance, provided that:

- (1) The "bodily injury" or "property damage" for which coverage is sought occurs; and
- (2) The "personal and advertising injury" for which coverage is sought is caused by an offense that is committed;

subsequent to the signing of that contract or agreement by you.

**5. Premium Audit**

- a. We will compute all premiums for this Coverage Part in accordance with our rules and rates.
- b. Premium shown in this Coverage Part as advance premium is a deposit premium only. At the close of each audit period we will compute the earned premium for that period and send notice to the first Named Insured. The due date for audit and retrospective premiums is the date shown as the due date on the bill. If the sum of the advance and audit premiums paid for the policy period is greater than the earned premium, we will return the excess to the first Named Insured.
- c. The first Named Insured must keep records of the information we need for premium computation, and send us copies at such times as we may request.

**6. Representations**

By accepting this policy, you agree:

- a. The statements in the Declarations are accurate and complete;
- b. Those statements are based upon representations you made to us; and
- c. We have issued this policy in reliance upon your representations.

The unintentional omission of, or unintentional error in, any information provided by you which we relied upon in issuing this policy will not prejudice your rights under this insurance. However, this provision does not affect our right to collect additional premium or to exercise our rights of cancellation or nonrenewal in accordance with applicable insurance laws or regulations.

**7. Separation Of Insureds**

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned in this Coverage Part to the first Named Insured, this insurance applies:

- a. As if each Named Insured were the only Named Insured; and
- b. Separately to each insured against whom claim is made or "suit" is brought.

**8. Transfer Of Rights Of Recovery Against Others To Us**

If the insured has rights to recover all or part of any payment we have made under this Coverage Part, those rights are transferred to us. The insured must do nothing after loss to impair them. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

**9. When We Do Not Renew**

If we decide not to renew this Coverage Part, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the nonrenewal not less than 30 days before the expiration date.

If notice is mailed, proof of mailing will be sufficient proof of notice.

**SECTION V – DEFINITIONS**

1. "Advertisement" means a notice that is broadcast or published to the general public or specific market segments about your goods, products or services for the purpose of attracting customers or supporters. For the purposes of this definition:
  - a. Notices that are published include material placed on the Internet or on similar electronic means of communication; and
  - b. Regarding websites, only that part of a website that is about your goods, products or services for the purposes of attracting customers or supporters is considered an advertisement.

## CONTRACT SIGNATURE PAGE

This Contract is entered by and between the City of New York (“City”), acting by and through the **DEPARTMENT OF DESIGN AND CONSTRUCTION**, and **CAC INDUSTRIES INC** (“Contractor”).

This Contract consists of this contract signature page as well as the following documents (“Contract Documents”) which are located in the Documents tab of the PASSPort record titled **85023B0052-HWQ274F2**.

1. (Question answer) - 2020 OSHA 300, 300A.pdf - Apr 27 2023 8:18PM
2. (Question answer) - 2021 OSHA 300, 300A.pdf - Apr 27 2023 8:18PM
3. (Question answer) - 2022 OSHA 300.pdf - Apr 27 2023 8:18PM
4. (Question answer) - 2022 OSHA 300A.pdf - Apr 27 2023 8:18PM
5. (Question answer) - BID BOND FOR NYCDDC HWQ274F2- BD 3-8-2023.pdf - Apr 27 2023 8:18PM
6. (Question answer) - CAC Industries Inc - Qualification Form.pdf - Apr 27 2023 8:18PM
7. (Question answer) - CAC Letter in Good Standing 2023 (APPRENTICE AGREEMENT).pdf - Apr 27 2023 8:18PM
8. (Question answer) - HWQ274F2 - CAC Industries, Inc. - Bid\_Schedule.xlsx - Apr 27 2023 8:18PM
9. Bid Schedule - May 8 2023 2:30PM
10. DDC PASSPort Bid Information [2022-04-28] - Apr 27 2023 8:18PM
11. DLS Approval - May 8 2023 2:46PM
12. HWQ274F2 - Bid Schedule [Addendum 4] - Apr 27 2023 8:18PM
13. HWQ274F2 - DRAWINGS PART 1 [Addendum 4] - Apr 27 2023 8:18PM
14. HWQ274F2 - DRAWINGS PART 2 [Addendum 4] - Apr 27 2023 8:18PM
15. HWQ274F2 - DRAWINGS PART 3 [Addendum 4] - Apr 27 2023 8:18PM
16. HWQ274F2 - Volume 3 [Addendum 4] - Apr 27 2023 8:18PM
17. HWQ274F2 Addendum 1 - Apr 27 2023 8:18PM
18. HWQ274F2 Addendum 2 - Apr 27 2023 8:18PM
19. HWQ274F2 Addendum 3 - Apr 27 2023 8:18PM
20. HWQ274F2 Addendum 4 - Apr 27 2023 8:18PM
21. HWQ274F2 Addendum 5 - Apr 27 2023 8:18PM
22. HWQ274F2 Disability Insurance Certificate - May 5 2023 7:41PM
23. HWQ274F2 Insurance Broker ertificate - May 5 2023 7:39PM
24. HWQ274F2 Insurance Certificate - May 5 2023 8:05PM
25. HWQ274F2 Payment and Performance Bonds - May 5 2023 8:08PM
26. HWQ274F2 Planholder's List (Addendum 1) - Apr 27 2023 8:18PM
27. HWQ274F2 VOLUME 2 - Apr 27 2023 8:18PM
28. HWQ274F2 Worker's Compensation Insurance Certificate - May 5 2023 8:04PM
29. HWQ274F2\_SWPPP Annexure A (PART 1 OF 2) - Apr 27 2023 8:18PM
30. HWQ274F2\_SWPPP Annexure A (PART 2 OF 2) - Apr 27 2023 8:18PM
31. NOTICE TO BIDDERS - COVID19 R4 - Apr 27 2023 8:18PM
32. Proposal/Bid - Apr 27 2023 8:18PM
33. RFx Document - Apr 27 2023 8:18PM
34. Round\_Addendum\_Job\_Aid - Apr 27 2023 8:18PM
35. Schedule B - May 8 2023 2:38PM
36. Schedule B - MWBE Utilization + Waiver Instructions July 2022 - Apr 27 2023 8:18PM
37. V1 Infra Bid Booklet PASSPort [2022-01-07] - Apr 27 2023 8:18PM

The above order does not represent an order of precedence. The Contract shall be governed by the order of precedence, if any, in the Contract Documents or by ordinary contract principles if no such order of precedence exists.



Each party is signing this Contract electronically on the date stated in that party's electronic signature.

The City of New York

By: **DEPARTMENT OF DESIGN AND CONSTRUCTION**

DocuSigned by:

*ERIC MACFARLANE*

1A87ABA0188B41C...  
(Signature)

Name: ERIC MACFARLANE

Title: First Deputy Commissioner

Date: 5/16/2023 | 05:25:13 PDT

Contractor

By: **CAC INDUSTRIES INC**

DocuSigned by:

*Michael Capasso*

B2B3548871FE4AE...  
(Signature)

Name: Michael Capasso

Title: President

Date: 5/16/2023 | 07:56:04 EDT

**Certificate Of Completion**

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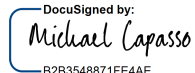
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**Signer Events**

Michael Capasso  
mcapasso@cacindinc.com  
President  
Security Level: Email, Account Authentication (None)

**Signature**

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ERIC MACFARLANE  
macfarla@ddc.nyc.gov  
First Deputy Commissioner  
Security Level: Email, Account Authentication (None)

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Signed: 5/16/2023 8:25:13 AM

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ID: 89c05ff5-fde4-4209-939b-5b4113fcd7e1

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
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Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/15/2023 2:47:36 PM

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Certified Delivered	Security Checked	5/16/2023 8:25:02 AM
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Completed	Security Checked	5/16/2023 8:25:13 AM

<b>Payment Events</b>	<b>Status</b>	<b>Timestamps</b>
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**Electronic Record and Signature Disclosure**

## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

From time to time, PASSport Production -- NYC MOCS (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

### **Getting paper copies**

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a \$0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

### **Withdrawing your consent**

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

### **Consequences of changing your mind**

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

### **All notices and disclosures will be sent to you electronically**

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

### **How to contact PASSport Production -- NYC MOCS:**

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

### **To advise PASSport Production -- NYC MOCS of your new email address**

To let us know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to us at [docusign@mocs.nyc.gov](mailto:docusign@mocs.nyc.gov) and in the body of such request you must state: your previous email address, your new email address. We do not require any other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

### **To request paper copies from PASSport Production -- NYC MOCS**

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an email to [docusign@mocs.nyc.gov](mailto:docusign@mocs.nyc.gov) and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

### **To withdraw your consent with PASSport Production -- NYC MOCS**

To inform us that you no longer wish to receive future notices and disclosures in electronic format you may:

i. decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;

ii. send us an email to [joshua.bonilla@mocs.nyc.gov](mailto:joshua.bonilla@mocs.nyc.gov) and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

### **Required hardware and software**

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: <https://support.docusign.com/guides/signer-guide-signing-system-requirements>.

### **Acknowledging your access and consent to receive and sign documents electronically**

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please confirm that you have read this ERSD, and (i) that you are able to print on paper or electronically save this ERSD for your future reference and access; or (ii) that you are able to email this ERSD to an email address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format as described herein, then select the check-box next to ‘I agree to use electronic records and signatures’ before clicking ‘CONTINUE’ within the DocuSign system.

By selecting the check-box next to ‘I agree to use electronic records and signatures’, you confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- You can print on paper this Electronic Record and Signature Disclosure, or save or send this Electronic Record and Disclosure to a location where you can print it, for future reference and access; and
- Until or unless you notify PASSport Production -- NYC MOCS as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by PASSport Production -- NYC MOCS during the course of your relationship with PASSport Production -- NYC MOCS.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**LABOR LAW ARTICLE 8 - NYC PUBLIC WORKS**

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Pursuant to New York Labor Law Article 8 the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work projects. Prevailing rates are required to be annexed to and form part of the public work contract pursuant to Labor Law section 220 (3).

This schedule is a compilation of separate determinations of the prevailing rate of wage and supplements made by the Comptroller for each trade classification listed herein pursuant to Labor Law section 220 (5). The source of the wage and supplement rates, whether a collective bargaining agreement, survey data or other, is listed at the end of each classification.

Agency Chief Contracting Officers should contact the Bureau of Labor Law's Classification Unit with any questions concerning trade classifications, prevailing rates or prevailing practices with respect to procurement on New York City public work contracts. Contractors are advised to review the Comptroller's Prevailing Wage Schedule before bidding on public work contracts. Contractors with questions concerning trade classifications, prevailing rates or prevailing practices with respect to public work contracts in the procurement stage must contact the contracting agency responsible for the procurement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

Any questions concerning trade classifications, prevailing rates or prevailing practices on New York City public work contracts that have already been awarded may be directed to the Bureau of Labor Law's Classification Unit by calling (212) 669-4443. All callers must have the agency name and contract registration number available when calling with questions on public work contracts. Please direct all other compliance issues to: [laborlaw@comptroller.nyc.gov](mailto:laborlaw@comptroller.nyc.gov) or Bureau of Labor Law, Attn: Paul Brumlik, Office of the Comptroller, 1 Centre Street, Room 651, New York, N.Y. 10007.

Pursuant to Labor Law § 220 (3-a) (a), the appropriate schedule of prevailing wages and benefits must be posted in a prominent and accessible place at all public work sites along with the Construction Poster provided on our web site at [comptroller.nyc.gov/wages](http://comptroller.nyc.gov/wages). In addition, covered employees must be given the appropriate schedule of prevailing wages and benefits along with the Worker Notice provided on our web site at the time the public work project begins, and with the first paycheck to each such employee after July first of each year.

This schedule is applicable to work performed during the effective period, unless otherwise noted. Changes to this schedule are published on our web site [comptroller.nyc.gov/wages](http://comptroller.nyc.gov/wages). Contractors must pay the wages and supplements in effect when the worker, laborer, mechanic performs the work. Preliminary schedules for future one-year periods appear in the City Record on or about June 1 each succeeding year. Final schedules appear on or about July 1 in the City Record and on our web site [comptroller.nyc.gov/wages](http://comptroller.nyc.gov/wages).

Prevailing rates and ratios for apprentices are published in the Construction Apprentice Prevailing Wage Schedule. Pursuant to Labor Law § 220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant, registered with the

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

New York State Department of Labor, may be paid at the apprentice rates. Apprentices who are not so registered must be paid as journey persons.

New York City public work projects awarded pursuant to a Project Labor Agreement (“PLA”) in accordance with Labor Law section 222 may have different labor standards for shift, premium and overtime work. Please refer to the PLA’s pre-negotiated labor agreements for wage and benefit rates applicable to work performed outside of the regular workday. More information is available at the Mayor’s Office of Contract Services (MOCS) web page at:

<https://www1.nyc.gov/site/mocs/legal-forms/project-labor-agreements.page>

All the provisions of Labor Law Article 8 remain applicable to PLA work including, but not limited to, the enforcement of prevailing wage requirements by the Comptroller in accordance with the trade classifications in this schedule; however, we will enforce shift, premium, overtime and other non-standard rates as they appear in a project’s pre-negotiated labor agreement.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona fide fringe benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee’s hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona fide fringe benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Although prevailing wage laws do not require employers to provide bona fide fringe benefits (as opposed to wage supplements) to their employees, other laws may. For example, the Employee Retirement Income Security Act, 29 U.S.C. § 1001 et seq., the Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 et seq., and the New York City Paid Sick Leave Law, N.Y.C. Admin. Code § 20-911 et seq., require certain employers to provide certain benefits to their employees. Labor agreements to which employers are a party may also require certain benefits. The Comptroller’s Office does not enforce these laws or agreements.

**Employers must provide prevailing supplemental benefits at the straight time rate for each hour worked unless otherwise noted in the classification.**

**Paid Holidays, Vacation and Sick Leave when listed must be paid or provided in addition to the prevailing hourly supplemental benefit rate.**

For more information, please refer to the Comptroller’s Prevailing Wage Law Regulations in Title 44 of the Rules of the City of New York, Chapter 2, available at [comptroller.nyc.gov/wages](http://comptroller.nyc.gov/wages).

**Paul Brumlik**  
Director of Classifications  
Bureau of Labor Law



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

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## **ASBESTOS HANDLER SEE HAZARDOUS MATERIAL HANDLER**

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### **BLASTER**

#### **Blaster**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$57.21**

Supplemental Benefit Rate per Hour: **\$50.43**

#### **Blaster - Hydraulic Trac Drill**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$51.35**

Supplemental Benefit Rate per Hour: **\$50.43**

#### **Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$50.02**

Supplemental Benefit Rate per Hour: **\$50.43**

#### **Blaster - Journeyperson**

(Laborer, Chipper/Jackhammer including Walk Behind Self Propelled Hydraulic Asphalt and Concrete Breakers and Hydro (Water) Demolition, Powder Carrier, Hydraulic Chuck Tender, Chuck Tender and Nipper)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.00**

Supplemental Benefit Rate per Hour: **\$50.43**

#### **Blaster - Magazine Keepers: (Watch Person)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.00**

Supplemental Benefit Rate per Hour: **\$50.43**

#### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Thanksgiving Day  
Christmas Day

## Paid Holidays

Labor Day  
Thanksgiving Day

## Shift Rates

When two shifts are employed, single time rate shall be paid for each shift. When three shifts are found necessary, each shift shall work seven and one half hours (7 ½), but shall be paid for eight (8) hours of labor, and be permitted one half hour for lunch.

(Local #731)

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# BOILERMAKER

## Boilermaker

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$64.38**

Supplemental Benefit Rate per Hour: **\$47.35**

Supplemental Note: For time and one half overtime - \$70.58 For double overtime - \$93.80

## Overtime Description

For Repair and Maintenance work:

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

For New Construction work:

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Columbus Day  
Election Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

Quadruple time the regular rate for work on the following holiday(s).  
Labor Day

## **Paid Holidays**

Good Friday  
Day after Thanksgiving  
Day before Christmas  
Day before New Year's Day

## **Shift Rates**

On jobs requiring two (2) or three (3) shifts, the first shift shall work eight (8) hours at the regular straight-time hourly rate. The second shift shall work eight (8) hours and receive eight hours at the regular straight time hourly rate plus two dollars (\$2.00) per hour. The third shift shall work eight (8) hours and receive eight hours at the regular straight time hourly rate plus two dollars and twenty-five cents (\$2.25) per hour.

(Local #5)

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# **BRICKLAYER**

## **Bricklayer**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.23**

Supplemental Benefit Rate per Hour: **\$37.75**

## **Overtime Description**

Time and one half the regular rate after a 7 hour day. If working on a job that is predominately Pointer, Cleaner, Caulker work, then Time and one half the regular rate after an 8 hour day.

## **Overtime**

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

## **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Labor Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**  
None

**Shift Rates**

The second shift wage rate shall be a 15% wage premium with no premium for supplemental benefits. There must be a first shift in order to work a second shift. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, eight hours will be paid at straight time rate for seven hours of work.

(Bricklayer District Council)

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**CARPENTER - BUILDING COMMERCIAL**

**Building Commercial**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$55.05**

Supplemental Benefit Rate per Hour: **\$47.83**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

**Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Paid Holidays**

None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Shift Rates

The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, the rule for the second shift will apply.

(Carpenters District Council)

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## CARPENTER - HEAVY CONSTRUCTION WORK

(Construction of Engineered Structures and Building Foundations including all form work)

### Heavy Construction Work

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.16**

Supplemental Benefit Rate per Hour: **\$54.26**

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

### Paid Holidays

None

### Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate and the supplemental benefits shall be paid at the straight time rate. When two (2) or more shifts of Carpenters are employed, single time will be paid for each shift.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

(Carpenters District Council)

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**CARPENTER - HIGH RISE CONCRETE FORMS**  
(Excludes Engineered Structures and Building Foundations)

**Carpenter High Rise A**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$50.78**

Supplemental Benefit Rate per Hour: **\$44.44**

**Carpenter High Rise B**

Carpenter High Rise B worker is excluded from high risk operations such as erection decking, perimeter debris netting, leading edge work, self-climbing form systems, and the installation of cocoon systems unless directly supervised by a Carpenter High Rise A worker.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$40.19**

Supplemental Benefit Rate per Hour: **\$17.75**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

**Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

**Paid Holidays**

None



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Shift Rates

The second shift wage rate shall be 113% of the straight time hourly wage rate. However, any shift beginning after 5:00 P.M. shall be paid at time and one half the regular hourly rate. There must be a first shift in order to work a second shift. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, the rule for the second shift will apply.

(Carpenters District Council)

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## CARPENTER - SIDEWALK SHED, SCAFFOLD AND HOIST

### Carpenter - Hod Hoist

(Assisted by Mason Tender)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$53.00**

Supplemental Benefit Rate per Hour: **\$47.65**

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### Paid Holidays

None

### Shift Rates

The second shift will receive 112% of the straight time hourly rate. Benefit fund contributions shall be paid at the straight time rate. There must be a first shift in order to work a second shift. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, the rule for the second shift will apply.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

(Carpenters District Council)

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## CARPENTER - WOOD WATER STORAGE TANK

### Tank Mechanic

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$36.42**

Supplemental Benefit Rate per Hour: **\$23.10**

### Tank Helper

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$28.76**

Supplemental Benefit Rate per Hour: **\$23.10**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

### **Paid Holidays**

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Day after Thanksgiving

1/2 day on Christmas Eve if work is performed in the A.M.

Christmas Day

1/2 day on New Year's Eve if work is performed in the A.M.

### **Vacation**

Employed for one (1) year.....one (1) week vacation (40 hours)

Employed for three (3) years.....two (2) weeks vacation (80 hours)

Employed for more than twenty (20) years.....three (3) weeks vacation (120 hours)

### **SICK LEAVE:**

Two (2) sick days after being employed for twenty (20) years.

(Carpenters District Council)

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## **CEMENT & CONCRETE WORKER**

### **Cement & Concrete Worker**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.28**

Supplemental Benefit Rate per Hour: **\$30.20**

Supplemental Note: \$34.20 on Saturdays; \$38.20 on Sundays & Holidays

### **Cement & Concrete Worker - (Hired after 2/6/2016)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$35.80**

Supplemental Benefit Rate per Hour: **\$22.20**

Supplemental Note: \$24.20 on Saturdays; \$26.20 on Sundays & Holidays

### **Overtime Description**

Time and one half the regular rate after 7 hour day (time and one half the regular rate after an 8 hour day when working with Dockbuilders on pile cap forms and for work below street level to the top of the foundation wall, not to exceed 2 feet or 3 feet above the sidewalk-brick shelf, when working on the foundation and structure.)

### **Overtime**

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

1/2 day before Christmas Day

1/2 day before New Year's Day

### **Shift Rates**

On shift work extending over a twenty-four hour period, all shifts are paid at straight time.

(Cement & Concrete Workers District Council 16)

## **CEMENT MASON**

### **Cement Mason**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.77**

Supplemental Benefit Rate per Hour: **\$41.01**

Supplemental Note: Supplemental benefit time and one half rate: \$71.97; Double time rate: double the base supplemental benefit rate.

### **Overtime Description**

Time and one-half the regular rate after an 8 hour day, double time the regular rate after 10 hours. Time and one-half the regular rate on Saturday, double time the regular rate after 10 hours. Double time the regular rate on Sunday. Four Days a week at Ten (10) hours straight time is allowed.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

### **Shift Rates**

For off shift work, (at times other than the regular 7:00 A.M. to 3:30 P.M. work day) a cement mason shall be paid at the regular hourly rate plus a 25% per hour differential.

(Local #780) (BCA)

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## **CORE DRILLER**

### **Core Driller**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 10/17/2022

Wage Rate per Hour: **\$42.54**

Supplemental Benefit Rate per Hour: **\$30.60**

Effective Period: 10/18/2022 - 6/30/2023

Wage Rate per Hour: **\$43.88**

Supplemental Benefit Rate per Hour: **\$31.35**

**Core Driller Helper**

Effective Period: 7/1/2022 - 10/17/2022

Wage Rate per Hour: **\$33.47**

Supplemental Benefit Rate per Hour: **\$30.60**

Effective Period: 10/18/2022 - 6/30/2023

Wage Rate per Hour: **\$34.47**

Supplemental Benefit Rate per Hour: **\$31.35**

**Core Driller Helper(Third year in the industry)**

Effective Period: 7/1/2022 - 10/17/2022

Wage Rate per Hour: **\$30.12**

Supplemental Benefit Rate per Hour: **\$30.60**

Effective Period: 10/18/2022 - 6/30/2023

Wage Rate per Hour: **\$31.02**

Supplemental Benefit Rate per Hour: **\$31.35**

**Core Driller Helper (Second year in the industry)**

Effective Period: 7/1/2022 - 10/17/2022

Wage Rate per Hour: **\$26.78**

Supplemental Benefit Rate per Hour: **\$30.60**

Effective Period: 10/18/2022 - 6/30/2023

Wage Rate per Hour: **\$27.58**

Supplemental Benefit Rate per Hour: **\$31.35**

**Core Driller Helper (First year in the industry)**

Effective Period: 7/1/2022 - 10/17/2022

Wage Rate per Hour: **\$23.43**

Supplemental Benefit Rate per Hour: **\$30.60**

Effective Period: 10/18/2022 - 6/30/2023

Wage Rate per Hour: **\$24.13**

Supplemental Benefit Rate per Hour: **\$31.35**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime Description

Time and one half the regular rate for work on a holiday plus Holiday pay when worked.

## Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

## Paid Holidays

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

## Shift Rates

When two (2) or more shifts are employed, single time shall be paid for each shift, but those employees employed on a shift other than from 8:00 A.M. to 5:00 P.M. shall, in addition, receive two dollars (\$2.00) per hour differential for each hour worked. When three (3) shifts are needed, each shift shall work seven and one-half (7 ½) hours paid for eight (8) hours of labor and be permitted one-half (½) hour for mealtime.

(Carpenters District Council)

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## DERRICKPERSON AND RIGGER

### Derrick Person & Rigger

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: \$57.76

Supplemental Benefit Rate per Hour: \$56.24

### Derrick Person & Rigger - Site Work

Assists the Stone Mason-Setter in the setting of stone and paving stone.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: \$46.20

Supplemental Benefit Rate per Hour: \$44.97

## Overtime Description

The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime

Double time the regular rate for Sunday.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
Washington's Birthday  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day  
Christmas Day

## Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

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## DIVER

### Diver (Marine)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$73.03**

Supplemental Benefit Rate per Hour: **\$54.26**

### Diver Tender (Marine)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$52.57**

Supplemental Benefit Rate per Hour: **\$54.26**

## Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Labor Day  
Columbus Day  
Presidential Election Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**  
None

**Shift Rates**

When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

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**DOCKBUILDER - PILE DRIVER**

**Dockbuilder - Pile Driver**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.16**

Supplemental Benefit Rate per Hour: **\$54.26**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

**Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Presidential Election Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**  
None

**Shift Rates**



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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

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## **DRIVER: TRUCK (TEAMSTER)**

### **Driver - Dump Truck**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.17**

Supplemental Benefit Rate per Hour: **\$53.95**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$24.00; at double time rate - \$32.00

### **Driver - Tractor Trailer**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.32**

Supplemental Benefit Rate per Hour: **\$52.40**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$23.25; at double time rate - \$31.00

### **Driver - Euclid & Turnapull Operator**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.88**

Supplemental Benefit Rate per Hour: **\$52.40**

Supplemental Note: Over 40 hours worked: at time and one half rate - \$23.25; at double time rate - \$31.00

## **Overtime Description**

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

## **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

## **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

### **Paid Holidays**

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

### **Shift Rates**

Off shift work commencing between 6:00 P.M. and 4:30 A.M. shall work eight and one half (8 1/2) hours allowing for one half hour for lunch and receive 9 hours pay for 8 hours of work.

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### **Driver Redi-Mix (Sand & Gravel)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$40.89**

Supplemental Benefit Rate per Hour: **\$47.85**

Supplemental Note: Over 40 hours worked: time and one half rate \$18.68; double time rate \$24.90

### **Overtime Description**

For Paid Holidays: Employees who do not work on a contractual holiday shall be compensated two (2) hours extra pay in straight time wages and benefits for every day on which the Employee does not pass up a day's work during the calendar week (Sunday through Saturday) of the holiday, up to a maximum of ten (10) hours in wages and eight (8) hours in benefit contributions for the holiday

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

President's Day  
Columbus Day  
Veteran's Day

Triple time the regular rate for work on the following holiday(s).

New Year's Day  
Memorial Day  
Independence Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Labor Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Election Day  
Thanksgiving Day  
Christmas Day

(Local #282)

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**ELECTRICIAN**

(Including installation of low voltage cabling carrying data, video and/or voice on building construction/alteration/renovation projects.)

**Electrician "A" (Regular Day / Day Shift)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$59.00**

Supplemental Benefit Rate per Hour: **\$57.84**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$61.00**

Supplemental Benefit Rate per Hour: **\$60.06**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

**Electrician "A" (Regular Day Overtime after 7 hrs / Day Shift Overtime after 8 hrs)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$88.50**

Supplemental Benefit Rate per Hour: **\$59.74**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$91.50**

Supplemental Benefit Rate per Hour: **\$62.02**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

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**Electrician "A" (Swing Shift)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$69.23**

Supplemental Benefit Rate per Hour: **\$65.68**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$71.57**

Supplemental Benefit Rate per Hour: **\$68.14**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

**Electrician "A" (Swing Shift Overtime after 7.5 hours)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$103.85**

Supplemental Benefit Rate per Hour: **\$67.90**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$107.36**

Supplemental Benefit Rate per Hour: **\$70.45**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

**Electrician "A" (Graveyard Shift)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$77.54**

Supplemental Benefit Rate per Hour: **\$72.31**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$80.17**

Supplemental Benefit Rate per Hour: **\$74.99**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

**Electrician "A" (Graveyard Shift Overtime after 7 hours)**

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$116.31**

Supplemental Benefit Rate per Hour: **\$74.80**

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$120.26**

Supplemental Benefit Rate per Hour: **\$77.57**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

\* Supplemental Benefit Rate per Hour Note

In addition to the Supplemental Benefit Rates per Hour listed above, the employer must provide an additional 6.2% of taxable gross pay earned on covered work only. This additional Supplemental Benefit Rate will terminate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

when the employee has contributed the maximum annual Social Security tax required by law, on all work performed.

### Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### Overtime Holidays

Time and one half the regular rate for work on a holiday.

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### Paid Holidays

None

### Shift Rates

For multiple shifts of temporary light and/or power, the temporary light and/or power employee shall be paid for 8 hours at the straight time rate. For three or less workers performing 8 hours temporary light and/or power the supplemental benefit rate is \$24.36, effective 04/13/2023 the supplemental benefit rate is \$24.78 - See \* Supplemental Benefit Rate per Hour Note above.

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### Electrician "M" (First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$31.25**

Supplemental Benefit Rate per Hour: **\$25.30**

First and Second Year "M" Wage Rate Per Hour: **\$26.75**

First and Second Year "M" Supplemental Rate: **\$22.88**

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$31.25**

Supplemental Benefit Rate per Hour: **\$26.55**

First and Second Year "M" Wage Rate Per Hour: **\$26.75**

First and Second Year "M" Supplemental Rate: **\$24.13**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Electrician "M" (Overtime After First 8 hours)**

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2022 - 4/12/2023

Wage Rate per Hour: **\$46.88**

Supplemental Benefit Rate per Hour: **\$27.28**

First and Second Year "M" Wage Rate Per Hour: **\$40.13**

First and Second Year "M" Supplemental Rate: **\$24.57**

Effective Period: 4/13/2023 - 6/30/2023

Wage Rate per Hour: **\$46.88**

Supplemental Benefit Rate per Hour: **\$28.53**

First and Second Year "M" Wage Rate Per Hour: **\$40.13**

First and Second Year "M" Supplemental Rate: **\$25.82**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

**Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Paid Holidays**

None

(Local #3)

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## **ELECTRICIAN - ALARM TECHNICIAN**

(Scope of Work - Inspect, test, repair, and replace defective, malfunctioning, or broken devices, components and controls of Fire, Burglar and Security Systems)

### **Alarm Technician**

Effective Period: 7/1/2022 - 3/8/2023

Wage Rate per Hour: **\$35.40**

Supplemental Benefit Rate per Hour: **\$19.79**

Supplemental Note: \$17.91 only after 8 hours worked in a day

Effective Period: 3/9/2023 - 6/30/2023

Wage Rate per Hour: **\$36.40**

Supplemental Benefit Rate per Hour: **\$20.67**

Supplemental Note: \$18.80 only after 8 hours worked in a day

### **Overtime Description**

Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.

Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### **Paid Holidays**

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### **Shift Rates**

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:30 A.M.

### **Vacation**

At least 1 year of employment.....ten (10) days

5 years or more of employment.....fifteen (15) days

10 years of employment.....twenty (20) days

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Plus one Personal Day per year

Sick Days:

One day per Year. Up to 4 vacation days may be used as sick days.

(Local #3)

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## **ELECTRICIAN-STREET LIGHTING WORKER**

### **Electrician - Electro Pole Electrician**

Effective Period: 7/1/2022 - 4/19/2023

Wage Rate per Hour: **\$59.00**

Supplemental Benefit Rate per Hour: **\$59.85**

Effective Period: 4/20/2023 - 6/30/2023

Wage Rate per Hour: **\$61.00**

Supplemental Benefit Rate per Hour: **\$62.13**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

### **Electrician - Electro Pole Foundation Installer**

Effective Period: 7/1/2022 - 4/18/2023

Wage Rate per Hour: **\$44.66**

Supplemental Benefit Rate per Hour: **\$45.27**

Effective Period: 4/20/2023 - 6/30/2023

Wage Rate per Hour: **\$46.66**

Supplemental Benefit Rate per Hour: **\$47.16**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

### **Electrician - Electro Pole Maintainer**

Effective Period: 7/1/2022 - 4/18/2023

Wage Rate per Hour: **\$38.61**

Supplemental Benefit Rate per Hour: **\$41.00**

Effective Period: 4/20/2023 - 6/30/2023

Wage Rate per Hour: **\$40.61**

Supplemental Benefit Rate per Hour: **\$42.88**

\* Supplemental Note: See Supplemental Benefit Rate per Hour Note below

\* Supplemental Benefit Rate per Hour Note

In addition to the Supplemental Benefit Rates per Hour listed above, the employer must provide an additional 6.2% of taxable gross pay earned on covered work only. This additional Supplemental Benefit Rate will terminate when the employee has contributed the maximum annual Social Security tax required by law, on all work performed.



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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.

Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.

Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

## Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

## Paid Holidays

None

(Local #3)

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## ELEVATOR CONSTRUCTOR

### Elevator Constructor

Effective Period: 7/1/2022 - 3/16/2023

Wage Rate per Hour: **\$75.14**

Supplemental Benefit Rate per Hour: **\$39.11**

Effective Period: 3/17/2023 - 6/30/2023

Wage Rate per Hour: **\$77.49**

Supplemental Benefit Rate per Hour: **\$40.62**

## Overtime Description

For New Construction: work performed after an 8 hour day, Saturday, Sunday or between 4:30pm and 7:00am shall be paid at double time rate.

Existing buildings: work performed after an 8 hour day, Saturday, Sunday or between 5:30pm and 7:00 am shall be paid time and one half.

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime

Double time the regular rate for work on the following holiday(s).

## Paid Holidays

New Year's Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

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## ELEVATOR REPAIR & MAINTENANCE

### Elevator Service/Modernization Mechanic

Effective Period: 7/1/2022 - 3/16/2023

Wage Rate per Hour: **\$59.09**

Supplemental Benefit Rate per Hour: **\$39.01**

Effective Period: 3/17/2023 - 6/30/2023

Wage Rate per Hour: **\$60.89**

Supplemental Benefit Rate per Hour: **\$40.52**

## Overtime Description

For Scheduled Service Work: Double time - work scheduled in advance by two or more workers performed on Sundays, Holidays, and between midnight and 7:00am.

## Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

## Paid Holidays

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

New Year's Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## Shift Rates

Afternoon shift - regularly hourly rate plus a (15%) fifteen percent differential. Graveyard shift - time and one half the regular rate.

## Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

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## ENGINEER

### Engineer - Heavy Construction Operating Engineer I

Cherry pickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$74.86**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$119.78**

### Engineer - Heavy Construction Operating Engineer II

Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) & machines of similar nature. Operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of similar nature, Vac-Alls, Meyers Machines, John Beam and machines of a similar nature, Ross Carriers and Travel Lifts and machines of a similar nature, Bulldozers, Scrapers and Turn-a-Pulls: Tugger Hoists (Used exclusively for handling excavated material); Tractors with attachments, Hyster and Roustabout Cranes, Cherry pickers. Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers: Loaders-Rubber Tired and Tractor: Barber Greene and Eimco Loaders and Eimco Backhoes; Mighty Midget and similar breakers and Tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature. Locomotives 10 Tons or under. Mini-Max, Break-Tech and machines of a similar nature; Milling machines, robotic and demolition machines and machines of a similar

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE**

nature, shot blaster, skid steer machines and machines of a similar nature including bobcat, pile rig rubber-tired excavator (37,000 lbs. and under), 2 man auger.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$72.55**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$116.08**

### **Engineer - Heavy Construction Operating Engineer III**

Minor Equipment such as Tractors, Post Hole Diggers, Ditch Witch (Walk Behind), Road Finishing Machines, Rollers five tons and under, Tugger Hoists, Dual Purpose Trucks, Fork Lifts, and Dempsey Dumpers, Fireperson.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$68.68**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$109.89**

### **Engineer - Heavy Construction Maintenance Engineer I**

Installing, Repairing, Maintaining, Dismantling and Manning of all equipment including Steel Cutting, Bending and Heat Sealing Machines, Mechanical Heaters, Grout Pumps, Bentonite Pumps & Plants, Screening Machines, Fusion Coupling Machines, Tunnel Boring Machines Moles and Machines of a similar nature, Power Packs, Mechanical Hydraulic Jacks; all drill rigs including but not limited to Churn, Rotary Caisson, Raised Bore & Drills of a similar nature; Personnel, Inspection & Safety Boats or any boats used to perform functions of same, Mine Hoists, Whirlies, all Climbing Cranes, all Tower Cranes, including but not limited to Truck Mounted and Crawler Type and machines of similar nature; Maintaining Hydraulic Drills and machines of a similar nature; Well Point System-Installation and dismantling; Burning, Welding, all Pumps regardless of size and/or motor power, except River Cofferdam Pumps and Wells Point Pumps; Motorized Buggies (three or more); equipment used in the cleaning and televising of sewers, but not limited to jet-rodder/vacuum truck, vacall/vactor, closed circuit television inspection equipment; high powered water pumps, jet pumps; screed machines and concrete finishing machines of a similar nature; vermeers.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$72.19**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$115.50**

### **Engineer - Heavy Construction Maintenance Engineer II**

On Base Mounted Tower Cranes

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$95.74**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$153.18**

### **Engineer - Heavy Construction Maintenance Engineer III**

On Generators, Light Towers

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.62**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$74.59**

### **Engineer - Heavy Construction Maintenance Engineer IV**

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.90**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$76.64**

### **Engineer - Heavy Construction Service Engineer**

Gradalls: Concrete Pumps: Power Houses: Driving Truck Cranes: Driving and Operating Fuel and Grease Trucks.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$64.78**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$103.65**

### **Engineer - Heavy Construction Service Mechanic**

Shovels: Cranes: Draglines: Backhoes: Keystones: Pavers: Trenching Machines: Gunite Machines: Compressors (three (3) or more in Battery): Crawler Cranes- having a straight lattice boom with no attachment or luffing boom, no jib and no auxiliary attachment.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$43.90**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$70.24**

### **Engineer - Steel Erection Maintenance Engineers**

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$69.19**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

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Shift Wage Rate: **\$110.70**

**Engineer - Steel Erection Oiler I**

On a Truck Crane

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$64.57**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$103.31**

**Engineer - Steel Erection Oiler II**

On a Crawler Crane

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$48.44**

Supplemental Benefit Rate per Hour: **\$44.72**

Supplemental Note: \$82.04 on overtime

Shift Wage Rate: **\$77.50**

**Overtime Description**

On jobs of more than one shift, if the next shift employee fails to report for work through any cause over which the employer has no control, the employee on duty who works the next shift continues to work at the single time rate.

**Overtime**

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

**Paid Holidays**

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

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**Engineer - Building Work Maintenance Engineers I**

**OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE**

Installing, repairing, maintaining, dismantling (of all equipment including: Steel Cutting and Bending Machines, Mechanical Heaters, Mine Hoists, Climbing Cranes, Tower Cranes, Linden Peine, Lorain, Liebherr, Mannes, or machines of a similar nature, Well Point Systems, Deep Well Pumps, Concrete Mixers with loading Device, Concrete Plants, Motor Generators when used for temporary power and lights), skid steer machines of a similar nature including bobcat.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$64.47**

Supplemental Benefit Rate per Hour: **\$43.81**

Supplemental Note: \$80.22 on overtime

## **Engineer - Building Work Maintenance Engineers II**

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$49.42**

Supplemental Benefit Rate per Hour: **\$43.81**

Supplemental Note: \$80.22 on overtime

## **Engineer - Building Work Oilers I**

All gasoline, electric, diesel or air operated Gradealls: Concrete Pumps, Overhead Cranes in Power Houses: Their duties shall be to assist the Engineer in oiling, greasing and repairing of all machines; Driving Truck Cranes: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$61.15**

Supplemental Benefit Rate per Hour: **\$43.81**

Supplemental Note: \$80.22 on overtime

## **Engineer - Building Work Oilers II**

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.68**

Supplemental Benefit Rate per Hour: **\$43.81**

Supplemental Note: \$80.22 on overtime

## **Overtime Description**

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

## **Overtime**

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Double time the regular rate for work on the following holiday(s).

### **Paid Holidays**

New Year's Day  
Lincoln's Birthday  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

### **Shift Rates**

When two (2) or more shifts are employed, single time will be paid for each shift.

(Local #15)

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## **ENGINEER - CITY SURVEYOR AND CONSULTANT**

### **Party Chief**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$42.49**

Supplemental Benefit Rate per Hour: **\$25.50**

Supplemental Note: Overtime Benefit Rate - \$30.50 per hour (time & one half) \$35.50 per hour (double time).

### **Instrument Person**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$34.64**

Supplemental Benefit Rate per Hour: **\$25.50**

Supplemental Note: Overtime Benefit Rate - \$30.50 per hour (time & one half) \$35.50 per hour (double time).

### **Rodperson**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$29.69**

Supplemental Benefit Rate per Hour: **\$25.50**

Supplemental Note: Overtime Benefit Rate - \$30.50 per hour (time & one half) \$35.50 per hour (double time).

### **Overtime Description**



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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

### **Paid Holidays**

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

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## **ENGINEER - FIELD (BUILDING CONSTRUCTION)** **(Construction of Building Projects, Concrete Superstructures, etc.)**

### **Field Engineer - BC Party Chief**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$66.46**

Supplemental Benefit Rate per Hour: **\$40.09**

Supplemental Note: Overtime Benefit Rate - \$56.54 per hour (time & one half) \$72.98 per hour (double time).

### **Field Engineer - BC Instrument Person**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$50.97**

Supplemental Benefit Rate per Hour: **\$40.09**

Supplemental Note: Overtime Benefit Rate - \$56.54 per hour (time & one half) \$72.98 per hour (double time).

### **Field Engineer - BC Rodperson**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.90**

Supplemental Benefit Rate per Hour: **\$40.09**

Supplemental Note: Overtime Benefit Rate - \$56.54 per hour (time & one half) \$72.98 per hour (double time).

### **Overtime Description**

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate after a 7 hour work and time and one half the regular rate for Saturday for the first seven hours worked, Double time the regular time rate for Saturday for work performed in excess of seven hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

### **Paid Holidays**

New Year's Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

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## **ENGINEER - FIELD (HEAVY CONSTRUCTION)** (Construction of Roads, Tunnels, Bridges, Sewers, Building Foundations, Engineering Structures etc.)

### **Field Engineer - HC Party Chief**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$77.31**

Supplemental Benefit Rate per Hour: **\$42.52**

Supplemental Note: Overtime benefit rate - \$60.06 per hour (time & one half), \$77.60 per hour (double time).

### **Field Engineer - HC Instrument Person**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$55.97**

Supplemental Benefit Rate per Hour: **\$42.52**

Supplemental Note: Overtime benefit rate - \$60.06 per hour (time & one half), \$77.60 per hour (double time).

### **Field Engineer - HC Rodperson**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.47**

Supplemental Benefit Rate per Hour: **\$42.52**

Supplemental Note: Overtime benefit rate - \$60.06 per hour (time & one half), \$77.60 per hour (double time).

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime Description

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

## Paid Holidays

New Year's Day  
Lincoln's Birthday  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

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## ENGINEER - FIELD (STEEL ERECTION)

### Field Engineer - Steel Erection Party Chief

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$71.98**

Supplemental Benefit Rate per Hour: **\$42.07**

Supplemental Note: Overtime benefit rate - \$59.38 per hour (time & one half), \$76.69 per hour (double time).

### Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$55.42**

Supplemental Benefit Rate per Hour: **\$42.07**

Supplemental Note: Overtime benefit rate - \$59.38 per hour (time & one half), \$76.69 per hour (double time).

### Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$36.05**

Supplemental Benefit Rate per Hour: **\$42.07**

Supplemental Note: Overtime benefit rate - \$59.38 per hour (time & one half), \$76.69 per hour (double time).

## Overtime Description

Time and one half the regular rate for Saturday for the first eight hours worked.  
Double time the regular rate for Saturday for work performed in excess of eight hours.

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime

Time and one half the regular rate after an 8 hour day.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

## Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

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## ENGINEER - OPERATING

### Operating Engineer - Road & Heavy Construction I

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$88.32**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$141.31**

### Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$91.40**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$146.24**

### Operating Engineer - Road & Heavy Construction III

Mine Hoists (Cranes, etc. when used as Mine Hoists)

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Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$94.31**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$150.90**

**Operating Engineer - Road & Heavy Construction IV**

Gradealls, Keystones, Cranes on land or water (with digging buckets), Bridge Cranes, Vermeer Cutter and machines of a similar nature, Trenching Machines.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$92.06**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$147.30**

**Operating Engineer - Road & Heavy Construction V**

Pile Drivers & Rigs (working alongside Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$90.26**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$144.42**

**Operating Engineer - Road & Heavy Construction VI**

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$85.80**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$137.28**

**Operating Engineer - Road & Heavy Construction VII**

Barrier Movers, Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$69.52**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$111.23**

**Operating Engineer - Road & Heavy Construction VIII**

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Utility Compressors

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$54.21**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$68.04**

**Operating Engineer - Road & Heavy Construction IX**

Horizontal Boring Rig

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$81.67**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$130.67**

**Operating Engineer - Road & Heavy Construction X**

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$75.16**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$120.26**

**Operating Engineer - Road & Heavy Construction XI**

Compressors (Portable 3 or more in battery), Driving of Truck Mounted Compressors, Well-point Pumps, Tugger Machines Well Point Pumps, Churn Drill.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.61**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$93.78**

**Operating Engineer - Road & Heavy Construction XII**

All Drills and Machines of a similar nature.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$86.71**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: \$64.40 overtime hours

Shift Wage Rate: **\$138.74**

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CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Operating Engineer - Road & Heavy Construction XIII**

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$84.02**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

Shift Wage Rate: **\$134.43**

**Operating Engineer - Road & Heavy Construction XIV**

Concrete Mixer

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$80.36**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

Shift Wage Rate: **\$128.58**

**Operating Engineer - Road & Heavy Construction XV**

Compressors (Portable Single or two in Battery, not over 100 feet apart), Pumps (River Cofferdam) and Welding Machines, Push Button Machines, All Engines Irrespective of Power (Power-Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$54.56**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

Shift Wage Rate: **\$87.30**

**Operating Engineer - Road & Heavy Construction XVI**

Concrete Breaking Machines, Hoists (Single Drum), Load Masters, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$76.80**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

Shift Wage Rate: **\$122.88**

**Operating Engineer - Road & Heavy Construction XVII**

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$77.36**

Supplemental Benefit Rate per Hour: **\$35.30**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: \$123.78

**Operating Engineer - Road & Heavy Construction XVIII**

Tower Crane

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$110.56  
Supplemental Benefit Rate per Hour: \$35.30  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: \$176.90

**Operating Engineer - Paving I**

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$85.80  
Supplemental Benefit Rate per Hour: \$35.30  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: \$137.28

**Operating Engineer - Paving II**

Asphalt Roller

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$83.63  
Supplemental Benefit Rate per Hour: \$35.30  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: \$133.81

**Operating Engineer - Paving III**

Asphalt Plants

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$70.88  
Supplemental Benefit Rate per Hour: \$35.30  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: \$113.41

**Operating Engineer - Concrete I**

Cranes

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$91.66



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours

**Operating Engineer - Concrete II**

Compressors

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$54.97**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours

**Operating Engineer - Concrete III**

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$73.46**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours

**Operating Engineer - Steel Erection I**

Three Drum Derricks

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$95.02**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$152.03**

**Operating Engineer - Steel Erection II**

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$91.33**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$146.13**

**Operating Engineer - Steel Erection III**

Compressors, Welding Machines.

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$54.68**  
Supplemental Benefit Rate per Hour: **\$35.30**  
Supplemental Note: \$64.40 overtime hours  
Shift Wage Rate: **\$87.49**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Operating Engineer - Steel Erection IV**

Compressors - Not Combined with Welding Machine. (Public Works Only)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$52.10**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

Shift Wage Rate: **\$83.36**

**Operating Engineer - Building Work I**

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$73.28**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

**Operating Engineer - Building Work II**

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, Jacking System, etc.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$54.94**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

**Operating Engineer - Building Work III**

Double Drum

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$86.78**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

**Operating Engineer - Building Work IV**

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$91.86**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Operating Engineer - Building Work V**

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$81.38**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

**Operating Engineer - Building Work VI**

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$80.52**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

**Operating Engineer - Building Work VII**

Rack & Pinion and House Cars

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$64.09**

Supplemental Benefit Rate per Hour: **\$35.30**

Supplemental Note: **\$64.40** overtime hours

For New House Car projects Wage Rate per Hour **\$51.21**

For New House Car projects: Supplemental Benefit overtime hours: **\$49.85**

**Overtime Description**

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

For House Cars and Rack & Pinion only: Overtime paid at time and one-half for all hours in excess of eight hours in a day, Saturday, Sunday and Holidays worked.

**Overtime**

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

**Paid Holidays**

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

## Shift Rates

When two (2) or more shifts are employed, single time will be paid for each shift.

For Steel Erection Only: Shifts may be worked at the single time rate at other than the regular working hours (8:00 A.M. to 4:30 P.M.) on the following work ONLY: Heavy construction jobs on work below the street level, over railroad tracks and on building jobs.

(Operating Engineer Local #14)

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## FLOOR COVERER

(Interior vinyl composition tile, sheath vinyl linoleum and wood parquet tile including site preparation and synthetic turf not including site preparation)

### Floor Coverer

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$55.05**

Supplemental Benefit Rate per Hour: **\$47.83**

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Day before Christmas

Christmas Day

Day before New Year's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Shift Rates

Two shifts may be utilized with the first shift working 8 a.m. to the end of the shift at straight time rate of pay. The wage rate for the second shift consisting of 7 hours shall be paid at 114.29% of straight time wage rate. The wage rate for the second shift consisting of 8 hours shall be paid 112.5% of the straight time wage rate. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, the rule for the second shift will apply.

(Carpenters District Council)

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## GLAZIER

(New Construction, Remodeling, and Alteration)

### Glazier

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.55**

Supplemental Benefit Rate per Hour: **\$50.04**

Supplemental Note: Supplemental Benefit Overtime Rate: \$75.07

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### Paid Holidays

None

### Shift Rates

Shifts shall be any 8 consecutive hours after the normal working day for which the Glazier shall receive 9 hours pay for 8 hours worked.

(Local #1281)

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## **GLAZIER - REPAIR & MAINTENANCE**

(For the Installation of Glass - All repair and maintenance work on a particular building.)

### **Craft Jurisdiction for repair, maintenance and fabrication**

Plate glass replacement, Residential glass replacement, Residential mirrors and shower doors, Storm windows and storm doors, Residential replacement windows, Herculite door repairs, Door closer repairs, Retrofit apartment house (non-commercial buildings), Glass tinting.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$26.40**

Supplemental Benefit Rate per Hour: **\$25.32**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Time and one half the regular hourly rate after 40 straight time hours in any work week.

### **Paid Holidays**

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Local #1281)

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## **HAZARDOUS MATERIAL HANDLER**

(Removal, abatement, encapsulation or decontamination of asbestos, lead, mold, or other toxic or hazardous waste/materials)

### **Handler**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$38.05**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$19.10**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$38.05**

Supplemental Benefit Rate per Hour: **\$19.60**

## Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Time and one half the regular hourly rate after 40 straight time hours in any work week.

## Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Easter

## Paid Holidays

None

(Local #78 and Local #12A)

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# HEAT AND FROST INSULATOR

## Heat & Frost Insulator

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$62.71**

Supplemental Benefit Rate per Hour: **\$41.91**

## Overtime Description

Double time shall be paid for supplemental benefits during overtime work.

8th hour paid at time and one half.

## Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

New Year's Day  
Martin Luther King Jr. Day  
President's Day  
Memorial Day  
Independence Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

Triple time the regular rate for work on the following holiday(s).  
Labor Day

### **Paid Holidays**

None

### **Shift Rates**

The first shift shall work seven hours at the regular straight time rate. The second and third shift shall work seven hours the regular straight time hourly rate plus a fourteen percent wage and benefit premium. There must be a first shift to work the second shift, and a second shift to work the third shift. Off-hour jobs in occupied buildings may be worked on weekdays with an increment of one-dollar (\$1.00) per hour and eight (8) hours pay for seven (7) hours worked.

(Local #12) (BCA)

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## **HOUSE WRECKER (TOTAL DEMOLITION)**

### **House Wrecker - Tier A**

On all work sites the first, second, eleventh and every third House Wrecker thereafter will be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). Other House Wreckers may be Tier B House Wreckers.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$38.23**

Supplemental Benefit Rate per Hour: **\$30.97**

### **House Wrecker - Tier B**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$27.46**

Supplemental Benefit Rate per Hour: **\$23.38**

### **Overtime**



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate after an 8 hour day.  
Time and one half the regular rate for Saturday.  
Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day  
Christmas Day

### Paid Holidays

None

(Mason Tenders District Council)

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## IRON WORKER - ORNAMENTAL

### Iron Worker - Ornamental

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.65**

Supplemental Benefit Rate per Hour: **\$61.62**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

### Overtime Description

Time and one half the regular rate after a 7 hour day for a maximum of two hours on any regular work day (the 8th and 9th hour) and double time shall be paid for all work on a regular work day thereafter, time and one half the regular rate for Saturday for the first seven hours of work and double time shall be paid for all work on a Saturday thereafter.

### Overtime

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day  
Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Paid Holidays

None

## Shift Rates

When two or three shifts are employed on a job, Monday through Friday, the second and third shift are paid eight and one half (8 ½) hours at the straight time rate for seven (7) hours of work, and ten (10) hours at the straight time rate for eight (8) hours of work. When it is not possible to conduct alteration or repair work during regular working hours in a building occupied by tenants, eight hours will be paid at straight time rate for seven hours of work, and all overtime shall be paid at time and one-half the regular straight time rates but on Sundays and Holidays, time and one-half the regular straight time rate shall be paid for all work up to seven (7) hours and double time shall be paid for all work thereafter.

(Local #580)

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## IRON WORKER - STRUCTURAL

### Iron Worker - Structural

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$55.70**

Supplemental Benefit Rate per Hour: **\$84.79**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

### Overtime Description

Monday through Friday- the first eight hours are paid at straight time, the 9th and 10th hours are paid at time and one-half the regular rate, all additional weekday overtime is paid at double the regular rate. Saturdays- the first eight hours are paid at time and one-half the regular rate, double time thereafter. Sunday-all shifts are paid at double time. Four Days a week at Ten (10) hours straight time is allowed.

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## **Paid Holidays**

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

## **Shift Rates**

Monday through Friday - First Shift: First eight hours are paid at straight time, the 9th & 10th hours are paid at time and a half, double time paid thereafter. Second and third Shifts: First eight hours are paid at time and one-half, double time thereafter. Saturdays: All shifts, first eight hours paid at time and one-half, double time thereafter: Sunday all shifts are paid at double time.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

(Local #40 & #361)

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## **LABORER**

(Foundation, Concrete, Excavating, Street Pipe Layer and Common)

### **Laborer**

Excavation and foundation work for buildings, heavy construction, engineering work, and hazardous waste removal in connection with the above work. Landscaping tasks in connection with heavy construction work, engineering work and building projects. Projects include, but are not limited to pollution plants, sewers, parks, subways, bridges, highways, etc.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.00**

Supplemental Benefit Rate per Hour: **\$50.43**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

Labor Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Thanksgiving Day

## Shift Rates

When two shifts are employed, single time rate shall be paid for each shift. When three shifts are found necessary, each shift shall work seven and one half hours (7 ½), but shall be paid for eight (8) hours of labor, and be permitted one half hour for lunch.

(Local #731)

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## LANDSCAPING

(Landscaping tasks, such as tree pruning, tree removing and spraying in connection with Green Infrastructure maintenance and the planting of street trees and trees in City parks, but not when such activities are performed as part of construction or reconstruction projects.)

### Landscaper (Year 6 and above)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$35.06**

Supplemental Benefit Rate per Hour: **\$17.55**

### Landscaper (Year 3 - 5)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$33.93**

Supplemental Benefit Rate per Hour: **\$17.55**

### Landscaper (up to 3 years)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.09**

Supplemental Benefit Rate per Hour: **\$17.55**

### Groundperson

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.09**

Supplemental Benefit Rate per Hour: **\$17.55**

### Tree Remover / Pruner

Effective Period: 7/1/2022 - 6/30/2023

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$40.76**

Supplemental Benefit Rate per Hour: **\$17.55**

**Landscaper Sprayer (Pesticide Applicator)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$29.39**

Supplemental Benefit Rate per Hour: **\$17.55**

**Watering - Plant Maintainer**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$23.68**

Supplemental Benefit Rate per Hour: **\$17.55**

**Overtime Description**

For all overtime work performed, supplemental benefits shall include an additional seventy-five (\$0.75) cents per hour.

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

**Paid Holidays**

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

**Shift Rates**

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

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**MARBLE MECHANIC**

**Marble Setter**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$57.17**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$42.26**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$57.40**

Supplemental Benefit Rate per Hour: **\$42.66**

### **Marble Finisher**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$44.42**

Supplemental Benefit Rate per Hour: **\$39.46**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$44.65**

Supplemental Benefit Rate per Hour: **\$39.76**

### **Marble Polisher**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$43.35**

Supplemental Benefit Rate per Hour: **\$32.26**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$43.71**

Supplemental Benefit Rate per Hour: **\$32.46**

### **Marble Maintenance Finisher**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$27.01**

Supplemental Benefit Rate per Hour: **\$13.99**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$27.17**

Supplemental Benefit Rate per Hour: **\$14.23**

### **Overtime Description**

Supplemental Benefit contributions are to be made at the applicable overtime rates.

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## **Paid Holidays**

None

(Local #7)

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## **MASON TENDER**

### **Mason Tender**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$39.95**

Supplemental Benefit Rate per Hour: **\$31.99**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

None

### **Shift Rates**

The employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate. When it is not possible to conduct alteration work during regular working hours in a building occupied by tenants, the rule for the second shift will apply.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

(Local #79)

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## **MASON TENDER (INTERIOR DEMOLITION WORKER)**

### **Mason Tender Tier A**

Tier A Interior Demolition Worker performs all burning, chopping, and other technically skilled tasks related to interior demolition work.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$37.69**

Supplemental Benefit Rate per Hour: **\$26.10**

### **Mason Tender Tier B**

Tier B Interior Demolition Worker performs manual work and work incidental to demolition work, such as loading and carting of debris from the work site to an area where it can be loaded in to bins/trucks for removal. Also performs clean-up of the site when demolition is completed.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$26.88**

Supplemental Benefit Rate per Hour: **\$20.42**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

None

(Local #79)

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## METALLIC LATHER

### Metallic Lather

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.40**

Supplemental Benefit Rate per Hour: **\$51.30**

Supplemental Note: For time and one half overtime - \$63.05 For double overtime - \$79.10

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

### Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

### Shift Rates

Off-shift work outside of normal working hours shall receive straight time rate plus \$12 per hour for the first eight (8) hours.

(Local #46)

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## MILLWRIGHT

### Millwright

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$57.80**

Supplemental Benefit Rate per Hour: **\$55.96**

### Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

## Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

## Shift Rates

Second and third shifts receives the straight time rate of pay plus fifteen (15%) percent allowing for one half hour for a meal. There must be a first shift to work a second and third shift. All additional hours worked shall be paid at the time and one-half rate of pay plus fifteen (15%) percent for weekday hours.

(Local #740)

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## MOSAIC MECHANIC

### Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$52.75**

Supplemental Benefit Rate per Hour: **\$44.37**

### Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$51.14**

Supplemental Benefit Rate per Hour: **\$44.37**

### Mosaic Mechanic - Machine Operator Grinder

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$51.14**

Supplemental Benefit Rate per Hour: **\$44.37**

## Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

## Paid Holidays

None

(Local #7)

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## PAINTER

### Painter - Brush & Roller

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$43.00**

Supplemental Benefit Rate per Hour: **\$38.78**

Supplemental Note: \$46.62 on overtime

### Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.00**

Supplemental Benefit Rate per Hour: **\$38.78**

Supplemental Note: \$46.62 on overtime

## Overtime

Time and one half the regular rate after a 7 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

## Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

## Paid Holidays

None

(District Council of Painters #9)

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## PAINTER - LINE STRIPING (ROADWAY)

### Striping - Machine Operator

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$15.27**

Supplemental Note: Overtime Supplemental Benefit rate - \$15.90

### Lineperson (Thermoplastic)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$43.00**

Supplemental Benefit Rate per Hour: **\$15.27**

Supplemental Note: Overtime Supplemental Benefit rate - \$15.90

### Striping Assistant & Traffic Safety

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$37.00**

Supplemental Benefit Rate per Hour: **\$15.27**

Supplemental Note: Overtime Supplemental Benefit rate - \$15.90

## Overtime Description

For Paid Holidays: Employees will only receive Holiday Pay for holidays not worked if said employee worked both the regularly scheduled workday before and after the holiday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Overtime**

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

**Paid Holidays**

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

**Vacation**

Employees with one to two years service shall accrue vacation based on hours worked: 250 hours worked - 1 day vacation; 500 hours worked - 2 days vacation; 750 hours worked - 3 days vacation; 900 hours worked - 4 days vacation; 1,000 hours worked - 5 days vacation. Employees with two to five years service receive two weeks vacation. Employees with five to twenty years service receive three weeks vacation. Employees with twenty to twenty-five years service receive four weeks vacation. Employees with 25 or more years service receive five weeks vacation.

(Local #1010)

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**PAINTER - METAL POLISHER**

**METAL POLISHER**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$32.51**

Supplemental Benefit Rate per Hour: **\$10.92**

**METAL POLISHER - NEW CONSTRUCTION**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$33.46**

Supplemental Benefit Rate per Hour: **\$10.92**

**METAL POLISHER - SCAFFOLD OVER 34 FEET**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$36.01**

Supplemental Benefit Rate per Hour: **\$10.92**

**ASSISTANT METAL POLISHER**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$25.31**

Supplemental Benefit Rate per Hour: **\$10.44**

**ASSISTANT METAL POLISHER - NEW CONSTRUCTION**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$26.26**

Supplemental Benefit Rate per Hour: **\$10.44**

**ASSISTANT METAL POLISHER - SCAFFOLD OVER 34 FEET**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$27.81**

Supplemental Benefit Rate per Hour: **\$10.44**

**Overtime Description**

All work performed on Saturdays shall be paid at time-in-a half. The exception being; for suspended scaffold work and work deemed as a construction project; an eight (8) hour shift lost during the week due to circumstances beyond the control of the employer, up to a maximum of eight (8) hours per week, may be worked on Saturday at the straight time rate.

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Triple time the regular rate for work on the following holiday(s).

**Paid Holidays**

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Shift Rates**

Four Days a week at Ten (10) hours straight a day.

Local 8A-28A

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## **PAINTER - SIGN**

### **Sign Painter**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$45.54**

Supplemental Benefit Rate per Hour: **\$22.29**

### **Assistant Sign Painter**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$38.70**

Supplemental Benefit Rate per Hour: **\$20.20**

### **Overtime Description**

If any employee is required to work on any of the paid holidays then the employee shall receive double time rate of wages as well as the holiday pay for that day.

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### **Paid Holidays**

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### **Vacation**

At least 1 year of employment.....1 week

2 years or more of employment.....2 weeks

8 years or more of employment.....3 weeks

(Local #8A-28A)

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## **PAINTER - STRUCTURAL STEEL**

### **Painters on Structural Steel**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$53.00**

Supplemental Benefit Rate per Hour: **\$49.83**

## **Painter - Power Tool**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$59.50**

Supplemental Benefit Rate per Hour: **\$49.83**

Overtime Wage Rate: **\$6.50** above the "Painters on Structural Steel" overtime rate.

## **Overtime Description**

Supplemental Benefits shall be paid for each hour worked, up to forty (40) hours per week for the period of May 1st to November 15th or up to fifty (50) hours per week for the period of November 16th to April 30th.

## **Overtime**

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

## **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

## **Paid Holidays**

None

## **Shift Rates**

Second shift is paid at regular hourly wage rates plus a ten percent (10%) differential. There must be a first shift in order to work a second shift.

(Local #806)

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# **PAPERHANGER**

## **Paperhanger**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.37**



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$39.06**

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

## Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

## Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

## Paid Holidays

None

## Shift Rates

Evening shift - 4:30 P.M. to 12:00 Midnight (regular rate of pay); any work performed before 7:00 A.M. shall be at time and one half the regular base rate of pay.

(District Council of Painters #9)

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## PAVER AND ROADBUILDER

### Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$48.35**

Supplemental Benefit Rate per Hour: **\$50.19**

Supplemental Note: For time and one half overtime - \$54.44 For double overtime - \$58.69

### Paver & Roadbuilder - Laborer

Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work for installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry/seal coating, paving stones, maintenance of safety surfaces; play equipment installation, and other related work.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.48**

Supplemental Benefit Rate per Hour: **\$50.19**

Supplemental Note: For time and one half overtime - \$54.44 For double overtime - \$58.69

### **Production Paver & Roadbuilder - Screed Person**

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$48.95**

Supplemental Benefit Rate per Hour: **\$50.19**

Supplemental Note: For time and one half overtime - \$54.44 For double overtime - \$58.69

### **Production Paver & Roadbuilder - Raker**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$48.35**

Supplemental Benefit Rate per Hour: **\$50.19**

Supplemental Note: For time and one half overtime - \$54.44 For double overtime - \$58.69

### **Production Paver & Roadbuilder - Shoveler**

General laborer (except removal of surfaces - see Paver and Roadbuilder-Laborer) including but not limited to tamper, AC paint and liquid tar work.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$44.48**

Supplemental Benefit Rate per Hour: **\$50.19**

Supplemental Note: For time and one half overtime - \$54.44 For double overtime - \$58.69

### **Overtime Description**

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 25%.

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay.

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

Memorial Day

Independence Day

Labor Day

Columbus Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Thanksgiving Day

## **Paid Holidays**

Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day

## **Shift Rates**

When two shifts are employed, the work period for each shift shall be a continuous eight (8) hours. When three shifts are employed, each shift will work seven and one half (7 ½) hours but will be paid for eight (8) hours at the straight time rate since only one half (1/2) hour is allowed for meal time.

When two or more shifts are employed, single time will be paid for each shift.

Night Work - On night work, the first eight (8) hours of work will be paid for at the single time rate, except that production paving work shall be paid at 10% over the single time rate for the screed person, rakers and shovelers directly involved only. This differential is to be paid when there is only one shift and the shift works at night. All other workers will be exempt. Hours worked over eight (8) hours during said shift shall be paid for at the time and one-half rate.

(Local #1010)

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# **PLASTERER**

## **Plasterer**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.03**

Supplemental Benefit Rate per Hour: **\$28.79**

## **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

## **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day  
Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## **Paid Holidays**

None

## **Shift Rates**

When it is not possible to conduct work during regular working hours (between 6:30am and 4:30pm), a shift differential shall be paid at the regular hourly rate plus a twelve percent (12%) per hour differential. Workers on shift work shall be allowed a paid one-half hour meal break.

(Local #262)

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## **PLASTERER - TENDER**

### **Plasterer - Tender**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$39.95**

Supplemental Benefit Rate per Hour: **\$31.99**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

## **Paid Holidays**

None

## **Shift Rates**

When work commences outside regular work hours, workers receive an hour additional (differential) wage and supplement payment. Eight hours pay for seven hours work or nine hours pay for eight hours work.

(Mason Tenders District Council)

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## **PLUMBER**

### **Plumber**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$72.50**

Supplemental Benefit Rate per Hour: **\$41.45**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

### **Plumber - Temporary Services**

Temporary Services - When there are no Plumbers on the job site, there may be three shifts designed to cover the entire twenty-four hour period, including weekends if necessary, at the following rate straight time.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.08**

Supplemental Benefit Rate per Hour: **\$33.08**

### **Overtime**

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### **Shift Rates**

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.

50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

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**PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)**  
(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

**Plumber**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.60**

Supplemental Benefit Rate per Hour: **\$19.96**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

**Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Paid Holidays**

None

(Plumbers Local # 1)

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**PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$50.35**

Supplemental Benefit Rate per Hour: **\$29.73**

**Overtime**

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

**Overtime Holidays**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## **Paid Holidays**

None

## **Shift Rates**

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.  
50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

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## **PLUMBER: PUMP & TANK** **Oil Trades (Installation and Maintenance)**

### **Plumber - Pump & Tank**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$69.73**

Supplemental Benefit Rate per Hour: **\$28.48**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### **Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Day after Thanksgiving  
Christmas Day

## **Paid Holidays**

None

## **Shift Rates**

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

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# **POINTER, WATERPROOFER, CAULKER, SANDBLASTER, STEAMBLASTER (Exterior Building Renovation)**

## **Journey person**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$58.83**

Supplemental Benefit Rate per Hour: **\$30.10**

## **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

## **Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

## **Paid Holidays**

None

## **Shift Rates**



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:00 P.M.) is to be paid at time and one half the regular rate. However, the employer may establish one (1) or two (2) shifts starting at or after 4:00 P.M. to be paid at the regular hourly rate plus a 10% differential.

(Bricklayer District Council)

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## ROOFER

### Roofer

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$45.25**

Supplemental Benefit Rate per Hour: **\$37.56**

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

### Paid Holidays

None

### Shift Rates

Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential. There must be a first shift to work the second shift, and a second shift to work the third shift. All other work outside the regular work day (an eight hour workday between the hours of 5:00 A.M. and 4:00 P.M.) is to be paid at time and one half the regular rate.

(Local #8)

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## SHEET METAL WORKER

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Sheet Metal Worker**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$52.10**

Supplemental Benefit Rate per Hour: **\$55.18**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

**Sheet Metal Worker - Fan Maintenance**

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$41.68**

Supplemental Benefit Rate per Hour: **\$55.18**

**Sheet Metal Worker - Duct Cleaner**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$19.12**

Supplemental Benefit Rate per Hour: **\$12.01**

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

**Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

**Paid Holidays**

None

**Shift Rates**

Work that can only be performed outside regular working hours (eight hours of work between 7:30 A.M. and 3:30 P.M.) - First shift (work between 3:30 P.M. and 11:30 P.M.) - 10% differential above the established hourly rate.

Second shift (work between 11:30 P.M. and 7:30 A.M.) - 15% differential above the established hourly rate.

For Fan Maintenance: On all full shifts of fan maintenance work the straight time hourly rate of pay will be paid for each shift, including nights, Saturdays, Sundays, and holidays.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

(Local #28)

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**SHEET METAL WORKER - SPECIALTY**  
**(Decking & Siding)**

**Sheet Metal Specialty Worker**

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$49.05**

Supplemental Benefit Rate per Hour: **\$27.76**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

**Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

**Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

**Paid Holidays**

None

(Local #28)

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## **SHIPYARD WORKER**

### **Shipyard Mechanic - First Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$28.85**

Supplemental Benefit Rate per Hour: **\$3.93**

### **Shipyard Mechanic - Second Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.07**

Supplemental Benefit Rate per Hour: **\$3.79**

### **Shipyard Laborer - First Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.48**

Supplemental Benefit Rate per Hour: **\$3.77**

### **Shipyard Laborer - Second Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$17.93**

Supplemental Benefit Rate per Hour: **\$3.78**

### **Shipyard Dockhand - First Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.15**

Supplemental Benefit Rate per Hour: **\$3.70**

### **Shipyard Dockhand - Second Class**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$18.04**

Supplemental Benefit Rate per Hour: **\$3.61**

## **Overtime Description**

Work performed on holiday is paid double time the regular hourly wage rate plus holiday pay.

## **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular hourly rate after 40 straight time hours in any work week.

## **Paid Holidays**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

New Year's Day  
Martin Luther King Jr. Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

Based on Survey Data

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## **SIGN ERECTOR**

(Sheet Metal, Plastic, Electric, and Neon)

### **Sign Erector**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$53.79**

Supplemental Benefit Rate per Hour: **\$59.56**

### **Overtime**

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

### **Paid Holidays**

New Year's Day  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Election Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

### **Shift Rates**

Time and one half the regular hourly rate is to be paid for all hours worked outside the regular workday either (7:00 A.M. through 2:30 P.M.) or (8:00 A.M. through 3:30 P.M.)

(Local #137)

## STEAMFITTER

### Steamfitter

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$61.30**

Supplemental Benefit Rate per Hour: **\$59.89**

Supplemental Note: Overtime supplemental benefit rate: \$119.04

### Steamfitter -Temporary Services

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$46.59**

Supplemental Benefit Rate per Hour: **\$48.70**

### Overtime Description

Double time after a 7 hour day except for Temporary Services.

### Overtime

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

### Paid Holidays

None

### Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. When shift work is performed the wage rate for regular time worked is a 15% percent premium on wage and 15% percent premium on supplemental benefits.

Local 638

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## **STEAMFITTER - REFRIGERATION AND AIR CONDITIONER (Maintenance and Installation Service Person)**

### **Refrigeration and Air Conditioner Mechanic**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$43.85**

Supplemental Benefit Rate per Hour: **\$19.96**

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### **Overtime Holidays**

Double time the regular rate for work on the following holiday(s).

New Year's Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

Christmas Day

Double time and one half the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day

President's Day

Memorial Day

Columbus Day

### **Paid Holidays**

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

(Local #638-B)

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## STONE MASON - SETTER

### Stone Mason - Setter

(Assisted by Derrickperson and Rigger)

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$57.16**

Supplemental Benefit Rate per Hour: **\$50.17**

### Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

### Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

### Shift Rates

For all work outside the regular workday (8:00 A.M. to 3:30 P.M. Monday through Friday), the pay shall be straight time plus a ten percent (10%) differential.

(Bricklayers District Council)

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## TAPER

### Drywall Taper

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$48.47**

Supplemental Benefit Rate per Hour: **\$30.01**

### Overtime

Time and one half the regular rate after a 7 hour day.



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### **Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

### **Paid Holidays**

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

(Local #1974)

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## **TELECOMMUNICATION WORKER**

(Install/maintain/repair telecommunications cables carrying data, video, and/or voice except for installation on building construction/alteration/renovation projects.)

### **Telecommunication Worker**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.03**

Supplemental Benefit Rate per Hour: **\$23.15**

Supplemental Note: The above rate applies for Manhattan, Bronx, Brooklyn, Queens. \$22.84 for Staten Island only.

### **Overtime**

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

### **Overtime Holidays**

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Lincoln's Birthday

Washington's Birthday

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Election Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

**Paid Holidays**

New Year's Day  
Lincoln's Birthday  
Washington's Birthday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Election Day  
Veteran's Day  
Thanksgiving Day  
Christmas Day

Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

**Shift Rates**

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

**Vacation**

After 6 months.....one week.  
After 12 months but less than 7 years.....two weeks.  
After 7 or more but less than 15 years.....three weeks.  
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

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**TILE FINISHER**

**Tile Finisher**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$44.40**  
Supplemental Benefit Rate per Hour: **\$35.56**

**Overtime**

Time and one half the regular rate after a 7 hour day.  
Time and one half the regular rate for Saturday.  
Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

## Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day  
Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## Paid Holidays

None

## Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

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## TILE LAYER - SETTER

### Tile Layer - Setter

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$57.41**

Supplemental Benefit Rate per Hour: **\$40.11**

### Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day  
President's Day  
Good Friday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veteran's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Thanksgiving Day  
Day after Thanksgiving  
Christmas Day

## Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

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## TIMBERPERSON

### Timberperson

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$53.05**

Supplemental Benefit Rate per Hour: **\$53.94**

### Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

### Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

### Paid Holidays

None

### Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate. Benefits for off-shift work shall be paid at the straight time rate.

(Local #1536)

## **TUNNEL WORKER**

### **Blasters, Mucking Machine Operators (Compressed Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$68.58**

Supplemental Benefit Rate per Hour: **\$60.19**

### **Tunnel Workers (Compressed Air Rates)**

Includes shield driven liner plate portions or solidification portions work (8 hour shift) during excavation phase.

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$66.14**

Supplemental Benefit Rate per Hour: **\$58.29**

### **Top Nipper (Compressed Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$65.04**

Supplemental Benefit Rate per Hour: **\$57.14**

### **Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$63.74**

Supplemental Benefit Rate per Hour: **\$56.20**

### **Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$63.74**

Supplemental Benefit Rate per Hour: **\$56.20**

### **Changehouse Attendant: Powder Watchperson (Compressed Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$56.04**

Supplemental Benefit Rate per Hour: **\$52.83**

### **Blasters (Free Air Rates)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$65.41**  
Supplemental Benefit Rate per Hour: **\$57.80**

**Tunnel Workers (Free Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$62.58**  
Supplemental Benefit Rate per Hour: **\$55.38**

**All Others (Free Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$57.84**  
Supplemental Benefit Rate per Hour: **\$51.26**

**Microtunneling (Free Air Rates)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$50.06**  
Supplemental Benefit Rate per Hour: **\$44.30**

**Overtime Description**

For work performed during excavation and primary concrete tunnel lining phases - Double time the regular rate after an 8 hour day and Saturday, Sunday and on the following holiday(s) listed below.  
For Repair-Maintenance Work on Existing Equipment and Facilities - Time and one half the regular rate after a 7 hour day, Saturday, Sunday and double time the regular rate for work on the following holiday(s) listed below.  
For Small-Bore Micro Tunneling Machines - Time and one-half the regular rate shall be paid for all overtime.  
For work not listed above - Time and one half the regular rate after an 8 hour day and Saturday and double time the regular rate on Sunday and on the following holiday(s) listed below.

**Paid Holidays**

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

(Local #147)

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## **UTILITY LOCATOR**

**(Locate & mark underground utilities for street excavation.)**

### **Utility Locator (Year 7 and above)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.56**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Year 5 - 6)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.85**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Year 4)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$21.54**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Year 3)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$20.30**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Year 2)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$19.13**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Year 1)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$18.04**

Supplemental Benefit Rate per Hour: **\$1.43**

### **Utility Locator (Up to 1 year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$17.00**

Supplemental Benefit Rate per Hour: **\$1.43**

Supplemental Note: No benefits for the first 90 days of employment.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION WORKER PREVAILING WAGE SCHEDULE

**Overtime**

Time and one half the regular rate for work on the following holiday(s).  
Time and one half the regular hourly rate after 40 straight time hours in any work week.

**Paid Holidays**

New Year's Day  
Memorial Day  
Independence Day  
Thanksgiving Day  
Christmas Day

**Shift Rates**

10% shift differential to employees working any shift starting between noon and 5 AM.

**Vacation**

For up to 1 year           0 hours  
For year 1 - 2   48 hours per year  
For year 3 - 9   96 hours per year  
For year 10 or more   144 hours per year

**Sick Days:**

For up to 1 year employee receives 40 hours paid sick leave.  
For year 1 employee earns 2 hours of paid sick leave for every 100 overtime hours worked.  
For year 2 - 9 years employee earns 4 hours of paid sick leave for every 100 overtime hours worked.  
For year 10 or more employee earns 6 hours of paid sick leave for every 100 overtime hours worked.

(C.W.A.)

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**WELDER**

**TO BE PAID AT THE RATE OF THE JOURNEYPERSON IN THE TRADE  
PERFORMING THE WORK.**



**OFFICE OF THE COMPTROLLER**

**CITY OF NEW YORK**

**CONSTRUCTION APPRENTICE  
PREVAILING WAGE SCHEDULE**

Pursuant to Labor Law § 220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant and registered with the New York State Department of Labor, may be paid at the apprentice rates in this schedule. Apprentices who are not so registered must be paid as journey persons in accordance with the trade classification of the work they actually performed.

Apprentice ratios are established to ensure the proper safety, training and supervision of apprentices. A ratio establishes the number of journey workers required for each apprentice in a program and on a job site. Ratios are interpreted as follows: in the case of a 1:1, 1:4 ratio, there must be one journey worker for the first apprentice, and four additional journey workers for each subsequent apprentice.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

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## **BOILERMAKER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

### **Boilermaker (First Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 65% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$33.57

### **Boilermaker (Second Year: 1st Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$35.54

### **Boilermaker (Second Year: 2nd Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 75% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$37.51

### **Boilermaker (Third Year: 1st Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$39.48

### **Boilermaker (Third Year: 2nd Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 85% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$41.45

### **Boilermaker (Fourth Year: 1st Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 90% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$43.42

### **Boilermaker (Fourth Year: 2nd Six Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 95% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$45.39

(Local #5)

## **BRICKLAYER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

### **Bricklayer (First 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 50% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

### **Bricklayer (Second 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

### **Bricklayer (Third 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

### **Bricklayer (Fourth 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 80% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

### **Bricklayer (Fifth 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 90% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

### **Bricklayer (Sixth 750 Hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 95% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$23.85

(Bricklayer District Council)

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## **CARPENTER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

### **Carpenter (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour For Building Apprentice: \$19.80

Supplemental Benefit Rate Per Hour For Building Apprentice: \$16.85

Wage Rate Per Hour For Heavy Apprentice: \$24.60

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$36.26

### **Carpenter (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour For Building Apprentice: \$22.80

Supplemental Benefit Rate Per Hour For Building Apprentice: \$18.35

Wage Rate Per Hour For Heavy Apprentice: \$30.20

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$36.26

### **Carpenter (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour For Building Apprentice: \$27.05

Supplemental Benefit Rate Per Hour For Building Apprentice: \$21.95

Wage Rate Per Hour For Heavy Apprentice: \$38.58

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$36.26

### **Carpenter (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour For Building Apprentice: \$34.93

Supplemental Benefit Rate Per Hour For Building Apprentice: \$23.95

Wage Rate Per Hour For Heavy Apprentice: \$46.97

Supplemental Benefit Rate Per Hour For Heavy Apprentice: \$36.26

(Carpenters District Council)

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## **CARPENTER - HIGH RISE CONCRETE FORMS**

**(Ratio of Apprentice to Journeyman: 1 to 1, 2 to 5)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Carpenter - High Rise (First Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$18.27**  
Supplemental Benefit Rate per Hour: **\$16.55**

**Carpenter - High Rise (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$24.70**  
Supplemental Benefit Rate per Hour: **\$17.68**

**Carpenter - High Rise (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$31.28**  
Supplemental Benefit Rate per Hour: **\$17.81**

**Carpenter - High Rise (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$38.90**  
Supplemental Benefit Rate per Hour: **\$17.96**

(Carpenters District Council)

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**CEMENT AND CONCRETE WORKER**  
**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

**Cement & Concrete Worker (First 1333 hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 53% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: **\$14.79**

**Cement & Concrete Worker (Second 1333 hours)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 69% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: **\$19.72**

**Cement & Concrete Worker (Last 1334 hours)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 85% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$21.30

(Cement Concrete Workers District Council)

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**CEMENT MASON**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

**Cement Mason (First Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$19.92  
Supplemental Benefit Rate per Hour: \$15.61

**Cement Mason (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$24.82  
Supplemental Benefit Rate per Hour: \$15.91

**Cement Mason (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: \$30.22  
Supplemental Benefit Rate per Hour: \$16.02

(Local #780)

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**DERRICKPERSON & RIGGER (STONE)**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

**Derrickperson & Rigger (stone) - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 50% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: 50% of Journeyman's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Derrickperson & Rigger (stone) - Second Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

**Derrickperson & Rigger (stone) - Second Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 80% of Journeyperson's rate  
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

**Derrickperson & Rigger (stone) - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 90% of Journeyperson's rate  
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

(Local #197)

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**DOCKBUILDER/PILE DRIVER  
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)**

**Dockbuilder/Pile Driver (First Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$24.60  
Supplemental Benefit Rate Per Hour: \$36.26

**Dockbuilder/Pile Driver (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$30.20  
Supplemental Benefit Rate Per Hour: \$36.26

**Dockbuilder/Pile Driver (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$38.58  
Supplemental Benefit Rate Per Hour: \$36.26

**Dockbuilder/Pile Driver (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$46.97



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour: \$36.26

(Carpenters District Council)

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## **ELECTRICIAN**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

### **Electrician (First Term: 0-6 Months)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$18.00**

Supplemental Benefit Rate per Hour: **\$15.68**

Overtime Supplemental Rate Per Hour: \$16.88

### **Electrician (First Term: 7-12 Months)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$18.50**

Supplemental Benefit Rate per Hour: **\$15.94**

Overtime Supplemental Rate Per Hour: \$17.17

### **Electrician (Second Term: 0-6 Months)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$19.50**

Supplemental Benefit Rate per Hour: **\$16.47**

Overtime Supplemental Rate Per Hour: \$17.76

### **Electrician (Second Term: 7-12 Months)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$20.50**

Supplemental Benefit Rate per Hour: **\$16.99**

Overtime Supplemental Rate Per Hour: \$18.35

### **Electrician (Third Term: 0-6 Months)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$21.50**

Supplemental Benefit Rate per Hour: **\$17.52**

Overtime Supplemental Rate Per Hour: \$18.94

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Electrician (Third Term: 7-12 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$22.50**  
Supplemental Benefit Rate per Hour: **\$18.04**  
Overtime Supplemental Rate Per Hour: **\$19.53**

**Electrician (Fourth Term: 0-6 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$23.50**  
Supplemental Benefit Rate per Hour: **\$18.56**  
Overtime Supplemental Rate Per Hour: **\$20.12**

**Electrician (Fourth Term: 7-12 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$25.50**  
Supplemental Benefit Rate per Hour: **\$19.61**  
Overtime Supplemental Rate Per Hour: **\$21.30**

**Electrician (Fifth Term: 0-12 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$26.75**  
Supplemental Benefit Rate per Hour: **\$22.88**  
Overtime Supplemental Rate Per Hour: **\$24.57**

**Electrician (Fifth Term: 13-18 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$31.25**  
Supplemental Benefit Rate per Hour: **\$25.30**  
Overtime Supplemental Rate Per Hour: **\$27.28**

**Overtime Description**

Overtime Wage paid at time and one half the regular rate

(Local #3)

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**ELEVATOR CONSTRUCTOR**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Elevator (Constructor) - First Year**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$33.38

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$34.64

**Elevator (Constructor) - Second Year**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$33.96

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$35.24

**Elevator (Constructor) - Third Year**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Rate Per Hour: \$35.10

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Rate Per Hour: \$36.43

**Elevator (Constructor) - Fourth Year**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$36.24

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$37.63

(Local #1)

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**ELEVATOR REPAIR & MAINTENANCE**  
**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Elevator Service/Modernization Mechanic (First Year)**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$33.33

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$34.59

**Elevator Service/Modernization Mechanic (Second Year)**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$33.90

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$35.18

**Elevator Service/Modernization Mechanic (Third Year)**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$35.03

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$36.37

**Elevator Service/Modernization Mechanic (Fourth Year)**

Effective Period: 7/1/2022 - 3/16/2023  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$36.17

Effective Period: 3/17/2023 - 6/30/2023  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Benefit Per Hour: \$37.55

(Local #1)

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**ENGINEER**  
**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)**

**Engineer - First Year**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$27.47**  
Supplemental Benefit Rate per Hour: **\$30.97**

**Engineer - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$34.34**  
Supplemental Benefit Rate per Hour: **\$30.97**

**Engineer - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$37.77**  
Supplemental Benefit Rate per Hour: **\$30.97**

**Engineer - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$41.21**  
Supplemental Benefit Rate per Hour: **\$30.97**

(Local #15)

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**ENGINEER - OPERATING**  
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

**Operating Engineer - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 40% of Operating Engineer - Road & Heavy Construction V's Rate  
Supplemental Benefit Per Hour: \$24.80

**Operating Engineer - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 50% of Operating Engineer - Road & Heavy Construction V's Rate  
Supplemental Benefit Per Hour: \$24.80

**Operating Engineer - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 60% of Operating Engineer - Road & Heavy Construction V's Rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Supplemental Benefit Per Hour: \$24.80

(Local #14)

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## **FLOOR COVERER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

### **Floor Coverer (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$24.80**

Supplemental Benefit Rate per Hour: **\$16.83**

### **Floor Coverer (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$27.80**

Supplemental Benefit Rate per Hour: **\$18.33**

### **Floor Coverer (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$32.05**

Supplemental Benefit Rate per Hour: **\$21.93**

### **Floor Coverer (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$39.93**

Supplemental Benefit Rate per Hour: **\$23.93**

(Carpenters District Council)

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## **GLAZIER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

### **Glazier (First Year)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

**Glazier (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

**Glazier (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

**Glazier (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #1281)

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**HAZARDOUS MATERIAL HANDLER**  
**(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)**

**Handler (First 1000 Hours)**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$20.00**

Supplemental Benefit Rate per Hour: **\$14.25**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$20.00**

Supplemental Benefit Rate per Hour: **\$14.75**

**Handler (Second 1000 Hours)**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$21.00**

Supplemental Benefit Rate per Hour: **\$14.25**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$21.00**

Supplemental Benefit Rate per Hour: **\$14.75**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Handler (Third 1000 Hours)**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$24.00**

Supplemental Benefit Rate per Hour: **\$14.25**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$24.00**

Supplemental Benefit Rate per Hour: **\$14.75**

**Handler (Fourth 1000 Hours)**

Effective Period: 7/1/2022 - 7/3/2022

Wage Rate per Hour: **\$26.00**

Supplemental Benefit Rate per Hour: **\$14.25**

Effective Period: 7/4/2022 - 6/30/2023

Wage Rate per Hour: **\$26.00**

Supplemental Benefit Rate per Hour: **\$14.75**

(Local #78)

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**HEAT & FROST INSULATOR**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

**Heat & Frost Insulator (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

**Heat & Frost Insulator (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

**Heat & Frost Insulator (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

**Heat & Frost Insulator (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 70% of Journeyman's rate



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

(Local #12)

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**HOUSE WRECKER**  
**(TOTAL DEMOLITION)**  
**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

**House Wrecker - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$20.80**  
Supplemental Benefit Rate per Hour: **\$10.67**

**House Wrecker - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$22.75**  
Supplemental Benefit Rate per Hour: **\$10.67**

**House Wrecker - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$24.25**  
Supplemental Benefit Rate per Hour: **\$10.67**

**House Wrecker - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$26.75**  
Supplemental Benefit Rate per Hour: **\$10.67**

(Mason Tenders District Council)

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**IRON WORKER - ORNAMENTAL**  
**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

**Iron Worker (Ornamental) - First Year**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$20.63**

Supplemental Benefit Rate per Hour: **\$17.61**

**Iron Worker (Ornamental) - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$24.22**

Supplemental Benefit Rate per Hour: **\$18.86**

**Iron Worker (Ornamental) - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$27.80**

Supplemental Benefit Rate per Hour: **\$20.12**

**Iron Worker (Ornamental) - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.38**

Supplemental Benefit Rate per Hour: **\$21.38**

(Local #580)

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**IRON WORKER - STRUCTURAL**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

**Iron Worker (Structural) - 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$28.97**

Supplemental Benefit Rate per Hour: **\$58.62**

**Iron Worker (Structural) - 7- 18 Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$29.57**

Supplemental Benefit Rate per Hour: **\$58.62**

**Iron Worker (Structural) - 19 - 36 months**

Effective Period: 7/1/2022 - 6/30/2023

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$30.18**

Supplemental Benefit Rate per Hour: **\$58.62**

(Local #40 and #361)

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**LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON)**

(Ratio Apprentice to Journeyman: 1 to 1, 1 to 3)

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First 1000 hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$50.43

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$50.43

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: \$50.43

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Rate Per Hour: \$50.43

(Local #731)

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## **MARBLE MECHANICS**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

### **Cutters & Setters - First 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

### **Cutters & Setters - Second 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 45% of Journeyman's rate

### **Cutters & Setters - Third 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

### **Cutters & Setters - Fourth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

### **Cutters & Setters - Fifth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

### **Cutters & Setters - Sixth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

### **Cutters & Setters - Seventh 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 70% of Journeyman's rate

### **Cutters & Setters - Eighth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

### **Cutters & Setters - Ninth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

**Cutters & Setters - Tenth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

**Polishers & Finishers - First 900 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

**Polishers & Finishers - Second 900 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

**Polishers & Finishers - Third 900 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 90% of Journeyperson's rate

(Local #7)

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**MASON TENDER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Mason Tender - First Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$20.95**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.90**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$24.40**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$26.90**

Supplemental Benefit Rate per Hour: **\$10.82**

(Local #79)

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**MASON TENDER (INTERIOR DEMOLITION WORKER)**  
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Mason Tender (Interior Demolition) - First Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$20.70**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender (Interior Demolition) - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.65**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender (Interior Demolition) - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$24.15**

Supplemental Benefit Rate per Hour: **\$10.82**

**Mason Tender (Interior Demolition) - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$26.65**

Supplemental Benefit Rate per Hour: **\$10.82**

(Local #79)

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## **METALLIC LATHER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Metallic Lather (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$22.55**

Supplemental Benefit Rate per Hour: **\$17.87**

### **Metallic Lather (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$23.60**

Supplemental Benefit Rate per Hour: **\$16.87**

### **Metallic Lather (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$24.60**

Supplemental Benefit Rate per Hour: **\$15.92**

### **Metallic Lather (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$37.18**

Supplemental Benefit Rate per Hour: **\$21.82**

(Local #46)

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## **MILLWRIGHT**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

### **Millwright (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.24**

Supplemental Benefit Rate per Hour: **\$35.94**

### **Millwright (Second Year)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$36.69**  
Supplemental Benefit Rate per Hour: **\$39.64**

**Millwright (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$42.14**  
Supplemental Benefit Rate per Hour: **\$43.99**

**Millwright (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$53.04**  
Supplemental Benefit Rate per Hour: **\$50.75**

(Local #740)

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**PAINTER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Painter - Brush & Roller - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$17.20**  
Supplemental Benefit Rate per Hour: **\$17.42**

**Painter - Brush & Roller - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$21.50**  
Supplemental Benefit Rate per Hour: **\$22.41**

**Painter - Brush & Roller - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$25.80**  
Supplemental Benefit Rate per Hour: **\$26.46**

**Painter - Brush & Roller - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$34.40**

Supplemental Benefit Rate per Hour: **\$34.15**

(District Council of Painters)

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**PAINTER - LINE STRIPING (ROADWAY)**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Painter - Line Striping (Roadway) - First Year (Minimum 1000 hours)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$30.36**

Supplemental Benefit Rate per Hour: **\$15.27**

**Painter - Line Striping (Roadway) - Second Year (Minimum 1000 hours)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$32.00**

Supplemental Benefit Rate per Hour: **\$15.27**

(Local #1010)

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**PAINTER - METAL POLISHER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Metal Polisher (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$16.00**

Supplemental Benefit Rate per Hour: **\$7.96**

New Construction - Wage Rate Per Hour: **\$16.39**

Scaffold Over 34 Feet - Wage Rate Per Hour: **\$18.50**

**Metal Polisher (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$17.00**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: **\$7.96**  
New Construction - Wage Rate Per Hour: **\$17.44**  
Scaffold Over 34 Feet - Wage Rate Per Hour: **\$19.50**

**Metal Polisher (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$18.00**  
Supplemental Benefit Rate per Hour: **\$7.96**  
New Construction - Wage Rate Per Hour: **\$18.54**  
Scaffold Over 34 Feet - Wage Rate Per Hour: **\$20.50**

(Local 8A-28)

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**PAINTER - STRUCTURAL STEEL**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Painters - Structural Steel (First Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

**Painters - Structural Steel (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

**Painters - Structural Steel (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #806)

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**PAVER AND ROADBUILDER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Paver and Roadbuilder - First Year (Minimum 1000 hours)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$29.86**

Supplemental Benefit Rate per Hour: **\$24.60**

**Paver and Roadbuilder - Second Year (Minimum 1000 hours)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$32.00**

Supplemental Benefit Rate per Hour: **\$24.60**

(Local #1010)

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**PLASTERER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

(Each Term is 800 Hours.)

**Plasterer - First Term**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 55% of Journeyman's rate

Supplemental Rate Per Hour: **\$17.48**

**Plasterer - Second Term**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: **\$18.63**

**Plasterer - Third Term**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Rate Per Hour: **\$20.93**

**Plasterer - Fourth Term**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: **\$22.10**

(Local #262)

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## **PLASTERER - TENDER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Plasterer Tender - First Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$21.45**

Supplemental Benefit Rate per Hour: **\$10.32**

### **Plasterer Tender - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$23.40**

Supplemental Benefit Rate per Hour: **\$10.32**

### **Plasterer Tender - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$24.90**

Supplemental Benefit Rate per Hour: **\$10.32**

### **Plasterer Tender - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$27.40**

Supplemental Benefit Rate per Hour: **\$10.32**

(Local #79)

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## **PLUMBER**

**(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)**

### **Plumber - First Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$16.78**

Supplemental Benefit Rate per Hour: **\$5.43**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Plumber - First Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$19.78**

Supplemental Benefit Rate per Hour: **\$6.43**

**Plumber - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$28.99**

Supplemental Benefit Rate per Hour: **\$21.95**

**Plumber - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$31.09**

Supplemental Benefit Rate per Hour: **\$21.95**

**Plumber - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$33.94**

Supplemental Benefit Rate per Hour: **\$21.95**

**Plumber - Fifth Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$35.34**

Supplemental Benefit Rate per Hour: **\$21.95**

**Plumber - Fifth Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.41**

Supplemental Benefit Rate per Hour: **\$21.95**

(Plumbers Local #1)

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**POINTER, WATERPROOFER, CAULKER, SANDBLASTER,  
STEAMBLASTER**

**(Exterior Building Renovation)**

**(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - First Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$29.86**

Supplemental Benefit Rate per Hour: **\$15.00**

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$33.74**

Supplemental Benefit Rate per Hour: **\$20.05**

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$39.02**

Supplemental Benefit Rate per Hour: **\$23.80**

**Pointer, Waterproofer, Caulker, Sandblaster, Steamblaster - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$47.05**

Supplemental Benefit Rate per Hour: **\$24.80**

(Bricklayer District Council)

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**ROOFER**

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

**Roofer - First Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 35% of Journeyman's rate

Supplemental Benefit Rate Per Hour: **\$3.82**

**Roofer - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Benefit Rate Per Hour: **\$18.92**

**Roofer - Third Year**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 60% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$22.64

**Roofer - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 75% of Journeyman's rate  
Supplemental Benefit Rate Per Hour: \$28.24

(Local #8)

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**SHEET METAL WORKER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

**Sheet Metal Worker (0-6 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 25% of Journeyman's rate  
Supplemental Rate Per Hour: \$6.84

**Sheet Metal Worker (7-18 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 35% of Journeyman's rate  
Supplemental Rate Per Hour: \$20.20

**Sheet Metal Worker (19-30 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 45% of Journeyman's rate  
Supplemental Rate Per Hour: \$27.48

**Sheet Metal Worker (31-36 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 55% of Journeyman's rate  
Supplemental Rate Per Hour: \$32.52

**Sheet Metal Worker (37-42 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 55% of Journeyman's rate  
Supplemental Rate Per Hour: \$32.52

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Sheet Metal Worker (43-48 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Rate Per Hour: \$40.08

**Sheet Metal Worker (49-54 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Rate Per Hour: \$40.08

**Sheet Metal Worker (55-60 Months)**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 80% of Journeyperson's rate  
Supplemental Rate Per Hour: \$45.12

(Local #28)

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**SIGN ERECTOR**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

**Sign Erector - First Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 35% of Journeyperson's rate  
Supplemental Rate Per Hour: \$17.09

**Sign Erector - First Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 40% of Journeyperson's rate  
Supplemental Rate Per Hour: \$19.39

**Sign Erector - Second Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 45% of Journeyperson's rate  
Supplemental Rate Per Hour: \$21.70

**Sign Erector - Second Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023



OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 50% of Journeyperson's rate  
Supplemental Rate Per Hour: \$24.02

**Sign Erector - Third Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 55% of Journeyperson's rate  
Supplemental Rate Per Hour: \$32.50

**Sign Erector - Third Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 60% of Journeyperson's rate  
Supplemental Rate Per Hour: \$35.35

**Sign Erector - Fourth Year: 1st Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 65% of Journeyperson's rate  
Supplemental Rate Per Hour: \$39.00

**Sign Erector - Fourth Year: 2nd Six Months**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 70% of Journeyperson's rate  
Supplemental Rate Per Hour: \$41.95

**Sign Erector - Fifth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 75% of Journeyperson's rate  
Supplemental Rate Per Hour: \$44.89

**Sign Erector - Sixth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 80% of Journeyperson's rate  
Supplemental Rate Per Hour: \$47.80

(Local #137)

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**STEAMFITTER**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

**Steamfitter - First Year**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

**Steamfitter - Second Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

**Steamfitter - Third Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate and Supplemental Rate per Hour: 60% of Journeyperson's rate.

**Steamfitter - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate and Supplemental Rate Per Hour: 70% of Journeyperson's rate.

**Steamfitter - Fifth Year**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

(Local #638)

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**STEAMFITTER - REFRIGERATION & AIR CONDITIONER  
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)**

**Refrigeration & Air Conditioner (First Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$21.23**

Supplemental Benefit Rate per Hour: **\$13.29**

**Refrigeration & Air Conditioner (Second Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$25.63**

Supplemental Benefit Rate per Hour: **\$14.57**

**Refrigeration & Air Conditioner (Third Year)**

Effective Period: 7/1/2022 - 6/30/2023

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$29.85**

Supplemental Benefit Rate per Hour: **\$15.91**

**Refrigeration & Air Conditioner (Fourth Year)**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate per Hour: **\$36.05**

Supplemental Benefit Rate per Hour: **\$17.72**

(Local #638-B)

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**STONE MASON - SETTER**

(Ratio Apprentice of Journeyman: 1 to 1, 1 to 2)

**Stone Mason - Setters - First 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Second 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Third 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Fourth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Fifth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Rate Per Hour: 50% of Journeyman's rate

**Stone Mason - Setters - Sixth 750 Hours**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: 100% of Journeyman's rate  
Supplemental Rate Per Hour: 50% of Journeyman's rate

(Bricklayers District Council)

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**TAPER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

**Drywall Taper - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$20.97**  
Supplemental Benefit Rate per Hour: **\$14.25**

**Drywall Taper - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$24.24**  
Supplemental Benefit Rate per Hour: **\$21.26**

**Drywall Taper - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$29.08**  
Supplemental Benefit Rate per Hour: **\$23.01**

**Drywall Taper - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate per Hour: **\$38.78**  
Supplemental Benefit Rate per Hour: **\$26.51**

(Local #1974)

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**TILE LAYER - SETTER**  
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

**Tile Layer - Setter - First 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 35% of Journeyperson's rate

**Tile Layer - Setter - Second 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour 40% of Journeyperson's rate

**Tile Layer - Setter - Third 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

**Tile Layer - Setter - Fourth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

**Tile Layer - Setter - Fifth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

**Tile Layer - Setter - Sixth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

**Tile Layer - Setter - Seventh 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

**Tile Layer - Setter - Eighth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

**Tile Layer - Setter - Ninth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

**Tile Layer - Setter - Tenth 750 Hours**

Effective Period: 7/1/2022 - 6/30/2023

Wage and Supplemental Rate Per Hour: 90% of Journeyperson's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK  
CONSTRUCTION APPRENTICE PREVAILING WAGE SCHEDULE

(Local #7)

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## **TIMBERPERSON**

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

### **Timberperson - First Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$22.42  
Supplemental Rate Per Hour: \$36.22

### **Timberperson - Second Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$27.53  
Supplemental Rate Per Hour: \$36.22

### **Timberperson - Third Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$35.18  
Supplemental Rate Per Hour: \$36.22

### **Timberperson - Fourth Year**

Effective Period: 7/1/2022 - 6/30/2023  
Wage Rate Per Hour: \$42.84  
Supplemental Rate Per Hour: \$36.22

(Local #1536)



Leonard A. Mancusi  
SENIOR ASSISTANT COMPTROLLER

THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER  
1 CENTRE STREET ROOM 1120  
NEW YORK, N.Y. 10007-2341

TELEPHONE: (212) 669-3622  
FAX NUMBER: (212) 669-8499

ALAN G. HEVESI  
COMPTROLLER

**MEMORANDUM**

November 6, 2000

To Agency Chief Contracting Officers

From: Leonard A. Mancusi

Re: Security at Construction Sites

Prior to the enactment of Administrative Code §6-109, security guards on construction sites were not subject to prevailing wages. Security guards under the New York State labor law are covered under §230 which provides that prevailing wages are to be paid for security guards in existing buildings. §6-109 of the Administrative Code which was enacted in 1996 closed this loophole by including all security guards working pursuant to a city contract as a prevailing wage trade.

Although some construction contract boilerplate language has been amended to include §6-109, sub-contractors performing security services have advised us that they were not aware of this provision and, since traditionally, security guards were not a covered trade on construction sites, and they were not advised by a prime contractor that they would have to pay prevailing wages, they have not been doing so.

To avoid the possibility of issuing stop payments against prime contractors for the failure of their security service sub-contractors to pay

*prevailing wages, we suggest that you write to all your existing security guard sub-contractors and their primes and in the future, upon approval of a security guard sub-contractor, advise the contractors of their obligation to pay prevailing wages under §6-109 of the Administrative Code.*

*As always, your cooperation is appreciated.*

**LAM:er**  
**ACCO.SECURITY AT SITES**





# Department of Design and Construction

## DIVISION OF INFRASTRUCTURE BUREAU OF DESIGN VOLUME 2 OF 3

PROJECT ID: HWQ274F2

### RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2

- Hook Creek Boulevard from 257th Street to 149th Avenue
- Francis Lewis Boulevard from 257th Street to Hook Creek Boulevard
- Frankton Street from Francis Lewis Boulevard to Nassau County Line
- 145th Avenue from Francis Lewis Boulevard to Nassau County Line
- 259th Street from 147th Avenue to 149th Road
- 259th Street from 149th Road to Craft Avenue
- 147th Avenue from 258th Street to Francis Lewis Boulevard
- 147th Road from 258th Street to Francis Lewis Boulevard
- 147th Drive from 257th Street to Hook Creek Boulevard
- 148th Avenue from 259th Street to Hook Creek Boulevard
- 148th Road from 259th Street to Hook Creek Boulevard
- 148th Drive from 259th Street to Hook Creek Boulevard
- 149th Road from 259th Street to 262nd Street
- Hungry Harbor Road from Hook Creek Boulevard to Nassau County Line
- 262nd Place from Hungry Harbor Road to Station 10+00

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND TRAFFIC WORK TOGETHER WITH ALL WORK INCIDENTAL THERETO TOGETHER

BOROUGH OF QUEENS  
CITY OF NEW YORK

\_\_\_\_\_  
*Contractor*

Dated \_\_\_\_\_, 20\_\_

APPROVED AS TO FORM  
CERTIFIED AS TO LEGAL AUTHORITY

\_\_\_\_\_  
*Acting Corporation Counsel*

Dated \_\_\_\_\_, 20\_\_



**Department of  
Design and  
Construction**

**THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND  
CONSTRUCTION  
DIVISION OF INFRASTRUCTURE**  
30-30 THOMSON AVENUE  
LONG ISLAND CITY, NY, 11101  
TEL: 718.391.1000  
WEB: [www.nyc.gov/ddc](http://www.nyc.gov/ddc)

*TO BE FILLED IN BY THE BIDDER:*

BIDDER'S NAME:

\_\_\_\_\_  
\_\_\_\_\_

BID SECURITY (CIRCLE ONE):  
BID BOND / CERTIFIED CHECK

NUMBER OF ADDENDUMS RECEIVED  
AND ATTACHED TO BID:  
\_\_\_\_\_ ADDENDUMS

**DDC CLIENT AGENCY:**  
**DEPARTMENT OF  
TRANSPORTATION**  
*PREPARED BY:*  
**IN-HOUSE DESIGN DATE**  
*PREPARED: 01/03/2023*



# VOLUME 3 OF 3

FOR FURNISHING ALL LABOR AND MATERIALS  
NECESSARY AND REQUIRED FOR:

**PROJECT ID: HWQ274F2**

## **SCHEDULE A SPECIFICATIONS AND REVISIONS TO STANDARD SPECIFICATIONS**

### **RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2**

- Hook Creek Boulevard from 257th Street to 149th Avenue
- Francis Lewis Boulevard from 257th Street to Hook Creek Boulevard
- Frankton Street from Francis Lewis Boulevard to Nassau County Line
- 145th Avenue from Francis Lewis Boulevard to Nassau County Line
- 259th Street from 147th Avenue to 149th Road
- 259th Street from 149th Road to Craft Avenue
- 147th Avenue from 258th Street to Francis Lewis Boulevard
- 147th Road from 258th Street to Francis Lewis Boulevard
- 147th Drive from 257th Street to Hook Creek Boulevard
- 148th Avenue from 259th Street to Hook Creek Boulevard
- 148th Road from 259th Street to Hook Creek Boulevard
- 148th Drive from 259th Street to Hook Creek Boulevard
- 149th Road from 259th Street to 262nd Street
- Hungry Harbor Road from Hook Creek Boulevard to Nassau County Line
- 262nd Place from Hungry Harbor Road to Station 10+00

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND  
TRAFFIC WORK TOGETHER WITH ALL WORK INCIDENTAL  
THERETO TOGETHER**

**BOROUGH OF QUEENS  
CITY OF NEW YORK**

(NO TEXT ON THIS PAGE)

**CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE**

# ADDENDA CONTROL SHEET

BID SUBMISSION DATE/ TIME: March 16, 2023; between 8:30 AM and 11:00 AM  
 BID OPENING DATE/ TIME: March 16, 2023; 11:30 AM

PROJECT No. : HWQ274F2

**TITLE: RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

ADDENDA ISSUED	NO. OF DWG	DATE	APPROVED BY:	
			SPECS UNIT	GENERAL COUNSEL
#1 Revised Bid Date Revised Documents	0	03/02/2023	RJ	N/A

THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

03/02/2023

**ADDENDUM No. # 1**

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

85023B0052 - HWQ274F2

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

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This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bid Date Revised to 3/16/23**
2. **Bidders Questions and Responses to Questions:**  
No Attachment A is included with this Addendum.
3. **Revisions to Documents:**  
Attachment B is included with this Addendum.
4. **Revisions to PASSPort forms:**  
No Attachment C is included with this Addendum.

Transferring Data Between Rounds of an RFX: A new document titled "Transferring Data Between Rounds of an RFX" has been added to the Documents section of the View RFX tab. Please refer to this document when an addendum has been issued. Note: Whenever an addendum is issued, the RFX item grid will be cleared. You can import the work you have already done by following the steps on this document.

DDC strongly advises vendors to finalize and submit bids 48 hours prior to due date and time. The City is not responsible for technical issues (e.g. internet connection, power outages, technology malfunction, computer errors, etc.) related to bid submissions.

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-1041 or by email at [CSB\\_projectinquiries@ddc.nyc.gov](mailto:CSB_projectinquiries@ddc.nyc.gov).

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Richard Jones, PE CWI CDT  
Executive Director, Specifications

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2  
-BOROUGH OF QUEENS

**ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES**

None

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

**ATTACHMENT B – REVISIONS TO THE DOCUMENTS**

1. Added Planholders List

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-  
PHASE 2- BOROUGH OF QUEENS

**ATTACHMENT C – REVISIONS TO PASSPORT FORMS**

**Bid date Revised.**

**This Addendum is included within Round 1 of the procurement.**

*Please note that numbering of addenda is independent of rounds.*

**Questionnaire Changes:**

None.




CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

# ADDENDA CONTROL SHEET

BID SUBMISSION DATE/ TIME: March 22, 2023; between 8:30 AM and 11:00 AM  
BID OPENING DATE/ TIME: March 22, 2023; 11:30 AM

PROJECT No. : HWQ274F2

TITLE: RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

ADDENDA ISSUED	NO. OF DWG	DATE	APPROVED BY:	
			SPECS UNIT	GENERAL COUNSEL
#1 Revised Bid Date Revised Documents	0	03/02/2023	RJ	
#2 Revised Bid Date Revised Documents		03/13/2023	RJ	 03.13.23

THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

03/13/2023

**ADDENDUM No. # 2**

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

85023B0052 - HWQ274F2

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

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This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bid Date Revised to 3/22/23**
2. **Bidders Questions and Responses to Questions:**  
Attachment A is included with this Addendum.
3. **Revisions to Documents:**  
Attachment B is included with this Addendum.
4. **Revisions to PASSPort forms:**  
Attachment C is included with this Addendum.

Transferring Data Between Rounds of an RFX: A new document titled "Transferring Data Between Rounds of an RFX" has been added to the Documents section of the View RFX tab. Please refer to this document when an addendum has been issued. Note: Whenever an addendum is issued, the RFX item grid will be cleared. You can import the work you have already done by following the steps on this document.

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If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-1041 or by email at [CSB\\_projectinquiries@ddc.nyc.gov](mailto:CSB_projectinquiries@ddc.nyc.gov).

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Richard Jones, PE CWI CDT  
Executive Director, Specifications

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2  
-BOROUGH OF QUEENS

**ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES**

No.	Bidders Questions	DDC Responses
1	We respectfully request a two-week extension on the bid date from March 8 <sup>th</sup> 2023 to March 22 <sup>nd</sup> 2023. There are some major discrepancies that needs clarifications in order to provide an adequate bid.	Bid is postponed to 3/23.
2	<u>On sheet GEN1</u> , note 1.07 list streets where the City of New York still needs to acquire titles. This list consists of 90 percent of the project. Is it the City's intent not to perform any work until all titles have been acquired in entirety?	Any work within the improved right-of-way (existing roadways and sidewalks) can be performed prior to the City obtaining titles to the public streets. Street restoration that will go outside the existing roadways, existing sidewalks, or impact private properties cannot be performed until the City takes titles to the streets that are being acquired.
3	<u>On sheet U-14</u> , 23"W X 14"H Elliptical RCP CL- HE-III storm sewer is proposed on Frankton Street between Hook Creek Boulevard and 145 <sup>th</sup> Avenue. The bid schedule does not have this item. Can you please provide method of payment for this item?	Bid Item 50.21M3E023W for 23"W X 14"H RCP Class HE III Storm Sewer added to bid schedule.
4	<u>On sheet U-17</u> , 10" sanitary sewer on Hook Creek Boulevard is proposed on the plan but not on the profile. Can you please clarify the limits of the proposed 10" sanitary sewer?	Drawing U17 (sheet 69) revised to include proposed 10" sanitary sewer limits on profile.
5	<u>On sheet U-18</u> , 2 sets of double catch basins are proposed on 262 <sup>nd</sup> Places, South of Hungry Harbor Road. The bid schedule does not have this item. Can you please provide method of payment for this item?	Each set of double catch basins paid as two (2) catch basins under the provided bid item.
6	<u>On Sheet U-20</u> , there are two proposed type 1 catch basins on 147 <sup>th</sup> Avenue, just East of 258 <sup>th</sup> Street without any connections. Are they to be connected to the nearest storm sewer manhole?	Drawing U20 (sheet 72) revised to show proposed catch basins connected to nearest 24" storm sewer manhole.
7	<u>On sheet U-22</u> , there is a proposed spot repair of existing 10" sanitary sewer. Can you please provide a profile of the existing 10" sewer? Or rim and invert elevations of upstream and downstream manholes.	Drawing U22 (sheet 74) revised to include additional information.
8	<u>On sheet C-1</u> , there are no limits for the new 8" H.E.S. Concrete Base. Please provide limits delineating the H.E.S concrete base and class B32 concrete base. Please also provide an item in the bid schedule for the H.E.S concrete base.	6" and 8" B32 Class B-32 Concrete Base deleted from project. 6" and 8" High Early Strength Concrete Base proposed in project for full reconstruction areas. Items revised in Bid Schedule and Drawing DET1 (sheet15).
9	<u>On sheet UD-1</u> , details describing item 51.41W000, is for type 1 catch basin with a shallow connection. Please confirm that all basins installed under item 51.41W000 – Shallow Catch Basins are in fact standard type 1 basins and not shallow basins and only the connections are shallow.	Detail on drawing UD1 (sheet 75) is for type 1S catch basin with shallow connections payable under bid item 51.41W000. Type 1S catch basins are not shallow catch basins.

No.	Bidders Questions	DDC Responses
10	Item 4.02 CB – Asphaltic Concrete Mixture has 23,565 tons. Is this item compensation for temporary restoration of the utility work such as watermains, sewers, basins and connections? 23,565 tons seems to be overwhelmingly a lot of quantity for restoration of trenches. Is there any other work the City had in mind that will be compensated through this item?	Item 4.02 CB is for temporary restoration of utility work trenches, temporary restoration/adjustments required due to street raising, and permanent restoration of asphalt driveways, as required.
11	On 259th Street between 148th Avenue and Craft Avenue, we cannot find any information with regards to restoration of these streets. There is an item in the bid schedule for restoration of concrete base for trench restoration (4.04 B), but no other items and or description of work to be performed once the concrete base has been installed. Please provide a specific pavement restoration schedule for this section of the project.	Please refer to Bid Documents Volume 3, SW-Pages, page SW-7.
12	On sheet MPT4, please clarify the note, Stage II – Installation of Sewers – Francis Lewis Blvd. bet. 147th Dr. and 257th St., contractor will provide one lane of twelve feet minimum for two-way traffic, together with flag persons, during working hours and non-working hours. Traffic to be diverted to Hook Creek Blvd. Are flag persons to maintain one 12-ft lane for two way traffic during and after work hours? When does the diverting of traffic to Hook Creek Blvd. start and /or end?	Drawing MPT4 (sheet 185) revised. Note revised to read: Stage II – Installation of Sewers – Hook Creek Boulevard between Francis Lewis Boulevard and 145th Avenue, contractor will provide one lane of twelve (12) feet minimum for two-way local and emergency access during working hours (together with flag persons) and non-working hours. All other traffic to be diverted to Francis Lewis Boulevard. Flag persons to maintain two-way local and emergency access during working hours.
13	Furthermore, OCMC contrastingly stipulates: <ul style="list-style-type: none"> <li>• Maintaining of two 11-ft lands one in each direction</li> <li>• Restore all travel lanes after working hours</li> </ul> Please clarify if we are to follow OCMC stipulations or suggested MPT notes and plans.	OCMC Traffic Stipulations/permit to be followed.
14	OCMC stipulations states maintaining a minimum of 5-foot clear sidewalk at all times, on every location. Can the 5-foot clear sidewalk be on the opposite side of the street?	No, minimum of 5-foot clear sidewalk to be maintained on both sides of the street.
15	OCMC stipulations states maintaining of all crosswalks during and after work hours on every location. Contrastingly, MPT notes, states maintain at least one crosswalk at each corner during roadway pavement work. Please clarify if we are to follow OCMC stipulations or suggested MPT notes and plans.	OCMC Traffic Stipulations/permit to be followed. Any requested deviations to be coordinated with and approved by OCMC for amended stipulations during construction.
16	<u>On sheet MPT4</u> , there is a Special Stage note, which proposes a full roadway closure on Hook Creek Blvd. bet. Francis Lewis Blvd. and 145 <sup>th</sup> Ave. Contrastingly, OCMC stipulates at the intersection of 145 <sup>th</sup> Drive and Hook Creek Blvd.: <ul style="list-style-type: none"> <li>• Restore full width of the roadway after work hours</li> </ul> Please clarify if we are to follow OCMC stipulations or suggested MPT notes and plans. Please note that if OCMC stips are to be followed here, we will require additional contract items such as item 6.97 A – Extra High-Early Strength Concrete.	OCMC Traffic Stipulations/permit to be followed. Any requested deviations to be coordinated with and approved by OCMC for amended stipulations during construction. See response to #8

No.	Bidders Questions	DDC Responses
17	OCMC stipulated maintaining of two 11-foot lanes, one in each direction on Hook Creek Blvd. bet. 149 <sup>th</sup> Ave. and Francis Lewis Blvd. including all the intersections within. The width of the roadway along with the size and alignment of the proposed utility work will not allow for two 11 foot lanes, let alone one 11-foot lane during working hours. Please consider changing this stipulation to maintaining one lane for local and emergency during working hours and one lane for traffic (one way) after working hours. If two lanes are to be provided after work hours, all the utility trenches will have to be decked.	OCMC Traffic Stipulations/permit to be followed. Any requested deviations to be coordinated with and approved by OCMC for amended stipulations during construction.
18	In further evaluating the OCMC stipulations, there are approximately 20 intersections where the stipulation to restore full width roadway is prescribed. Was this stipulation written for just the utility work? Please consider readdressing these stipulations for curb, sidewalk and roadway work. Also please consider the significant grade changes that will hinder the maintenance of traffic as well.	Traffic Stipulations apply to all work. OCMC Traffic Stipulations/permit to be followed. Any requested deviations to be coordinated with and approved by OCMC for amended stipulations during construction.
19	<u>On sheet MPT2, notes 8 on Stage I and note 3 on stage II, refer to sheeted trenches which can remain open at end of day except at intersections. All of OCMC's stipulations seem to contradict these notes or have not been addressed. For example, stipulations on 259<sup>th</sup> St., 147<sup>th</sup> Rd., 147<sup>th</sup> Dr., 148<sup>th</sup> Rd., etc.... states contractor to maintain one 12-foot lane for local and emergency during working hours and occupy eight feet adjacent to curb after working hours. If the sheeted utility trench is not within the 8-foot adjacent to curb, will the trench have to be plated or decked?</u>	Trenches to be plated/decked, as necessary. OCMC Traffic Stipulations/permit to be followed. Any requested deviations to be coordinated with and approved by OCMC for amended stipulations during construction.
20	<u>Item 6.52 CG – Crossing Guards – Please confirm that according to specification section 6.52 CG, there are no prevailing wage rate for crossing guards.</u>	No, prevailing wage rate does not apply for item 6.52 CG.
21	Please refer to bid item 70.31 FN (47,357 LF). Please clarify where this item is located and please provide a detail.	Item is a standard NYCDEP MPT item to be used for sewer and water main installations, as required. No detail provided
22	Please refer to 6.34 ACT (66,662 LF) and 70.31 FN (47,357 LF):In total, there is a fencing quantity of 114,019 LF, which is an enormous quantity of fencing on this job. Please verify these quantities.	Quantities are correct as shown.
23	In order to provide a competitive bid, we are again requesting a two-week (2) postponement on this job due to the complexity and value of the job	Bid is postponed to 3/23.
24	Sheet 68 shows 10" ESVP Sanitary Sewer, Encased in concrete, but there is no item for encased sanitary sewer. Please provide item	Bid item 50.31SE10 added to bid schedule
25	Sheet 69 contains a note indicating 10" sanitary sewer to be replaced at same elevation as existing sewer. What are the limits of this replacement?	Drawing U17 (sheet 69) revised to include proposed 10" sanitary sewer limits on profile.
26	Please confirm the gas company will cut and loop the gas services when requested by contractor.	Yes, the gas company will cut and loop the gas services upon request
27	Please refer to U8, we are unable to determine the type of manholes at station 11+00 and 11+20. These are the manholes between Chamber No. 7 as shown in the profile view. Please clarify.	Drawing U8 (sheet 60) revised to clarify proposed work.

No.	Bidders Questions	DDC Responses
28	Please refer to the profile view on sheet U9. Along the 18" line, we'd like to confirm the material of the run. Is 18" RCP the correct call out? We do not have a bid item for this. We only have 18" ESVP. Please confirm.	Drawing U9 (sheet 61) revised profile and callouts. 18" run is E.S.V.P. Storm Sewer, Encased in Concrete.
29	Please refer to bid item 6.94 A (69 EACH). We are unable to determine where this item is or find a detail/spec for it. Please provide more information.	Refer to drawing DET1 (sheet 15), see Cross Section at Grade Change; and refer to drawing DET2 (sheet 16), see Detail-Concrete Sump with Grating Cover (Item No. 6.94A). Refer to Bid Book Volume 3, I-Pages, specification for item 6.94 A has been added.
30	Please refer to bid item 6.29 LSS (60 LF). We are not able to find these in the drawings or find a detail for this item. Please provide one.	Refer to Drawings C1 (sheet 17) and PM1 (sheet 93), see callout for Tubular Markers; and refer to Bid Book Volume 3, I-Pages, for specification for item 6.29 LSS.
31	Sheet 66 shows 23"x14" HERCP but there is no bid item for this work.	Bid Item 50.21M3E023W for 23"W X 14"H RCP Class HE III Storm Sewer added to bid schedule.
32	Sheet 69 shows 48" RCP encased in concrete but there is no bid item for this work.	Bid item 50.21M3E048D added to bid schedule.
33	There are no bid items to pay for the following GI items required in the installation of the precast porous concrete pavement: GI-PPCP-CC (CAST IN PLACE CONCRETE CURB); GI-PPCP-CH (CONCRETE HEADER); CONCRETE CHECK DAMS (GI-PPCP-CCD). Please advise how these will be paid.	Refer to Drawings PPD1-PPD6 (sheets 176-181) for bid items and details relating to Precast Porous Concrete Pavement.
34	Please confirm the following pipes: (1) Sheet U8 has a 12" RCP, CL III, this is not a bid item. (2) Sheet U18 has a 15" RCP, CL III, this is not a bid item. (3) Sheet U9 has an 18" RCP, CL III, this is not a bid item. Please confirm if this call outs are correct, if so, please revise the bid item list.	(1) Drawing U8 (sheet 60) revised profile and callouts. 12" run is E.S.V.P. Storm Sewer, Encased in Concrete. (2) Drawing U18 (sheet 70) revised callouts. 15" run is E.S.V.P. Storm Sewer, On Concrete Cradle. Item 50.31MC15 added to Bid Schedule. (3) Drawing U9 (sheet 61) revised profile and callouts. 18" run is E.S.V.P. Storm Sewer, Encased in Concrete.
35	Please refer to U14, we have a 23"X14" RCP, CL HE-III shown. However, we do not have a bid item for the 421 LF shown in the profile. Please clarify.	Bid Item 50.21M3E023W for 23"W X 14"H RCP Class HE III Storm Sewer added to bid schedule.
36	Please revise the watermain quantities for the 8" and 12" DIP. We believe the quantities provided by the DDC are way too high.	Quantities verified, please bid as shown.
37	See sheet 17. The pavement restoration on plan view calls for 3" asphalt concrete wearing course on 8" H.E.S Concrete Base. This is contradictory to the volume 3 specifications sheet SW-7 "Specific pavement restoration provisions" because it calls for an 8" class B-32 mix for pavement base. There is a very large difference in price between these two mixes. Please confirm what you want in the main road. Class B-32 concrete or Class HES concrete.	See response #8. Refer to Bid Book Volume 3 of 3, page SW-7: item 4.04 B is only for Concrete Base For Pavement, Variable Thickness for Trench Restoration, (Class B-32).
38	By raising the grade of this road, the contractor is responsible for reconstructing concrete driveways and steps, and resetting existing fences and gates as required within the private properties. Please confirm under what bid item we get paid for this work.	Refer to revised drawing DET1 (sheet 15), see Cross Section at Grade Change and Notes #1-#3.

No.	Bidders Questions	DDC Responses
39	Sheet 15 typical cross section calls for 8" thick HES Concrete item no. 4.04CC at Hook Creek Blvd. When you look at our bid item list, the description of this concrete is actually class B-32 concrete. Please confirm what concrete you want. Class B-32 concrete or Class HES concrete.	See response #8.
40	On Sheet 54 of 254 - U2/U22: In the profile view, the access manhole on station 18+50 isn't labeled. This makes it impossible to identify which item the access manhole should be paid under, as there are multiple pay items for different access manholes. Please clarify as to which bid item this particular manhole will be paid under.	Refer to Drawing U2 (sheet 54) revised profile and callouts. Access Manhole No. 3 at station 18+50 to be paid under item 51.21A003000C.
41	On Sheet 54 of 254 - U2/U22: The plan location and profile location are different for centerline of chamber 7. This will either reduce the 5'-6"W X 3'-0"H box sewer quantity while increasing the 53"W X 34"H R.C.P. sewer, or vice versa. We request a revised drawing showing the exact location of Chamber 7.	Refer to Drawing U2 (sheet 54) revised profile and callouts.
42	On Sheet 60 of 254 – U8/U22: Station 11+00 shows 12" R.C.P. CLASS III Storm Sewer Encased in Concrete. Not only is there no pay item for this, but DEP specifications call for E.S.V.P. sewers for sizes of this diameter, not R.C.P sewers. Please clarify.	Refer to Drawing U8 (sheet 60) revised profile and callouts. 12" run is E.S.V.P. Storm Sewer, Encased in Concrete.
43	On Sheet 60 of 254 – U8/U22: There is no description of the manhole on 24" R.C.P. sewer run. Please clarify.	Refer to Drawing U8 (sheet 60) revised profile and callouts.
44	On Sheet 61 of 254 – U9/U22: Station 20+50 shows 18" R.C.P. CLASS III Storm Sewer Encased in Concrete. Not only is there no pay item for this, but DEP specifications call for E.S.V.P. sewers for sizes of this diameter, not R.C.P sewers. Please clarify.	Drawing U9 (sheet 61) revised profile and callouts. 18" run is E.S.V.P. Storm Sewer, Encased in Concrete.
45	On Sheet 61 of 254 – U9/U22: The profile shows the Type B-1 manholes in dry locations. However, Type B-1 manholes are usually for wet locations, and we notice this occurs in other parts of the drawings as well. Please clarify as to whether the profiles are correct.	Refer to Drawings BOR1-BOR16, Record of Borings. Type B-1 manholes proposed due to high water table at these locations.
46	On Sheet 62 of 254 – U10/U22: the profile shows that on the 24" R.C.P. sewer, the Type B-1 manholes are in dry locations. However, Type B-1 manholes are usually for wet locations, and we notice this occurs in other parts of the drawings as well. Please clarify as to whether the profiles are correct.	Refer to Drawings BOR1-BOR16, Record of Borings. Type B-1 manholes proposed due to high water table at these locations.
47	On Sheet 64 of 254 – U12/U22: The profile shows the Type B-1 manholes in dry locations. However, Type B-1 manholes are usually for wet locations, and we notice this occurs in other parts of the drawings as well. Please clarify as to whether the profiles are correct.	Refer to Drawings BOR1-BOR16, Record of Borings. Type B-1 manholes proposed due to high water table at these locations.
48	On Sheet 64 of 254 – U12/U22: a. 1. At the intersection of 147th Ave, the plan shows a 12" wet connection at the watermain when this would typically be a 3-way fitting. Please clarify.	Wet connection at the intersection of 147th Avenue and Francis Lewis Boulevard is correct as shown.

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

**ATTACHMENT B – REVISIONS TO THE DOCUMENTS**

1) Revised Volume 3:

- S-Pages – providing latest version of OCMC stipulations.
- I-Pages – added Sections 4.09CG, 6.94 A
- JB-Package - Replace JB Price List (Revise JB 306 Description)

2) Drawings - revised:

- TTL1, DET1, C1-C6, C8-C16, HW4, U2, U8, U9, U17, U18, U20, U22, UD2, CH7, SL1, SL20, SL22, MPT1, MPT4. (TOTAL 32 DRAWINGS).



**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-  
PHASE 2- BOROUGH OF QUEENS

**ATTACHMENT C – REVISIONS TO PASSPORT FORMS**

**This Addendum initiates Round 2 of the procurement.**

*Please note that numbering of addenda is independent of rounds.*

**Questionnaire Changes:**

**Revised Bid Schedule:**

1) Revised Price Criteria:

- UTL-6.01.1(NG), UTL-6.01.2A(NG), UTL-6.01.8(NG), 7.88 AB, 7.88 AC, 7.88 AD, 70.31 FN, 70.51 EO, 70.81CB, 73.11AB, 73.21AC, 73.31AEO, 73.41AG, 73.51AS, 8.01C1, 8.01C2, 8.01H, 8.01S, 8.01W1, 8.01W2, 65.21PS, 65.31FF, 52.41V08N, 52.41 V06N

2) Added Items

- 4.04 HA, 4.04 HC, 50.21M3E023W, 50.31SE10, 50.21M3E048D, 50.31MC15

3) Deleted Items

- 50.21M3C048D, 4.04 AC, 4.04 CC

4) Changed Quantities:

- 61.11DMM06, 61.12DMM06, 50.31SC10, 64.13WC12

**Item Grid Change**

None.


CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

# ADDENDA CONTROL SHEET

BID SUBMISSION DATE/ TIME: March 22, 2023; between 8:30 AM and 11:00 AM  
 BID OPENING DATE/ TIME: March 22, 2023; 11:30 AM

PROJECT No. : HWQ274F2

TITLE: **RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

ADDENDA ISSUED	NO. OF DWG	DATE	APPROVED BY:	
			SPECS UNIT	GENERAL COUNSEL
#1 Revised Bid Date Revised Documents	0	03/02/2023	RJ	
#2 Revised Bid Date Revised Documents		03/13/2023	RJ	
#3 Questions and Answers		03/16/2023	RJ	 03.16.23

THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

03/16/2023

**ADDENDUM No. # 3**

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

85023B0052 - HWQ274F2

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

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This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bidders Questions and Responses to Questions:**  
Attachment A is included with this Addendum.
  
2. **Revisions to Documents:**  
No Attachment B is included with this Addendum.
  
3. **Revisions to PASSPort forms:**  
No Attachment C is included with this Addendum.

Transferring Data Between Rounds of an RFX: A new document titled "Transferring Data Between Rounds of an RFX" has been added to the Documents section of the View RFX tab. Please refer to this document when an addendum has been issued. Note: Whenever an addendum is issued, the RFX item grid will be cleared. You can import the work you have already done by following the steps on this document.

DDC strongly advises vendors to finalize and submit bids 48 hours prior to due date and time. The City is not responsible for technical issues (e.g. internet connection, power outages, technology malfunction, computer errors, etc.) related to bid submissions.

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-1041 or by email at [CSB\\_projectinquiries@ddc.nyc.gov](mailto:CSB_projectinquiries@ddc.nyc.gov).

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Richard Jones, PE CWI CDT  
Executive Director, Specifications

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2  
-BOROUGH OF QUEENS

**ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES**

No.	Bidders Questions	DDC Responses
1	After Addendum No. 2, the Bid Date in PASSPort is shown as March 22, 2023. However, the DDC Response to Question No. 1 shows that the bid is postponed until 3/23. Please clarify as to what the correct Bid Date is for this project.	<i>Please disregard typo in Attachment A of Addendum 2. <b><u>The current Bid Opening as stated in Addendum 2 is 3/22/2023.</u></b></i>
2	The street light drawings indicate that "existing or relocated" utility wood poles will be reused. However, the drawings fail to show which wood poles are to be relocated. This is important pre-bid information that must be known since the cost of relocating a wood pole and reusing it at a different location is significantly higher than reusing at the same location. Please specify which wood poles have to be relocated.	<i>Contractor is not responsible for relocating existing utility poles. All utility pole relocation work will be performed by the private utility companies during construction and in coordination with the Engineer and the Contractor.</i>

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

**ATTACHMENT B – REVISIONS TO THE DOCUMENTS**

- None

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-  
PHASE 2- BOROUGH OF QUEENS

**ATTACHMENT C – REVISIONS TO PASSPORT FORMS**

**This Addendum is included within Round 2 of the procurement.**

*Please note that numbering of addenda is independent of rounds.*

**Questionnaire Changes:**

- None

**Item Grid Change**

- None.


CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

# ADDENDA CONTROL SHEET

BID SUBMISSION DATE/ TIME: March 27, 2023; between 8:30 AM and 11:00 AM  
 BID OPENING DATE/ TIME: March 27, 2023; 11:30 AM

PROJECT No. : HWQ274F2

TITLE: **RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

ADDENDA ISSUED	NO. OF DWG	DATE	APPROVED BY:	
			SPECS UNIT	GENERAL COUNSEL
#1 Revised Bid Date Revised Documents	0	03/02/2023	RJ	
#2 Revised Bid Date Revised Documents		03/13/2023	RJ	
#3 Questions from Bidders and Responses to Questions		03/16/2023		
#4 Revised Bid Date Questions from Bidders and Responses to Questions; Revisions to Documents Revisions to PASSPort Forms		03/17/2023		 03/17/23

THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

03/17/2023

**ADDENDUM No. # 4**

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

85023B0052 - HWQ274F2

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

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This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bid Date Revised to 3/27/23**
2. **Bidders Questions and Responses to Questions:**  
Attachment A is included with this Addendum.
3. **Revisions to Documents:**  
Attachment B is included with this Addendum.
4. **Revisions to PASSPort forms:**  
Attachment C is included with this Addendum.

Transferring Data Between Rounds of an RFX: A new document titled "Transferring Data Between Rounds of an RFX" has been added to the Documents section of the View RFX tab. Please refer to this document when an addendum has been issued. Note: Whenever an addendum is issued, the RFX item grid will be cleared. You can import the work you have already done by following the steps on this document.

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If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-1041 or by email at [CSB\\_projectinquiries@ddc.nyc.gov](mailto:CSB_projectinquiries@ddc.nyc.gov).

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Richard Jones, PE CWI CDT  
Executive Director, Specifications



**DDC PROJECT #: HWQ274F2**

**PROJECT NAME: RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2  
 -BOROUGH OF QUEENS**

**ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES**

<b>No.</b>	<b>Bidders Questions</b>	<b>DDC Responses</b>
1	Page u9 calls out an 8" DIP WM to replace existing. This extends onto page U21, where it's called out as a 12" DIP WM. Please clarify.	The new 8" DIP WM on U9 does not extend to U21. It connects to a new 12" DIP WM at the intersection of Hook Creek Blvd and 148 <sup>th</sup> Road as shown on U9. See revised drawing U9.
2	Sheet 15 - Dwg No. DET1 – Cross Section at Grade Change – Shows the limit of unclassified excavation under item no. 6.02AAN only for the existing road. Does this limit extend to the removal of existing curbs, sidewalks, gutters and sod under the proposed curbs and sidewalks? Compensated under the same item, 6.02AAN?	Item 6.02 AAN will be paid as per NYCDOT Standard Highway Specifications, Section 6.02-Unclassified Excavation.
3	Sheet 63 – Dwg No. U11 – Profile – Shows a STD MH TYPE E-1, which corresponds to item no. 51.21SOE1030H – Standard Manhole Type E-1. Please provide detail drawing for this manhole.	Refer to NYCDEP Sewer Design Standards for Standard Manhole Type E-1 details.
4	Item no. 50.31ME12 – 12" E.S.V.P. Storm Sewer, Encased in Concrete – The bid schedule has provided 987 LF of this item, where as our take offs indicate that there is only 80± LF shown on the plans. Three locations were identified: a. 259th St. & 148th Ave. (U-2 & U-8) b. 259th St. & 148th Rd. (U-2 & U-9) c. 259th St. & 148th Dr. (U-3 & U-10) All of which are short runs under 33 LF ea. Can you confirm our takeoff or are there any other locations designated for this item for another 900± LF?	Please refer to Attachment C.
5	Item no. 50.21M3C024D – 24" R.C.P. Storm Sewer, on Concrete Cradle – The bid schedule has provided 1,202 LF of this item, where as our take offs indicate that there are only 483± LF shown on the plans. Only one location was identified: a. Francis Lewis Blvd. between 147th Ave. & 147th Rd (U-12 & U-13) b. Can you confirm our takeoff or are there any other locations designated for this item for another 700± LF?	Please refer to Attachment C.
6	Item no. 50.31SC12 – 12" E.S.V.P. Sanitary Sewer, on Concrete Cradle - The bid schedule has provided 2,284 LF of this item, where as our take offs indicate that there are only 1,656± LF shown on the plans. Is the difference of 600± LF due to any anticipated overages on the designated 15 ft – 20 ft spot repairs?	Please refer to Attachment C.

<b>No.</b>	<b>Bidders Questions</b>	<b>DDC Responses</b>
7	Item no. 51.21S0B1000V – Standand Manhole Type B-1 - The bid schedule has provided 35 EA. of this item, where as our take offs indicate that there is only 21± EA. shown on the plans. Can you please verify if the bid quantity of 35 EA. type B-1 manholes is correct?	Please refer to Attachment C.
8	Trench Restoration on 259th St. between 148th Ave. and Craft Ave. – Can DDC confirm that the restoration of these trenches is to be in kind?	Refer to revised page SW-7 in Volume 3 of 3, SW-Pages.
9	Attachment A of Addendum 2 – Bidders Questions and DDC Responses # 26 – Please confirm that there is a fee associated with cutting and looping the gas services by the Gas Company.	Please refer to Schedule GCS-A in the Volume 3 EP-7 Pages.

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

**ATTACHMENT B – REVISIONS TO THE DOCUMENTS**

- Revised Book 3 of 3, SW-Pages, Page SW-7.
- Revised Contract Drawings – sheets TTL1 and U9.

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-  
PHASE 2- BOROUGH OF QUEENS

**ATTACHMENT C – REVISIONS TO PASSPORT FORMS**

**This Addendum initiates Round 3 of the procurement.**

*Please note that numbering of addenda is independent of rounds.*

**Questionnaire Changes:**

**Revised Bid Schedule:**

1) Added Item

- 4.02 AB-R

2) Changed Quantities:

- 50.31ME12
- 50.21M3C024D
- 50.31SC12
- 51.21S0B1000V

**Item Grid Change**

- None.


CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

# ADDENDA CONTROL SHEET

BID SUBMISSION DATE/ TIME: March 29, 2023; between 8:30 AM and 11:00 AM  
 BID OPENING DATE/ TIME: March 29, 2023; 11:30 AM

PROJECT No. : HWQ274F2

TITLE: **RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

ADDENDA ISSUED	NO. OF DWG	DATE	APPROVED BY:	
			SPECS UNIT	GENERAL COUNSEL
#1 Revised Bid Date Revised Documents	0	03/02/2023	RJ	
#2 Revised Bid Date Revised Documents		03/13/2023	RJ	
#3 Questions from Bidders and Responses to Questions		03/16/2023	RJ	
#4 Revised Bid Date Questions from Bidders and Responses to Questions; Revisions to Documents Revisions to PASSPort Forms		03/17/2023	RJ	
#5 Revised Bid Date Questions from Bidders and Responses to Questions;		03/21/2023	RJ	 03.21.23

THE CITY OF NEW YORK  
DEPARTMENT OF DESIGN AND CONSTRUCTION  
DIVISION OF INFRASTRUCTURE

03/21/2023

**ADDENDUM No. # 5**

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

85023B0052 - HWQ274F2

**RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS**

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This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bid Date Revised to 3/29/23.**
2. **Bidders Questions and Responses to Questions:**  
Attachment A is included with this Addendum.
3. **Revisions to Documents:**  
No Attachment B is included with this Addendum.
4. **Revisions to PASSPort forms:**  
No Attachment C is included with this Addendum.

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Richard Jones, PE CWI CDT  
Executive Director, Specifications

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2  
-BOROUGH OF QUEENS

**ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES**

<b>No.</b>	<b>Bidders Questions</b>	<b>DDC Responses</b>
1	The GCA is requesting that the above referenced project be extended one additional day to Tuesday, March 28th. The additional day will allow bidders to obtain quotes from subcontractors and vendors, who often do not provide final prices until Monday morning. This will give contractors sufficient time to complete their bids at the most cost effective price to the DDC.	Bid Postponed to 3/29.
2	Sheet 15 calls for 3" asphalt concrete wearing course on top of 6" class B-32 Concrete Base for all streets except for HOOK CREEK BLVD & FRANCIS LEWIS BLVD. There is a contradiction between what this detail says and what is called out on sheet 25. Hungry Harbor Road calls for 3" asphalt on 8" HES concrete base. Which is correct? Please advise.	Please follow drawing C9 (sheet 25) for new concrete base on Hungry Harbor Road.

**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2-  
BOROUGH OF QUEENS

**ATTACHMENT B – REVISIONS TO THE DOCUMENTS**



**DDC PROJECT #:** HWQ274F2

**PROJECT NAME:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA-  
PHASE 2- BOROUGH OF QUEENS

**ATTACHMENT C – REVISIONS TO PASSPORT FORMS**

**This Addendum is included within Round 3 of the procurement.**

*Please note that numbering of addenda is independent of rounds.*

**Questionnaire Changes:**

- None

**Item Grid Change**

- None.

**VOLUME 3 OF 3**  
**TABLE OF CONTENTS**

<b><u>SECTION</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>PAGES</u></b>
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SCHEDULE A	GENERAL CONDITIONS TO CONSTRUCTION CONTRACT	SA-1 to SA-12
R – PAGES	REVISIONS TO STANDARD SPECIFICATIONS	R-1
I – PAGES	NEW SECTIONS	I-1 to I-64
S – PAGES	SPECIAL PROVISIONS	S-1 to S-29
SW - PAGES	SEWER AND WATER MAIN SPECIFICATIONS	SW-1 to SW-8
EP7 - PAGES	GAS COST SHARING (EP-7) STANDARD SPECIFICATIONS	EP7-1 to EP7-28C
HAZ - PAGES	SUPPLEMENTAL DOCUMENTATION FOR USE WITH SPECIFICATIONS FOR HANDLING, TRANSPORTATION AND DISPOSAL OF NONHAZARDOUS AND POTENTIALLY HAZARDOUS CONTAMINATED MATERIALS	HAZ-1 to HAZ-432
JB – PAGES	JOINT BID SECTION	JB-1 to JB-G3

## SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

The following specifications and standards are incorporated into the Contract Documents by reference as though fully set forth herein.

1. Standard Specifications and Drawings for New York City Department of Transportation (NYCDOT) are available:  
Online at: <http://www1.nyc.gov/site/ddc/resources/publications.page>
  - a. NYC DOT Standard Highway Specifications
  - b. NYC DOT Standard Details of ConstructionOnline at: <https://www1.nyc.gov/html/dot/html/about/dotlibrary.shtml#spec>
  - c. NYC DOT Division of Street Lighting Standard Drawings
  - d. NYC DOT Standard Specifications for Traffic Signals
  - e. NYC DOT Standard Drawings for Traffic SignalsFor purchase between 9:00 A.M. and 3:00 P.M. Bid Window, at 55 Water St., Ground Floor, NYC, N.Y. 10041. Tel. (212) 839-9435.
  - f. NYC DOT Division of Street Lighting Specifications
2. The 2010 Americans with Disabilities Act (ADA) Standards; available online at: <https://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm>
3. The 2013 Public Rights-of-Way Accessibility Guidelines (PROWAG); available online at: <https://www.access-board.gov/files/prowag/PROW-SUP-SNPRM-2013.pdf>
4. Standard Specifications and Drawings for New York City Department of Environmental Protection (NYCDEP) are available online at: <http://www1.nyc.gov/site/ddc/resources/publications.page>
  - a. NYC DEP Standard Sewer and Water Main Specifications, August 8, 2022
  - b. NYC DEP Instructions to Architect/Engineers Specifications for Concrete, January 1992
  - c. NYC DEP General Specification 11-Concrete, November 1991
  - d. NYC DEP Sewer Design Standards, August 2018
  - e. NYC DEP Water Main Standard Drawings, December 2020
  - f. Specifications for Trunk Main Work, July 2014
  - g. Standard Green Infrastructure Specifications September 1,2021
5. Standard Design and Guidelines for Green Infrastructure Practices, latest version, available only online at: <https://www1.nyc.gov/assets/dep/downloads/pdf/water/stormwater/green-infrastructure/green-infrastructure-standard-designs.pdf>
6. Standard Specifications and Drawings for New York City Fire Department Communications facilities of New York City are available online at <https://www1.nyc.gov/assets/fdny/downloads/pdf/about/fdny-plant-operations-standard-drawings-specifications.pdf> or for pick up from the FDNY Facilities Management Bureau, Plant Operations Engineering, 316 Sgt. Beers Avenue Cluster 1 Box 16, Fort Totten, N.Y. 11359. Contact: Mr. Ed Durkin, Tel. (718) 281-3933
7. Tree Planting Standards of the City of New York Parks & Recreation are available at the following Department of Parks & Recreation website: <http://www.nycgovparks.org/pagefiles/53/Tree-Planting-Standards.pdf>
8. Standards and Specifications for Utility Joint Bid work are available online at <http://www1.nyc.gov/site/ddc/resources/publications.page>
  - a. CET SPECIFICATIONS AND SKETCHES, dated November 2010
  - b. JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR MANHATTAN, Issued August 1, 2005

**SCHEDULE A**

**(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT  
(INCLUDING GENERAL CONDITIONS RELATED TO ARTICLE 22 – INSURANCE)**

**PART I. REQUIRED INFORMATION**

<p align="center"><b><u>INFORMATION FOR BIDDERS SECTION 26 BID SECURITY</u></b></p> <p>The <b>Contractor</b> shall obtain a bid security in the amount indicated to the right.</p>	<p>Required provided the TOTAL BID PRICE set forth on the Bid Form is \$1,000,000. or more.</p> <p>Certified Check: 2% of Bid Amount or Bond: 10% of Bid Amount</p>
<p align="center"><b><u>INFORMATION FOR BIDDERS SECTION 26 PERFORMANCE AND PAYMENT BONDS</u></b></p> <p>The <b>Contractor</b> shall obtain performance and payment bonds in the amount indicated to the right.</p>	<p>Required for contracts in the amount of \$1,000,000 or more.</p> <p>Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.</p>
<p align="center"><b><u>INFORMATION FOR BIDDERS DEPARTMENT OF DESIGN AND CONSTRUCTION SAFETY REQUIREMENTS</u></b></p> <p>The <b>Contractor</b> shall provide the safety personnel as indicated to the right.</p>	<ul style="list-style-type: none"> <li>■ Project Safety Representative</li> <li>■ Dedicated, full-time Project Safety Representative</li> </ul>
<p align="center"><b><u>CONTRACT ARTICLE 14 DATE FOR SUBSTANTIAL COMPLETION</u></b></p> <p>The <b>Contractor</b> shall substantially complete the <b>Work</b> in the number of calendar days indicated to the right.</p>	<p>See Page SA-4</p>
<p align="center"><b><u>CONTRACT ARTICLE 15 LIQUIDATED DAMAGES</u></b></p> <p>If the <b>Contractor</b> fails to substantially complete the <b>Work</b> within the time fixed for substantial completion plus authorized time extensions or if the <b>Contractor</b>, in the sole determination of the <b>Commissioner</b>, has abandoned the <b>Work</b>, the <b>Contractor</b> shall pay to the <b>City</b> the amount indicated to the right.</p>	<p>\$7,000.00 for each consecutive calendar day over substantial completion time</p>
<p align="center"><b><u>CONTRACT ARTICLE 17. SUB-CONTRACTOR</u></b></p> <p>The <b>Contractor</b> shall not make subcontracts totaling an amount more than the percentage of the total <b>Contract</b> price indicated to the right.</p>	<p>Not to exceed <u>49</u> % of the <b>Contract</b> price</p>

<p align="center"><b><u>CONTRACT ARTICLE 21.</u></b> <b><u>RETAINAGE</u></b></p> <p>The <b>Commissioner</b> shall deduct and retain until the substantial completion of the <b>Work</b> the percent value of the <b>Work</b> indicated to the right.</p>	<p><u>5 %</u> of the value of the <b>Work</b></p>
<p align="center"><b><u>CONTRACT ARTICLE 22.</u></b> <b><u>(Per Directions Below)</u></b></p>	<p>See pages SA-5 through SA-12</p>
<p align="center"><b><u>CONTRACT ARTICLE 24.</u></b> <b><u>DEPOSIT GUARANTEE</u></b></p> <p>As security for the faithful performance of its obligations, the <b>Contractor</b>, upon filing its requisition for payment on <b>Substantial Completion</b>, shall deposit with the <b>Commissioner</b> a sum equal to the percentage of the <b>Contract</b> price indicated to the right.</p>	<p>1% of <b>Contract</b> price</p>
<p align="center"><b><u>CONTRACT ARTICLE 24.</u></b> <b><u>PERIOD OF GUARANTEE</u></b></p> <p>Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.</p>	<p>Eighteen (18) Months, excluding Trees and Plants</p> <p>Twenty-four (24) Months for Trees and Plants</p>
<p align="center"><b><u>CONTRACT ARTICLE 75.</u></b> <b><u>COMPENSATION TO BE PAID TO CONTRACTOR</u></b></p> <p>The <b>City</b> shall pay and the <b>Contractor</b> shall accept in full consideration for the performance of the <b>Contract</b>, subject to additions and deductions as provided herein, the total sum <b>shown in the column to the right</b>, being the amount at which the <b>Contract</b> was awarded to the <b>Contractor</b> at a public letting thereof, based upon the <b>Contractor's</b> bid for the <b>Contract</b>.</p>	<p>Amount for which the <b>Contract</b> was Awarded:</p> <p>_____</p> <p>_____ Dollars</p> <p>(\$ _____)</p>
<p align="center"><b><u>CONTRACT ARTICLE 79.</u></b> <b><u>PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT</u></b></p>	<p>See M/WBE Utilization Plan in the PASSPort Procurement M/WBE Considerations Section.</p>

<p style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 6.40</u></b> <b><u>LIQUIDATED DAMAGES FOR ENGINEER'S FIELD OFFICE</u></b></p> <p>If the Contractor fails to satisfactorily provide the field office and all equipment specified in <b>Section 6.40 - Engineer's Field Office</b>, and/or if a cited deficiency exceed seventy-two (72) hours after notice from the Engineer in writing, or is permitted to recur, liquidated damages will be assessed in the amount specified herein for each subsequent calendar day or part thereof that a cited deficiency resulting in nonpayment, as described in <b>Section 6.40.5</b>, is not corrected.</p>	<p>\$ <u>500.00</u> for each calendar day of deficiency</p>
<p style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 6.70</u></b> <b><u>LIQUIDATED DAMAGES FOR MAINTENANCE AND PROTECTION OF TRAFFIC</u></b></p>	<p>\$ <u>250.00</u> for each instance of failure to comply with the Maintenance and Protection of Traffic requirements within three (3) hours after written notice from the Engineer.</p> <p>\$ <u>500.00</u> for each and every hour of failing to open the entire width of roadway to traffic the morning following a night/weekend work operation.</p>
<p style="text-align: center;"><b><u>STANDARD HIGHWAY SPECIFICATIONS</u></b> <b><u>SECTION 7.13</u></b> <b><u>LIQUIDATED DAMAGES FOR MAINTENANCE OF SITE</u></b></p> <p>If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of <b>Section 7.13 - Maintenance of Site</b>, the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum specified above per calendar day, for each instance of such failure, as liquidated damages and not as a penalty, for such default.</p>	<p>\$ <u>400.00</u> for each calendar day, for each occurrence</p>

**Date for Substantial Completion (Reference: Article 14)**

The Contractor shall substantially complete the Work within the Final Contract Duration determined in accordance with the terms and conditions set forth herein.

The Base Contract Duration for this project is 1095 consecutive calendar days (“ccds”).

The Final Contract Duration shall be the Base Contract Duration when a check mark is indicated before the word “NO”, below, and shall be the Base Contract Duration adjusted by the table set forth below when a check mark is indicated before the word “YES”, below.

YES       NO

When the Final Contract Duration is indicated above to be adjusted by the table below, the table may increase the Base Contract Duration depending on the date of scheduled substantial completion to avoid a scheduled substantial completion of the Work during the winter months. The date of scheduled substantial completion shall be determined by adding the Base Contract Duration to the date specified to commence work in the written Notice to Proceed. The Final Contract Duration shall then be determined as follows:

- (a) Find the row that corresponds to the month of substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice to Proceed.
- (b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

<b>Month of Substantial Completion based on the Base Contract Duration</b>	<b>Number of Days of adjustment</b>
<b>January</b>	150
<b>February</b>	120
<b>March</b>	90
<b>April</b>	60
<b>May</b>	30
<b>June</b>	0
<b>July</b>	0
<b>August</b>	0
<b>September</b>	0
<b>October</b>	0
<b>November –December 15</b>	0
<b>December 16 – December 31</b>	180

In addition, should Item No. 9.30, “Storm Water Pollution Prevention,” exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC’s recommended Standards, an additional 60 ccd shall be added to the above Final Contract Duration.

**(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)**

**PART II. TYPES OF INSURANCE, MINIMUM LIMITS AND SPECIAL CONDITIONS**

**Note:** All certificate(s) of insurance submitted pursuant to Contract Article 22.3.3 must be accompanied by a Certification by Broker consistent with Part III below and include the following information:

- For each insurance policy, the name and NAIC number of issuing company, number of policy, and effective dates;
- Policy limits consistent with the requirements listed below;
- Additional insureds or loss payees consistent with the requirements listed below; and
- The number assigned to the Contract by the City (in the “Description of Operations” field).

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Commercial General Liability Art. 22.1.1</p>	<p>The minimum limits shall be \$ <u>3,000,000</u> per occurrence and \$ <u>6,000,000</u> per project aggregate applicable to this <b>Contract</b>.                      Additional Insureds:                      1. City of New York, including its officials and employees, with coverage at least as broad as ISO Form CG 20 10 and CG 20 37,                      2. All person(s) or organization(s), if any, that Article 22.1.1(b) of the <b>Contract</b> requires to be named as Additional Insured(s), with coverage at least as broad as ISO Form CG 20 26. The Additional Insured endorsement shall either specify the entity’s name, if known, or the entity’s title (e.g., Project Manager),                      3. Con Edison                      4. National Grid                      5. Verizon</p>



<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Workers' Compensation                      Art. 22.1.2</li> <li><input checked="" type="checkbox"/> Disability Benefits Insurance                      Art. 22.1.2</li> <li><input checked="" type="checkbox"/> Employers' Liability                                      Art. 22.1.2</li> <li><input type="checkbox"/> Jones Act    Art. 22.1.3</li> <li><input type="checkbox"/> U.S. Longshoremen's and Harbor Workers Compensation Act                                      Art. 22.1.3</li> </ul>	<p>Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction.</p> <p><b>Note:</b> The following forms are acceptable: (1) New York State Workers' Compensation Board Form No. C-105.2, (2) State Insurance Fund Form No. U-26.3, (3) New York State Workers' Compensation Board Form No. DB-120.1 and (4) Request for WC/DB Exemption Form No. CE-200. The City will not accept an ACORD form as proof of Workers' Compensation or Disability Insurance.</p> <p>Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. Law.</p> <p><input type="checkbox"/> Additional Requirements:</p>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Builders' Risk    Art. 22.1.4</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Required: 100% of total bid amount</li> <li><input type="checkbox"/> Required: 100 % of total bid amount for Item(s):</li> </ul> <p><b>Contractor</b> the Named Insured; the <b>City</b> both an Additional Insured and one of the loss payees as its interests may appear. If the <b>Work</b> does not involve construction of a new building or gut renovation work, the <b>Contractor</b> may provide an installation floater in lieu of Builders Risk insurance. Note: Builders Risk Insurance may terminate upon <b>Substantial Completion</b> of the <b>Work</b> in its entirety.</p>
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Commercial Auto Liability                      Art. 22.1.5</li> </ul>	<p>\$ <u>2,000,000</u> per accident combined single limit</p> <p>If vehicles are used for transporting hazardous materials, the <b>Contractor</b> shall provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> <li>1. City of New York, including its officials and employees.</li> </ol>

<input type="checkbox"/> Contractors Pollution Liability      Art. 22.1.6	<p>\$ <u>5,000,000</u> per occurrence          \$ <u>5,000,000</u> aggregate</p> <p>Additional Insureds:          1. City of New York, including its officials and employees, and          2. _____          3. _____</p>
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.7(a)	<p>\$ _____ each occurrence          \$ _____ aggregate</p> <p>Additional Insureds:          1. City of New York, including its officials and employees, and          2. _____          3. _____</p>
<input type="checkbox"/> Hull and Machinery Insurance      Art. 22.1.7(b)	<p>\$ _____ per occurrence          \$ _____ aggregate</p> <p>Additional Insureds:          1. City of New York, including its officials and employees, and          2. _____          3. _____</p>
<input type="checkbox"/> Marine Pollution Liability      Art. 22.1.7(c)	<p>\$ <u>1,000,000</u> per occurrence          \$ <u>1,000,000</u> aggregate</p> <p>Additional Insureds:          1. City of New York, including its officials and employees, and          2. _____          3. _____</p>

[OTHER]

Art. 22.1.8

 Railroad Protection Liability Policy

(ISO-RIMA or equivalent form) approved by Permitter covering the work to be performed at the designated site and affording protection for damages arising out of bodily injury or death, physical damage to or destruction of property, including damage to the Insured's own property and conforming to the following:

- Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist.
- Indicate the Name and address of the Contractor to perform the work, the Contract # and the name of the railroad property where the work is being performed and the Agency Permit.
- Evidence of Railroad Protective Liability Insurance, must be provided in the form of the Original Policy. A detailed Insurance Binder (ACORD or Manuscript Form) will be accepted pending issuance of the Original Policy, which must be provided within 30 days of the Binder Approval.

\$ 2,000,000 per occurrence

\$ 6,000,000 annual aggregate

 Named Insureds:

1. New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), the Staten Island Rapid Transit Operation Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner) and all other indemnified parties.

<p>[OTHER]</p> <p>■ Professional Liability</p> <p>A. The Contractor’s Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of \$1,000,000 per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Contract arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor’s Professional Engineer or anyone employed by the Contractor’s Professional Engineer.</p> <p>B. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor’s Professional Engineer shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.</p>	<p>Art. 22.1.8</p>	<p>Art. 22.1.8</p>
<p>[OTHER]</p> <p>■ Engineer’s Field Office</p> <p><b>Section 6.40, Standard Highway Specifications</b></p>	<p>Art. 22.1.8</p>	<p>Fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of <u>\$40,000</u></p>
<p>[OTHER]</p> <p>□ The Following Additional Insurance Must Be Provided:</p> <p><b>Umbrella/Excess Liability Insurance</b> - The Contractor shall provide Umbrella/Excess Liability Insurance in the minimum amount of \$10,000,000 per Occurrence and \$10,000,000 in Aggregate. The policy terms and condition should be at least as broad as the underlying policies. The underlying policies should comply with the insurance provision as outlined by the contract. Defense cost should be in addition to the limit of liability. The City of New York, including its officials and employees, should be included as additional insured as respects to the noted project.</p>	<p>Art. 22.1.8</p>	

Per **Article 22.2.5 of the Standard Construction Contract**: The Contractor may satisfy its insurance obligations as defined in this Schedule A through primary policies or a combination of primary and excess/umbrella policies, so long as all policies provide the scope of coverage required herein

**SCHEDULE A**  
**(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)**  
**(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)**

**PART III. CERTIFICATES OF INSURANCE**

All certificates of insurance (except certificates of insurance solely evidencing Workers' Compensation Insurance, Employer's Liability Insurance, and/or Disability Benefits Insurance) must be accompanied by one of the following:

- (1) the Certification by Insurance Broker or Agent on the following page setting forth the required information and signatures;

-- OR --

- (2) copies of all policies as certified by an authorized representative of the issuing insurance carrier that are referenced in such certificate of insurance. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

CITY OF NEW YORK

**CERTIFICATION BY INSURANCE BROKER OR AGENT**

The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

\_\_\_\_\_  
[Name of broker or agent (typewritten)]

\_\_\_\_\_  
[Address of broker or agent (typewritten)]

\_\_\_\_\_  
[Email address of broker or agent (typewritten)]

\_\_\_\_\_  
[Phone number/Fax number of broker or agent (typewritten)]

\_\_\_\_\_  
[Signature of authorized official, broker, or agent]

\_\_\_\_\_  
[Name and title of authorized official, broker, or agent (typewritten)]

State of .....)  
  ) ss.:  
County of .....)

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC FOR THE STATE OF \_\_\_\_\_

**SCHEDULE A**

**(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)**

**PART IV. ADDRESS OF COMMISSIONER**

Wherever reference is made in Article 7 or Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents must be sent through email to [insurance@ddc.nyc.gov](mailto:insurance@ddc.nyc.gov). Hard copy documents of the above requirement are no longer required.

(NO FURTHER TEXT ON THIS PAGE)

**REVISIONS TO STANDARD SPECIFICATIONS**

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**NOTICE**

The Specification Bulletin(s) (“SB(s)”) referenced in this Section (R-Pages) may consist of revisions to the following Standard Specifications:

- New York City Department of Transportation (“NYC DOT”) Standard Highway Specifications, dated 5/16/2022;
- New York City Department of Environmental Protection (“NYC DEP”) Standard Sewer and Water Main Specifications, dated 8/8/2022; and
- NYC DEP Specifications for Trunk Main Work, dated 7/2014.

The SB(s) modify and supersede portions of the applicable Standard Specifications. The provisions contained in this Contract’s I-Pages, S-Pages and SW-Pages may further modify the applicable Standard Specifications.

The following active SB(s) are included as part of this contract:

- *SB 22-006 – INCREMENTAL COST NEAR TRANSIT FACILITIES*

The SB(s) are available online at:

<http://www1.nyc.gov/site/ddc/resources/specification-bulletins.page>

**(NO FURTHER TEXT ON THIS PAGE)**



**I - PAGES**

**NEW SECTIONS**

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**NOTICE**

UNLESS OTHERWISE NOTED, ALL SECTIONS, SUBSECTIONS, ARTICLES, OR SUB ARTICLES AS REFERRED TO HEREIN WITHIN THESE NEW SECTION SPECIFICATIONS WILL BE THOSE OF THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYC DOT) CURRENT STANDARD HIGHWAY SPECIFICATIONS WITH CURRENT ADDITIONS, MODIFICATIONS AND REVISIONS TO THE STANDARD HIGHWAY SPECIFICATIONS (R-PAGES).

THE STANDARD HIGHWAY SPECIFICATIONS ARE NOT INCLUDED IN THESE I-PAGES. SEE THE NYC DOT STANDARD HIGHWAY SPECIFICATIONS BOOKS FOR STANDARD SPECIFICATIONS TEXTS.

(NO TEXT ON THIS PAGE)

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(NO TEXT)

## **SECTION 2.29 – WARM MIX TECHNOLOGIES**

**2.29.1.** This section describes warm mix technologies for use in the construction of Performance Based Asphalt Paving Mixtures. Warm mix technologies are systems that enable the production of asphalt pavements at lower temperatures than traditional Hot Mix Asphalt (HMA) or are used to enhance compaction of HMA.

### **2.29.2. GENERAL REQUIREMENTS**

Warm Mix technologies must be on one of the current NYSDOT Approved Lists for Warm Mix Asphalt Technologies (lists 712-1010, 712-1020, or 712-1030).

Warm mix additives must be used in accordance with the manufacturer's published recommendations.

### **2.29.3. PLANT AND EQUIPMENT**

All plant and equipment for warm mix technologies must be installed in accordance with the manufacturer's recommendations. Prior to using the warm mix technologies, the plant and equipment installation must be approved in writing by a manufacturer's technical representative and the Director of QA.

All references to **Section 3.01** are hereby replaced with the following new **Section 3.09**.

**SECTION 3.09 – ASPHALT PAVING MIXTURES (BALANCED MIX DESIGN)**

**3.09.1. INTENT.**

This section describes Balanced Mix Design Asphalt Paving Mixtures.

**3.09.2. CLASSES AND TYPES.**

(A) Balanced Mix Design Asphalt Paving Mixtures must be of the following kinds:

- Balanced Mix Design Binder Mixture, 1" Nominal Maximum Aggregate Size (NMAS)
- Balanced Mix Design Top Mixture, 1/2" NMAS

(B) Kind of mixture must be as specified.

**3.09.3. MATERIAL.**

Balanced Mix Design Asphalt Paving Mixtures will be composed of virgin aggregate, virgin asphaltic cement, rejuvenating agent, warm mix technologies and / or recycled asphalt pavement (RAP).

(A) GENERAL.

The Contractor must obtain Department approval of all material sources before any mixture is mixed at any asphalt plants. Approval of sources for the supply of the coarse and fine mineral aggregates must be obtained from the NYCDDC Director of Quality Assurance (QA).

All laboratories, asphalt mix designs, and asphalt plants proposed by the Contractor must be subject to approval by QA and in accordance with their "Mix Design, Laboratory and Plant Acceptance Protocol". Copies of this protocol may be obtained at the pre-construction meeting or from the Engineer. The minimum requirement for approval of the proposed plant is that it must be on the current New York State Department of Transportation (NYSDOT) approved list.

(B) VIRGIN AGGREGATES.

Virgin aggregates must meet the requirements of Section 2.02.

(C) VIRGIN ASPHALTIC CEMENT.

Virgin asphaltic cement must meet the requirements of Section 2.05.

(D) REJUVENATING AGENT.

Rejuvenating agent must meet the requirements of Section 2.28.

(E) WARM MIX TECHNOLOGIES.

Warm mix technologies must meet the requirements of Section 2.29.

(F) RECYCLED ASPHALT PAVEMENT.

Recycled asphalt pavement must meet the requirements of section 2.30.

## 3.09.4. CONTRACTOR'S MIX DESIGN.

## (A) MIX DESIGN.

The Contractor must formulate and submit mix designs for Balanced Mix Design Asphalt Paving Mixtures, and submit them in writing to the Engineer. The mix designs must be submitted on forms in accordance with the QA "Mix Design, Laboratory and Plant Acceptance Protocol". Mix designs must be prepared and submitted to the Engineer for approval a minimum of four (4) weeks prior to the scheduled start of paving work.

The approved formula must not be changed without the written permission of QA.

The contractor must develop a Job Mix Formula (JMF) through a four-step process consisting of:

- 1) selecting appropriate materials,
- 2) developing a design aggregate structure,
- 3) evaluating the resultant mixture's conformance to specified Performance Requirements, and
- 4) determining the acceptable range of total mixture asphalt content.

Mix designs must be 4-point designs with constant aggregate proportions, constant RAP proportions, and varied amounts of virgin asphaltic cement and/or rejuvenating agent. The design points must be selected so that the total mixture asphalt content (%AC<sub>mix</sub>) is evenly spaced. The overall range of %AC<sub>mix</sub> covered by the design points must be large enough that they contain one failing rutting test (Hamburg or IDT) and one failing cracking test (FI or CT Index) or have an overall range of 2% %AC<sub>mix</sub>, whichever is smaller.

%AC<sub>mix</sub> as calculated and shown in the mix design will include the rejuvenator and all of the RAP AC.

Subject to approval by the Director of QA, a mix design may be resubmitted for renewal without performing a new 4-point design, provided the following requirements are met:

- i. The mix design has been in continuous production (no gaps greater than 6 months) since its initial approval;
- ii. The plant layout has not been modified (including replacement of major equipment);
- iii. All periodic Performance Testing per Subsection 3.09.4.(C) is within tolerance, and did not require any retests.
- iv. The performance of the mix design is acceptable to the Director of QA.

The mix design procedure must be as follows:

- i. Identify all material sources.
- ii. Determine gradation and asphalt content of RAP stockpiles per **Section 2.30.4**.
- iii. Determine aggregate bulk specific gravity ( $G_{sb}$ ) and apparent specific gravity ( $G_{sa}$ ) of all virgin and RAP aggregates per ASTM C127 and C128.
- iv. Select grade of virgin asphalt binder and/or rejuvenating agent to be used.
- v. Select blend of virgin aggregates RAP, virgin asphalt cement, and rejuvenator to meet the requirements of Subsection 3.09.4.(B), Control Requirements.
- vi. Select the AC content for the trial batches.
- vii. Determine mixing and compaction temperatures, per NYSDOT MM5.16, Table 7.
- viii. Prepare samples in the laboratory for testing per ASTM D6925, with the following supplemental requirements:
  - a. Samples for Performance Testing must be prepared per 3.09.4.(C) below.

- ix. Perform tests per Subsection 3.09.4.(C) and Subsection 3.09.4.(D) to verify mix design performance and establish production tolerances.
- x. Submit acceptable mix design to the Director of QA for approval.

(B) CONTROL REQUIREMENTS.

1. AGGREGATE GRADATION. The JMF submitted must meet all of the control points in NYSDOT Materials Method 5.16, Table 1. The JMF must show the target design gradation at the sieve sizes shown in NYSDOT MP 401 Table 1. All aggregate gradation percentages are based on the total dry weight of the aggregate.

2. TARGET DESIGN ASPHALT CONTENT. The JMF submitted must list the target design total mixture asphalt content  $\%AC_{mix}$ , the minimum design total mixture asphalt content  $\%AC_{min}$ , and the maximum total mixture asphalt content  $\%AC_{max}$ .

The target design total mixture asphalt content  $\%AC_{mix}$  will be selected as follows:

- i. A plot will be generated for each of the performance tests, with  $\%AC_{mix}$  on the X axis and the performance value on the Y axis, and a linear trendline generated.
- ii. The range of  $\%AC_{mix}$  that produces passing performance tests (where the trendline meets the performance criteria) will be identified for each performance test. The  $\%AC_{mix}$  passing performance range must be rounded to the 0.1% in the direction that produces the most conservative result (a smaller range of acceptable  $\%AC_{mix}$ ).
- iii. The ranges for each of the performance tests will be overlaid, and a combined range that produces passing results for all tests will be determined.
- iv. The middle of this combined range will be the target  $\%AC_{mix}$ .

3. TARGET VOLUMETRIC PROPERTIES. The JMF submitted must show the following target volumetric properties:

- i. Voids in Mineral Aggregate (VMA)
- ii. Voids Filled with Bitumen (VFB).

These properties must be calculated as described in Subsection 3.09.4.(D). If the target design asphalt content  $\%AC_{mix}$  is interpolated between trial values, the JMF volumetric properties must be similarly interpolated.

(C) PERFORMANCE REQUIREMENTS

1. PERFORMANCE TESTING CRITERIA. The mix must be designed to meet the performance testing criteria in Table 3.09-1.



**TABLE 3.09-I - PERFORMANCE TESTING CRITERIA**

Test Methods	Criteria	Min. Design Value	Max. COV <sup>1</sup>
<b>RUTTING TESTS</b>			
AASHTO T324 Hamburg Wheel-Track Test	Rut Depth	12.5 mm	N/A
ASTM D6931 Indirect Tensile Strength (IDT) Test	IDT Strength	30 psi	≤15
<b>CRACKING TESTS</b>			
AASHTO T 393 SCB Flexibility Index (FI) Test	Flexibility Index	8	≤40
ASTM D8225 CT Index Test	CT Index	135	≤25

Note 1: COV = Coefficient of Variation, defined per ASTM E177.

Specimens must be batched and compacted per NYSDOT MM5.16 Section VI.C, and Table 3.09-II below.

**TABLE 3.09-II - SUMMARY OF TESTING CRITERIA FOR BALANCED MIX ASPHALT**

		Hamburg Wheel-Track	IDT	CT Index	SCB FI
Test Location		Laboratory	Plant	Plant	Plant
Test Method		AASHTO T324	ASTM D6931 NCHRP 9-33 Report	ASTM D8225	AASHTO T393
No. of Samples		Initial: 2 wheel tests (4 plugs) Periodic verification: 1 wheel test (2 plugs)	3	3	3
Cycles		20,000	N/A	N/A	N/A
Load Rate (mm/min)		N/A	50±5	50±2	50±2
Height (mm)		62±2	95±5	½" NMAS = 62±1 1" NMAS = 95±1	50±1
Notch Dimensions (mm)		N/A	N/A	N/A	<2.25 wide 15±1 deep
Aging	Lab mixed	2 hours loose mix volumetric Conditioning at Compaction Temperature			
	Plant mixed	Reheat loose mix to Compaction Temperature and Compact Specimens			
HMA Compaction Temp, °C		V Grade = 149°C ± 3°C E Grade = 163°C ± 3°C			
WMA Compaction Temp, °C		V Grade = 132°C ± 3°C E Grade = 146°C ± 3°C			
Air Voids, %		7 ± 0.5	7 ± 0.5	7 ± 0.5	7 ± 0.5
Test Temp, °C		45°C ± 1.0	44°C ± 1.0	25°C ± 1.0	25°C ± 1.0
Water Bath Conditioning		50°C for 30 min.	44°C for 2 hrs ± 10 min.	25°C for 2 hrs ± 10 min.	25°C for 2 hrs ± 10 min

## (D) PRODUCTION TOLERANCES

The tolerances in Table 3.09-III are applied to the JMF in the approved mix design.

**TABLE 3.09-III - VOLUMETRICS PRODUCTION TOLERANCES**

Test	Tolerance applied to the JMF in the approved mix design
Aggregate Gradation, ASTM D5444 <i>(Note 1)</i>	NYSDOT MP 401 Table 1, except the Control Points in NYSDOT MM 5.16 Table 1 must not be exceeded.
Asphalt %AC <sub>mix</sub> , ASTM D6307 <i>(Note 1)</i>	±0.1% applied to the JMF
Air voids $P_a$ , ASTM D3203 <i>(Notes 2, 3)</i>	4.0% ±1.0%
VMA, ASTM D6995 <i>(Notes 2, 3)</i>	NYSDOT MP 401 Table 7
VFB <i>(Notes 2, 3, 4)</i>	NYSDOT MP 401 Table 7

*Note 1: Determined by batched weight for mix design tests.*

*Note 2: Samples must be prepared by Superpave Gyratory Compactor per ASTM D6825, compacted to  $N_{design}$  of 75 gyrations.*

*Note 3: Maximum ( $G_{mm}$ ) and Bulk ( $G_{mb}$ ) specific gravity samples used for these tests must meet the tolerances in NYSDOT MP 401, Table 5.*

*Note 4: VFB is calculated per Appendix 1 to NYSDOT MM 5.16.*

**3.09.5. ASPHALT PLANT REQUIREMENTS.**

## (A) QUALITY CONTROL.

## 1. DAILY QC LOT TESTING.

The asphalt plant must perform ongoing QC lot testing during production. Test reports must be kept of all QC test results. Test reports must include the technician's name and approval (signed and dated) by the plant's QC manager. The QC manager must review and approve test reports on a daily basis. If test reports are kept electronically, a scanned PDF of the signed test reports are acceptable; test reports stored solely in computer spreadsheets are not acceptable. The Quality Control sampling and testing called for in NYSDOT MP 401 Table 4 is required, except that references to the RME refer to the Director of QA.

## 2. PERIODIC PERFORMANCE TESTING.

The asphalt plant must perform periodic performance testing. Periodic performance testing will be required at the frequency shown in Table 3.09-IV, and after all plant shutdowns and major maintenance. Periodic performance testing must be per Subsection 3.09.4.(C). The plant may choose which of the cracking tests to perform for periodic performance testing, unless directed in advance by the Director of QA. The cracking test used for periodic testing may not be changed without prior written approval of the Director of QA. Results of all periodic performance testing must be submitted to the Director of QA for approval.

**TABLE 3.09-IV  
PERIODIC PERFORMANCE TESTING FREQUENCY**

Mix Design RAP%	Periodic Testing Frequency		
	Cracking (SCB FI, <u>or</u> CT Index)	Rutting (IDT)	Rutting (Hamburg)
RAP% ≤ 40%	Weekly	Weekly	6 months
40% < RAP%	Every third day	Every third day	3 months

(B) QUALITY ASSURANCE SAMPLES.

In addition to the requirements of Section 5.07, when requested by the Director of QA, the Contractor must deliver to QA bagged asphalt and / or compacted asphalt samples (Superpave gyratory compactor samples) in sufficient quantity to perform the testing in Subsection 3.09.5.(A).

The Marshall flow and stability tests called for in Section 5.07.2 are replaced by the cracking test specified in Section 3.09.5.(A).2 above.

(C) MAINTENANCE.

The asphalt plant must be maintained in proper working order. Plant scales must be checked quarterly, and adjusted if necessary. The Director of QA must be notified in writing two weeks prior to scale checks, scheduled plant shutdowns, scheduled major maintenance, and plant openings after shutdowns or major maintenance.

**3.09.6. HANDLING, MEASURING, AND BATCHING MATERIALS.**

(A) HEATING AND STORING INGREDIENTS

Virgin asphalt binder must be heated at the temperature recommended by the binder supplier in a manner that will avoid overheating and provide a continuous supply to the mixer at a uniform temperature.

(B) PROPORTIONING INGREDIENTS

Aggregate and RAP being mixed must be proportioned accurately by weight. Fluids must be proportioned by weight or volume. All scales and meters must be calibrated quarterly and maintained accurate within 0.5%.

(C) MIXING INGREDIENTS

The mixer must be capable of producing a well-coated and homogeneous mixture at the specified temperature. The finished mixture must contain 95% minimum fully coated particles, in accordance with ASTM D2489. The plant must verify the 95% fully coated particles annually and as follows:

- i. Whenever plant layout (including RAP collar placement) is altered or major maintenance is performed;
- ii. Whenever feed rate is changed for drum plants;
- iii. Whenever minimum mixture times are changed for batch plants.

(D) TEMPERATURE OF MIXTURE

Balanced Mix Design asphalt must be mixed and compacted within the temperature ranges shown on the approved mix design.

Unless an alternate range is approved by the Director of QA with the mix design:

1. HMA must be mixed and compacted within 250F and 325F, but all compaction must be completed before the mat temperature falls below 250F.
2. WMA must be mixed and compacted within the ranges recommended by the WMA technology provider, but all compaction must be completed before the mat temperature falls below 230F.

**SECTION 4.09 CG - STEEL FACED INTEGRAL CONCRETE CURB AND GUTTER**

**4.09CG.1. DESCRIPTION.** Steel faced integral concrete curb and gutter shall consist of steel facing set in a concrete cradle integrally formed with the gutter to the size and shape shown on the Contract Drawings and where directed by the Engineer.

**4.09CG.2. MATERIALS.** All materials shall comply with the requirements of Subsections 4.09.3. of the Standard Highway Specifications, unless otherwise shown on the plans or specified herein.

Steel facing shall be Type D, bent plate as per Standard Drawings H-1010, H-1011-1 through H-1011-9 and attached sketches, and H-1015, dated 07-01-10, and as modified on the plans. All steel facing at corners, transition and other modifications to bent plate sections shall be shop fabricated.

Concrete for machine formed curb and gutters shall be Class J Concrete as specified in the New York State Department of Transportation STANDARD SPECIFICATIONS current version, Section 501, Portland Cement Concrete - General.

**4.09CG.3. METHODS.** All methods of construction shall be in accordance with the requirements of Item 4.08 CG, modified with the addition of steel facing, as shown on the Contract Drawings.

All steel facing shall be painted as per Subsection 4.09.4.(K) PAINTING, of the Standard Highway Specifications.

Where the Contractor proposes to machine form integral curb and gutter, he shall also comply with the following additional requirements:

Slump range shall be 1/2 inch to 1-1/2 inches. Air content shall be  $\pm 2\%$  of design.

**4.09CG.3. MEASUREMENT.** The quantity to be measured for payment shall be the number of linear feet of each type of Integral Steel Faced Concrete Curb and Gutter constructed, complete, in place, as required, measured along the top of the exposed face of steel, and adjusted in accordance with Section 5.04.

Integral steel faced concrete curb and gutter constructed in accordance with the New York City Department of Transportation's Standard Details of Construction Standard Drawings H-1011-1 through H-1011-9, will be measured for payment under the appropriate Corner or Straight Integral Steel Faced Concrete Curb and Gutter item. Integral steel faced concrete curb and gutter constructed in accordance with New York City Department of Transportation's Standard Details of Construction Standard Drawing No. H-1015, will be measured for payment under the appropriate Straight or Depressed Integral Steel Faced Curb and Gutter item.

Curved integral steel faced concrete curb and gutter will be measured as straight curb when the radius is greater than 100 feet and as corner curb when the radius is 100 feet or less. Integral Corner Steel Faced Concrete Curb and Gutter will be measured only from PC to PT. All additional tangent lengths of steel faced integral concrete curb attached to the integral corner steel faced concrete curb will be measured for payment as integral straight steel faced concrete curb and gutter.

Transitional steel faced concrete curb and gutter at driveways shall be measured for payment as Depressed Steel Faced Concrete Curb and Gutter. All additional lengths of steel faced curb, outside of the depressed and transitional curb and gutter in driveways, will be measured for payment as straight steel faced concrete curb and gutter.

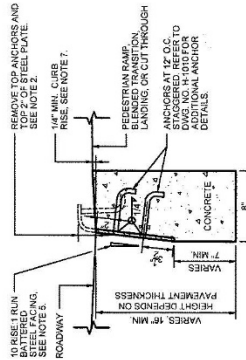
**4.09CG.4. PRICES TO COVER.** When the proposed adjacent sidewalk is designated to be pigmented, no additional payment will be made for the cost of pigmenting the steel faced concrete curb and gutter to match the proposed adjacent pigmented sidewalk in color.

The contract price per linear foot of Integral Steel Faced Concrete Curb and Gutter of each type shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to construct the integral curb and gutter complete in place, including, but not limited to, excavation (other than rock excavation) and backfilling, in full compliance with the requirements of the specifications, to furnish such samples for testing and to provide such testing equipment, laboratory space and facilities as may be required, and maintaining the integral steel faced concrete curb and gutter in good condition as specified in Section 5.05.

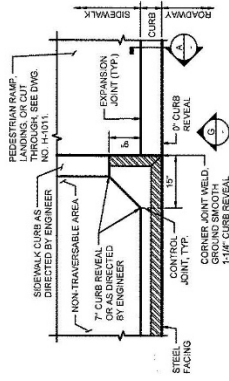
*Payment will be made under:*

Item No.	Item	Pay Unit
4.09 CGA	INTEGRAL STRAIGHT STEEL FACED CONCRETE CURB AND GUTTER	L.F.
4.09 CGC	INTEGRAL CORNER STEEL FACED CONCRETE CURB AND GUTTER	L.F.
4.09 CGD	INTEGRAL DEPRESSED STEEL FACED CONCRETE CURB AND GUTTER	L.F.

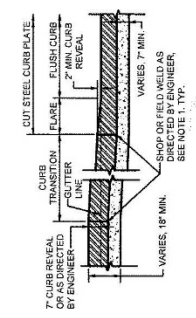
- NOTES:**
1. ALL MATERIALS AND CONSTRUCTION METHODS USED MUST CONFORM TO SECTION 4.09 OF THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYC DOT) STANDARD HIGHWAY SPECIFICATIONS.
  2. FOR STEEL FACED CONCRETE CURB, SEE DWG. NO. H-1010.
  3. ALL EXPOSED CUT STEEL CURB SURFACES MUST BE GROUND SMOOTH.
  4. FOR PEDESTRIAN RAMPS, SEE DWG. NO. H-1011. THE ROUNDED EDGE OF STEEL CURB SHALL BE 1/4" MIN. FOR FLUSH CURB OF PEDESTRIAN RAMPS, BLENDED TRANSITIONS, AND CUT THROUGH.
  5. VERTICAL STEEL FACING MAY BE USED FOR CORNER CURBS, PROVIDING THE ENDS ARE WELDED TO FORM A TRANSITION AND ALIGN WITH ADJACENT BATTERED STEEL FACED CURB.
  6. STEEL CURB FACING WITH LESS THAN TWO WELDED ANCHORS MUST BE WELDED TO FORM A TRANSITION AND ALIGN WITH ADJACENT BATTERED STEEL FACED CURB.
  7. FLUSH CURB MAY BE CONSTRUCTED WITH A RISE OF ONE QUARTER INCH (1/4") TO ONE HALF INCH (1/2") AT FLUSH CURB. THE TRANSVERSE CURB SLOPE MUST NOT BE LESS THAN THE SIDEWALK SLOPE. POSITIVE DRAINAGE MUST BE PROVIDED AT FLUSH CURB.



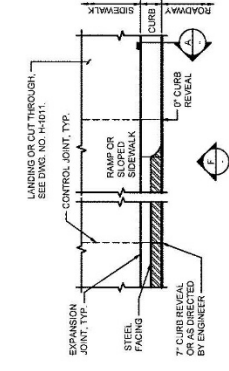
**A** FLUSH STEEL FACED CONCRETE CURB - SECTION VIEW  
SCALE: N.T.S.



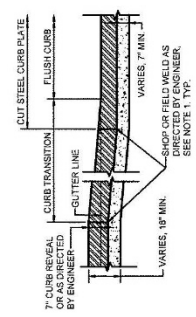
**B** STEEL FACED CONCRETE CURB AT RAMP SIDE FLARES - PLAN VIEW  
SCALE: N.T.S.



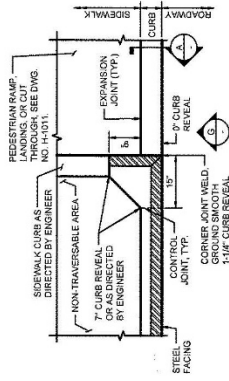
**C** STEEL FACED CONCRETE CURB AT RAMP SIDE FLARES - ELEVATION VIEW  
SCALE: N.T.S.



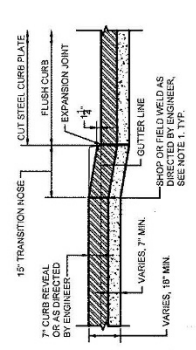
**D** STEEL FACED CONCRETE CURB AT TRANSITION NOSE - PLAN VIEW  
SCALE: N.T.S.



**E** STEEL FACED CONCRETE CURB AT TRANSITION NOSE - ELEVATION VIEW  
SCALE: N.T.S.



**F** STEEL FACED CONCRETE CURB AT SLOPED SIDEWALK - PLAN VIEW  
SCALE: N.T.S.




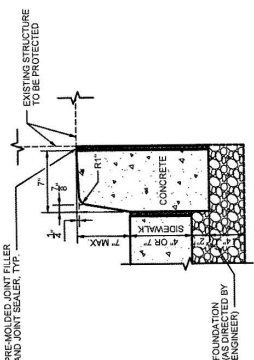
**G** STEEL FACED CONCRETE CURB AT SLOPED SIDEWALK - ELEVATION VIEW  
SCALE: N.T.S.

**NEW YORK CITY**  
  
 New York City  
 Department of Transportation  
**MISCELLANEOUS CURBS**  
**STEEL FACED CURB AT PEDESTRIAN RAMPS**

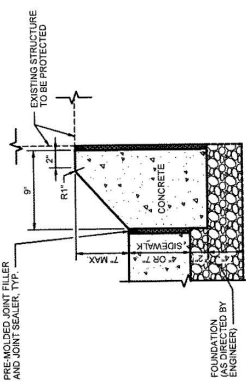
Date Issued: 6/27/2022  
 Scale: AS SHOWN  
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 PAGE 5 OF 4

- NOTES:**
- FOR SIDEWALK CURB AT PEDESTRIAN RAMPS, SEE DWG. NO. H-1011.
  - FOR STEEL FACED CURB CONSTRUCTION AT SIDEWALK CURBS, SEE DETAILS D AND G ON DWG. NO. H-1061-1.
  - ALL MATERIALS AND CONSTRUCTION METHODS USED MUST CONFORM TO SECTION 4.08 OF THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYC DOT) STANDARD HIGHWAY SPECIFICATION (S.H.S.) AND THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYC DOT) STANDARD HIGHWAY SPECIFICATION (S.H.S.) FOR CONCRETE SIDEWALK CURB MUST BE INSTALLED AS DIRECTED BY THE ENGINEER. WHERE PROPOSED REDUCED SIDEWALK GRADES WOULD OTHERWISE COMPROMISE THE INTEGRITY OF NYC STRUCTURES, EXISTING SIDEWALK ENCROACHMENTS TO REMAIN (SUCH AS BRICK AND/OR MASONRY WALLS) EXPOSED TREE ROOTS, OR EXPOSED EXISTING BURIED BUILDING FACADES.
  - INTEGRAL CONCRETE SIDEWALK CURB MUST BE INSTALLED AS DIRECTED BY THE ENGINEER WHERE PROPOSED REDUCED SIDEWALK GRADES WOULD OTHERWISE COMPROMISE THE INTEGRITY OF TREE ROOTS.
  - INTEGRAL CONCRETE SIDEWALK CURB MAY BE INSTALLED AS DIRECTED BY THE ENGINEER WHERE PROPOSED REDUCED SIDEWALK GRADES WOULD OTHERWISE COMPROMISE THE INTEGRITY OF TREE ROOTS, OR EXPOSED EXISTING BURIED BUILDING FACADES, OR OTHER FLEXIBLE GROUND SURFACES.
  - EXPANSION JOINTS IN SIDEWALK CURB MUST COMPLY WITH NYC DOT STANDARD SPECIFICATIONS SECTION 4.08 AND DWG. NO. H-1061-1. EXPANSION JOINTS IN SIDEWALK CURB MUST COMPLY WITH NYC DOT STANDARD SPECIFICATIONS SECTION 4.13.
  - WHERE SIDEWALK CURB IS USED TO AVOID A STRUCTURE OR NON-WALKABLE AREA ADJACENT TO A PEDESTRIAN CIRCULATION PATH, SIDEWALK CURB MAY BE INSTALLED AS DIRECTED BY THE ENGINEER TO ACCOMMODATE REDUCED SIDEWALK GRADE.
  - AT THE INTERSECTION OF SIDEWALK CURB RUNS, INCLUDING WHERE SIDEWALK CURB IS WRAPPED AROUND STRUCTURES OR NON-WALKABLE AREAS, A SINGLE JOINT WITH PRE-MOLDED JOINT FILLER AND JOINT SEALER MUST BE PROVIDED.

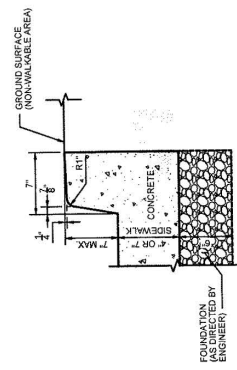
	New York City Department of Transportation
	MISCELLANEOUS CURBS SIDEWALK CURBS
Date Issued: 6/27/2022	Scale: AS SHOWN
	APPX. TB 22-002 PAGE 4 OF 4



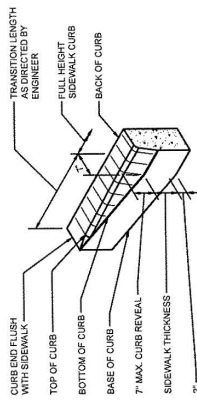
**H** CONCRETE SIDEWALK CURB - SECTION VIEW  
SCALE: N.T.S.



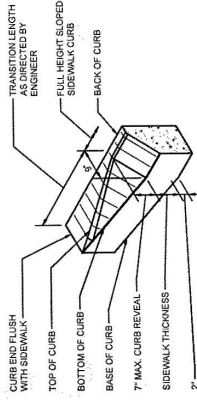
**J** SLOPED CONCRETE SIDEWALK CURB - SECTION VIEW  
SCALE: N.T.S.



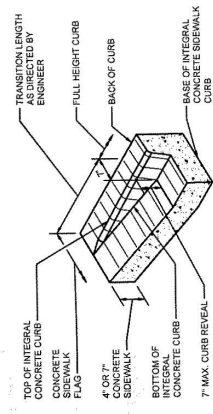
**K** INTEGRAL CONCRETE SIDEWALK CURB - SECTION VIEW  
SCALE: N.T.S.



**L** SIDEWALK CURB TRANSITION FLUSH TO FULL HEIGHT  
ISOMETRIC VIEW  
SCALE: N.T.S.



**M** SLOPED SIDEWALK CURB TRANSITION FLUSH TO FULL HEIGHT  
ISOMETRIC VIEW  
SCALE: N.T.S.



**N** INTEGRAL SIDEWALK CURB TRANSITION FLUSH TO FULL HEIGHT  
ISOMETRIC VIEW  
SCALE: N.T.S.



**SECTION 6.29 LSS - FURNISH AND INSTALL PERMANENT DEDICATED LANE SEPARATOR SYSTEM WITH REBOUNDABLE BOLLARDS**

**6.29 LSS.1 DESCRIPTION.**

This work shall consist of furnishing and installing plastic bollards at locations specified in the Contract Documents or as directed by the Engineer.

**6.29 LSS.2 MATERIALS.**

The bollard assemblies should be supplied by one of the following or approved equal. Color shall be yellow, as selected by the City from the manufacturer's range of colors.

<p><b>Qwick Kurb</b>  <b>Qwick Kurb INC.</b>                  1919 US 41 South                  Ruskin, FL 33570                  Website:  <a href="http://www.qwickkurb.com/">http://www.qwickkurb.com/</a>                  Phone: (813) 645-5072                  Fax: (813) 645-4856</p>	<p><b>Dura-Curb</b>  <b>John Thomas Inc.</b>                  1560 Lovett Drive                  Dixon, IL 61021                  Website:  <a href="https://www.jttraffic.com/our-products/dura-curb/">https://www.jttraffic.com/our-products/dura-curb/</a>                  Phone: (888) 447-7263                  Fax: (888) 335-3948</p>	<p><b>Tuff Curb</b>  <b>Impact Recovery Systems</b>                  4955 Stout Dr.                  San Antonio, TX 78219                  Website:  <a href="https://www.impactrecovery.com/products/tuff-curb1/">https://www.impactrecovery.com/products/tuff-curb1/</a>                  Phone: (210) 736-4477</p>
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The material should consist of reboundable bollards and pavement anchor assemblies. The separator system shall consist of but not limited to Separator Units, Male End Units, Female End Units, Reflective Arcs, Reboundable Channelizers and Connecting Nuts. Any specialized tools required for maintenance or repairs after acceptance of the project shall also be supplied.

**6.29 LSS.3 METHODS.**

The work shall consist of furnishing and installing bollards at locations specified in the Contract Documents. The Contractor shall properly align and install as per the manufacturer's instructions.

**6.29 LSS.4 MEASUREMENT.**

The quantity to be measured for payment shall be the number of linear feet, measured to the nearest foot, measured along the centerline of the raised separator system.

**6.29 LSS.5 PRICE TO COVER.**

The contract price bid per linear foot of Permanent Dedicated Lane Separator System with Reboundable Bollards shall include the cost of the raised separators, end units, reflective arcs, reboundable channelizers, anchors and all other materials, labor, equipment, tools, insurance and incidentals necessary to furnish and install the system in accordance with the Contract Documents.

*Payment will be made under:*

Item No.	Item	Pay Unit
6.29 LSS	FURNISH AND INSTALL PERMANENT DEDICATED LANE SEPARATOR SYSTEM WITH REBOUNDABLE BOLLARDS	L.F.

The Section below supersedes and replaces Section 6.40 of NYC DOT  
Standard Specifications dated May 16, 2022

**SECTION 6.40 – Engineer’s Field Office**

**6.40.1. DESCRIPTION.** The Contractor shall provide, furnish, and maintain a fully equipped field office (Type A, B, C, CU, D, DC, or DU, as specified) for the exclusive use of and occupancy by the Department’s engineering personnel and/or Supervising Consultant (herein after called “City personnel”), and by the engineering personnel of private utilities when specified. The field office shall be at a location approved by the Engineer and shall be a commercial building, store front, or with the approval of both Office of Construction Mitigation and Coordination (OCMC) and the Community Board it may be a mobile trailer(s). If a trailer is used it shall be subject to approval by the Engineer, and all necessary permits shall be obtained by the Contractor. The Contractor may have facilities in an adjoining area separated by a lockable door, provided such facilities are in a location approved by the Engineer. The field office must be within ½ mile of the job site. Field offices located further than ½ mile from the job site will require approval by the Director or Assistant Commissioner for Construction.

The field office structure and occupancy thereof shall conform to the requirements of all laws, rules, regulations, and orders applicable to it.

The field office and all equipment, except as otherwise specified, may be new materials or may be used materials in good condition and satisfactory to the Engineer.

**6.40.2. MATERIALS.**

(A) **GENERAL CONSTRUCTION.** The Engineer’s Field Office shall be in an approved and weatherproof building. It shall have a minimum ceiling height of seven (7’) feet and be partitioned to provide the number of rooms required for the type of office specified. Floor space for Field Office Types C, CU, D, and DU shall be subdivided into work areas based on a floor plan provided by the City to the Contractor upon notification of space availability.

(B) **GENERAL FACILITIES.** The field office shall contain or have the following facilities incorporated:

- (a) Lighting - Electric light, non-glare type luminaries to provide a minimum illumination level of 100 ft.- candles at desk height level.
- (b) Heating and Cooling - Adequate equipment to maintain an ambient air temperature of 70<sup>o</sup> F. ±5<sup>o</sup>.
- (c) Electrical Energy Outlets
- (d) Toilet - A separate enclosed room, properly ventilated per code and complying with applicable sanitary codes shall contain a lavatory with a sink that provides running hot and cold water, flush-type toilet, mirror, electric hand dryer, and paper towel dispenser.
- (e) Potable Water - Potable water supplied from an existing system or five (5) gallon capacity water cooler of a type to be approved by the Engineer shall be provided for use by City personnel. Replacement bottles of water shall be provided by the Contractor, when required.
- (f) Signs - Store front locations shall have a window graphic sign in black and white lettering with the following inscription. Other locations shall have a wood or metal sign affixed on the outside wall of the building with the following inscription painted in black block lettering on a white background. Paints shall be approved exterior enamels.

<b>CITY OF NEW YORK</b>	2-1/2"
<b>DEPARTMENT OF DESIGN AND CONSTRUCTION</b>	3-1/2"
<b>INFRASTRUCTURE</b>	2-1/2"
<b>RESIDENT ENGINEER’S FIELD OFFICE</b>	2-1/2"

- (g) Electric Refrigerator - Five (5) cubic feet minimum capacity for use by City personnel.
  - (h) Microwave, Toaster Oven, and Coffee Maker - Basic reheating equipment or approved appliances for use by City personnel.
  - (i) Windows and Doors - All windows and doors shall be weatherproof, and each equipped with adequate locking devices. Each window shall be equipped with vertical blinds. Exterior doors shall be provided with two (2) separate "high security" dead bolt type cylinder locks, keyed alike, and three (3) keys shall be furnished for each lock.
  - (j) Partitions - Partitions for workspace enclosures shall be either permanent walls or of the modular type similar to Herman Miller's standard fabric covered line.
  - (k) Kitchen Sink – Mechanism to provide non-drinking, hot and cold, running water.
  - (l) Security Cameras – Wi-Fi enabled security cameras must be provided at all entrances and exits, except that fire escapes / emergency stairwells do not require cameras. One security camera must be provided for the interior of the field office, with the location to be determined by the Engineer. Cameras must be minimum 1080p video resolution. Cameras must have internet cloud storage, with all videos stored for a minimum of two weeks. The cloud storage must be accessible via desktop or mobile. Cameras may be hardwired for power or battery powered; battery powered cameras must have the batteries changed by the Contractor as required to ensure no lapses of service. Signs must be posted indicating that the area is under video surveillance.
- (C) OFFICE EQUIPMENT.
- (a) Pencil Sharpener - One standard pencil sharpener for use by City personnel.
  - (b) Telephone Answering Machine - The telephone answering machine to be provided shall be an electronic digital voice machine with emergency call forwarding capability. It shall be operable twenty-four (24) hours per day and, when unattended, shall transmit to the caller the following message:  
  
 "You have reached the Field Office of the New York City Dept. of Design and Construction. No one is here now. We check our incoming messages frequently. We will get back to you as soon as possible. Please leave your name, message, and phone number where you may be reached. In case of emergency, call the New York City Hotline at 311. Again, the emergency number is 311."  
  
 All electronic voicemail messages shall be automatically forwarded as email attachments, to allow for the voicemails to be played remotely.
  - (c) Computer Equipment - Computers shall be provided for all contracts regardless of construction duration.  
  
 Computers furnished by the Contractor for use by City Personnel, for the duration of the contract, shall be in accordance with Table I - ADDITIONAL SPECIFIC REQUIREMENTS, contained herein, and shall meet the following minimum requirements:
    - (1) Personal Computers – Personal Computers must meet the requirements of the US General Services Administration (GSA) Government-Wide Strategic Solutions (GSS) Standard Laptop, Desktop, and Tablet Specifications, V7. (Available online at <https://hallways.cap.gsa.gov/>)
      - (a) Computer type for Personal Computers to be "Desktop Small Form Factor." Computer type for projector laptop to be "Lightweight Notebook" or "Notebook"
      - (b) The following components listed as optional in the GSA specification must be provided with each personal computer: monitor, speakers, optical drive, smart card reader, webcam, and headset.

- (c) The following additional software must be provided with licenses for each computer:
1. Adobe Acrobat Pro DC or Bluebeam Revu
  2. Microsoft Office Professional
  3. Autodesk AutoCAD LT
  4. Anti-virus software
  5. Microsoft Visio (only one license required per field office)

(2) All field offices requiring computers shall be provided with the following:

- (a) One (1) broad-band internet service account. See table below for minimum required upload and download speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	Download Speeds (Minimum)	Upload Speeds (Minimum)
1 – 5	10 Mbps	15 Mbps
6 – 10	20 Mbps	15 Mbps
11 – 15	25 Mbps	15 Mbps
16 – 20	50 Mbps	15 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the NYCDDC Field Office/project Id (preferably Gmail or Outlook – e.g. [HWK666@gmail.com](mailto:HWK666@gmail.com)).

- (b) All necessary Cabling.
  - (c) Storage Boxes for and Blank CDs/DVDs.
  - (d) UPS/Surge Suppressor combo.
  - (e) 10 USB Thumb (or Flash) Drive – 16 GB each
- (3) All computers required for use in the Engineer’s Field Office shall be delivered, installed, and setup in the Field Office by the Contractor.
- (4) All Computer Hardware shall come with a three (3) year warranty for on-site repair or replacement. Additionally, and notwithstanding any terms of the warranty to the contrary, the Contractor is responsible for rectifying all computer problems or equipment failures within one (1) business day.
- (5) An adequate supply of blank CDs/DVDs, and paper and toner cartridges for the printer shall be provided by the Contractor and shall be replenished by the Contractor as required by the Engineer.
- (6) It is the Contractor’s responsibility to ensure that electrical service and phone connections are also available at all times; that is, the Field Office Computer(s) is to be powered and turned on twenty-four (24) hours each day.

Broadband connectivity is preferred at each field office location. Please take into consideration that an extra phone line dedicated to the modem must be ordered as part of the contract unless Internet broadband connectivity, via Cable or FiOS, is available at the planned field office location. Any questions regarding this policy should be directed to the Director of Information Technology Services at 718-391-1761.

- (d) Data Access - Electronic access to the Equipment Watch Retail Rental Rates database (formerly known as The AED Green Book, published by Equipment Watch), shall be provided for all contracts that have a total Consecutive Calendar Days for General Construction duration as set forth in Schedule A of greater than 545 CCD's. Contracts of lesser duration shall not require any data access.
- (D) Field Testing Equipment.
- (a) Air Entrainment Meters - Pressure Type, with carrying case for use by City personnel. Each meter shall be capable of producing an accurate test result in approximately five (5) minutes and shall comply with ASTM Designation C231.
- (b) Slump Test Sets - Slump cone and test sets conforming to the requirements of ASTM Designation C143, complete with rod and scoop for use by City personnel.
- (c) Thermometers: For use by City personnel.
- (1) 1 Minimum-maximum thermometer.
- (2) 3 Asphalt thermometers of stainless-steel construction with an accuracy of 0.5% of the full scale, able to measure temperatures from 50 to 500 degrees F. in 5-degree increments.
- (3) 3 Surface Thermometers able to measure temperatures of flat surfaces similar to Sargent-Welsh Model S81441-D, or an approved equivalent.
- (d) Non sparking Pinch Bar - For use in opening manholes.
- (e) Gas Meters - For use in detecting the presence of explosive gases and vapors for use by City personnel.
- (f) Straight Edge - One 10-foot-long straight edge for use by City personnel in detecting pavement surface tolerance.
- (g) 48" Smart Level - For use in determining pedestrian ramp and sidewalk slopes.
- (h) Chlorine Test Kits – For testing residual chlorine levels following water main flushing.
- (i) Green Florescent Power Trace-Dye – For testing sewer connections.
- (j) One Million Candlepower Rechargeable Flashlight.
- (k) Distance Measuring Wheel – For measuring long distances.
- (E) Additional Office Electronics –
- (a) Photocopying machine must be a stand-alone, heavy duty, electric, dry-process color photocopying type with color scan and send capability via e-mail, a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers for printing capability.
- (b) Fax machine must be provided with an adequate supply of copy paper, toner, etc. The supply of copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer.
- (c) Paper shredder must be a heavy-duty commercial grade diamond cut shredder with automatic start. The shredder shall be able to receive 8-1/2 inch wide paper and shred a minimum of 15 sheets simultaneously along with CDs and staples.

- (d) Projector must be 1080p LCD with a min. of 2200 ANSI Lumens, 1920 x 1080, 16:9, 40,000:1 contrast ratio, HDMI, VGA, USB, and a 10' diagonal, 16:9 Projection Screen. A screen must be provided if directed by the Engineer. A laptop must be provided for use with the projector, and all required cables for connecting the laptop to the projector.

### 6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEER'S FIELD OFFICE.

In addition to the general requirements, each type of Field Office shall have the minimum floor area indicated in Table 6.40-I calculated based on usable area only, excluding any loss factors. Loss factors are defined as those areas such as lobby, sidewalk window ledge, elevator shafts and stairways. The Contractor shall provide and maintain furnishings for each type of Field Office in the quantity specified in Table 6.40-I. The furnishings shall be new or used equipment satisfactory to the Engineer:

- (a) Each Type shall have a minimum of one outside door and four windows.
- (b) Type C shall be partitioned to provide three (3) rooms.
- (c) Type CU shall be partitioned to provide four (4) rooms, one of which shall be at least 150 s.f. in area (for use by private utilities).
- (d) Type D and DC shall be partitioned to provide four (4) rooms.
- (e) Type DU shall be partitioned to provide five (5) rooms, one of which shall be at least 150 s.f. in area (for use by private utilities).

**TABLE 6.40-I – ADDITIONAL SPECIFIC REQUIREMENTS**

SPECIFIC REQUIREMENTS	FIELD OFFICE TYPE						
	A	B	C	CU	D	DC	DU
Minimum useable floor space (Square Feet)	400	800	1,200	1,200	1,800	2,320	1,800
Office desks, at least 4'-8" x 2'-8", with drawers, locks, and keys.	2	2	4	8 <sup>a</sup>	8	8	12 <sup>a</sup>
Swivel chairs, with arms, for the above.	2	2	4	8 <sup>a</sup>	8	8	12 <sup>a</sup>
Office folding chairs, metal, with padded seats and backs.	2	3	6	14 <sup>b</sup>	8	8	16 <sup>b</sup>
Steel supply cabinets (approximate size 72" high by 36" wide by 18" deep), with four adjustable shelves, tumbler lock and 3 keys.	1	1	1	1	1	1	1
Fire resistant cabinet, 4-drawer, legal size with lock and three (3) keys, meeting the requirements for "Filing devices, Insulated (36 E 9)" Class D Label, of the Underwriters' Laboratories, Inc. Specifications.	1	1	1	3 <sup>c</sup>	4	4	6 <sup>c</sup>
Individual lockers (17" wide x 18" deep x 72" high) with flat key locks and two (2) keys each.	1	1	4	4	4	4	4
Calculating machines, tape type with digital display registering at least ten (10) digits.	1	1	2	2	3	3	3
Wastepaper baskets (metal, approximately 12" square by 16" high).	1	2	2	6 <sup>a</sup>	4	4	8 <sup>a</sup>
Fire extinguishers, non-toxic, dry chemical type meeting Underwriters Laboratories, Inc., approval for Class A, Class B and Class C fires with a minimum rating of 2A: IOB:10C.	1	1	2	3 <sup>d</sup>	4	8	5 <sup>d</sup>
First Aid Kit kept properly stocked with appropriate first aid supplies at all times.	1	1	1	1	2	2	2

SPECIFIC REQUIREMENTS	FIELD OFFICE TYPE						
	A	B	C	CU	D	DC	DU
Drafting tables (3'-0" x 5'-0") with storage drawers and stool.	1	2	2	3 <sup>d</sup>	4	4	5 <sup>d</sup>
Photocopying Machine	1	1	1	1	1	1	1
Standalone networked color laser printer. (Not required if photocopying machine prints in color)	1	1	1	1	1	1	1
Vertical filing plan racks for six sets of 22"x36" plans each rack.	1	1	2	3 <sup>d</sup>	4	4	5 <sup>d</sup>
Telephone lines for calls, where one shall be dedicated for the Fax Machine, one for each computer fax/modem and the others for telephone instruments.	4	6	6	7 <sup>e</sup>	8	8	9 <sup>e</sup>
Telephone instruments.	2	2	3	5 <sup>e</sup>	4	4	6 <sup>e</sup>
Telephone answering machine.	1	1	1	1	1	1	1
Fax Machine	1	1	1	1	1	1	1
Personal Computer	1	3	3	3	4	4	4
Bottled water with refrigerator unit-hot/cold water. (For private utilities room.)	0	0	0	1	0	0	1
Paper Shredder	1	1	1	1	1	1	1
Projector	0	0	1	1	1	1	1
Conference Room, 320 square feet (20'x16' minimum, equipped with (2) 3'x6.5' tables and (30) chairs.	0	0	0	0	0	1	0

<sup>a</sup> Provide four (4) each of Office Desks, Swivel Chairs and Wastepaper Baskets in private utilities room.

<sup>b</sup> Provide eight (8) Folding Chairs in private utilities room.

<sup>c</sup> Provide two (2) Fire Resistant 4- Drawer Legal Size Cabinets in private utilities room.

<sup>d</sup> Provide one (1) each of Fire Extinguisher, Drafting Table and Vertical File Rack in private utilities room.

<sup>e</sup> Provide one (1) telephone line and two (2) telephone instruments for the exclusive use by private utilities personnel. The line shall interconnect the two telephone instruments by push button control.

**6.40.4. CONSTRUCTION METHODS.** The building shall be fully equipped and made available for use and occupancy by the Department's personnel and/or Supervision Consultant not less than thirty (30) days prior to the start of any contract work.

The building interior (including access foyers, stairwells, etc.) shall be maintained in good, clean, and sanitary working condition by the Contractor for the duration of the contract. The Contractor shall provide and pay all costs for electrical service, telephone service for calls within New York City limits, hot and cold water, heat and fuel, and daily janitor service. Staples, such as paper towels, hand soap, toilet paper, and similar supplies, shall always be available.

Where necessary, the site for a mobile trailer(s) shall be graded and shoulder stone placed and maintained as directed by the Engineer to provide a parking area for City personnel and, if necessary, an approach road shall be provided. Plumbing work shall include all water supply, drainage and piping required for the operation of a complete installation. Temporary water service shall be provided from an existing main and extended into the trailer and all fixtures requiring water supply shall be properly connected up. All necessary soil, waste, vent and drainage piping shall be provided and connected to the existing sewer or as otherwise directed.

The office, incorporated facilities, equipment, and personal property of the Department's employees shall be protected by the Contractor against loss or damage from fire, theft, or other causes, at all hours of the day and night. The Contractor shall provide fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of forty thousand dollars (\$40,000.00) for office equipment of the City of New York in the Engineer's field office and for property of City personnel that is used in the contract work and stored in the office. All insurance coverage shall be written by a company

approved by the Commissioner and payable in case of loss to the City of New York. The office shall be maintained by the Contractor in first class condition until final acceptance of the work.

At the direction of the Engineer, any equipment on the above lists may be deleted. The Engineer may direct that other equipment of equivalent value be supplied by the Contractor or an appropriate credit be taken for the value of equipment not provided.

When directed by the Engineer, the Contractor shall disconnect all services and remove and dispose of all temporary installations from the site, including fencing, surfacing and utilities, the area shall then be cleaned, loamed, and seeded if required and left in a neat and acceptable condition. On and after the date of the Engineer's Final Acceptance, the temporary structure and all installed equipment shall become the property of the Contractor, and shall be disposed of, by him, away from the site of the work. Engineer's Final Acceptance shall be when the Contractor has completed all punch list work and Official Completion Date has been set.

**6.40.5. NONCONFORMANCE.** No payment will be made under Engineer's Field Office for each calendar day during which there are deficiencies in compliance with the requirements of any subsection of this specification. The first calendar day shall commence twenty-four (24) hours after notice to the Contractor of such a deficiency. This non-payment shall be deducted from the Contractor's next estimate as a charge to the Contractor on the item. The amount of such calendar day non-payment will be determined by dividing the unit price bid per month by 30.

In addition, the Contractor may be subject to liquidated damages in accordance with Schedule A.

**6.40.6. MEASUREMENT.** The quantity to be measured for payment under this item shall be the number of months that the Field Office is available for occupancy by the Field Engineers during the period of the contract. Payment will begin the first month that the office is fully equipped, serviced as specified, and made available for occupancy. The Field Office is to be continuously made available and monthly payments will continue for the duration of the contract through a period not to exceed 6 months past the Substantial Completion date. When directed in writing by the Commissioner, the Field Office will be provided and paid for a period of time beyond 6 months past the Substantial Completion date. Payment for each month's occupancy after the date of Substantial Completion acceptance will be made as part of the final estimate. Monthly payments may be terminated on a specified date prior to acceptance of the contract by written notification by the Engineer that such office will no longer be required on the contract.

In order to incentivize early Substantial Completion of the Project, the City agrees to share the savings resulting from the reduction of the quantity measured for payment under this item.

If the determination of Substantial Completion is reached at least two (2) months earlier than the Substantial Completion date set forth in the Notice to Proceed letter, plus any approved time extensions, the Contractor and the City will evenly split the saved amount. This payment will be in addition to any payments of incentive for early completion if one is specified for the Project.

For example, using a contract with a 30-month duration for achievement of substantial completion, with the Engineer's Field Office directed by the Commissioner to remain open six (6) months after the substantial completion date per Subsection 6.40.6 above, the following would apply under these two scenarios:

1. Project substantial completion is achieved in 28.5 months: Because the contract was completed within two (2) months of the scheduled substantial completion date, the contractor is entitled to be paid for the 28.5 month project duration plus the six (6) months after Substantial Completion, amounting to 34.5 months to be paid to the Contractor for the Engineer's Field Office, with no additional amounts due to the contractor from any savings.
2. Project substantial completion is achieved in 26 months: Because the contract was substantially completed more than two (2) months early, the contractor is entitled to be paid for the 26 month project duration plus six (6) months after substantial completion plus half of the four months saved, amounting to 34 months to be paid to the contractor for the Engineer's Field Office.



**6.40.7. PRICE TO COVER.** The unit price bid per month for the item Engineer's Field Office shall include the cost of furnishing all labor, materials, equipment, ground rental, fire and theft insurance, and utility charges necessary to complete the work of providing or constructing the field office; making all necessary electrical, water, sewer, and other connections required to make the above facilities operative; payment of all rental costs; furnishing and paying for heating fuel, as required; all electrical energy; private telephone services; staples, as specified; and all necessary incidentals to complete the work - all in accordance with the specifications and the directions of the Engineer.

*Payment will be made under:*

Item No.	Item	Pay Unit
6.40 A	ENGINEER'S FIELD OFFICE (Type A)	MONTH
6.40 B	ENGINEER'S FIELD OFFICE (Type B)	MONTH
6.40 C	ENGINEER'S FIELD OFFICE (Type C)	MONTH
6.40 CU	ENGINEER'S FIELD OFFICE (Joint Use) (Type CU)	MONTH
6.40 D	ENGINEER'S FIELD OFFICE (Type D)	MONTH
6.40 DC	ENGINEER'S FIELD OFFICE WITH CONFERENCE ROOM	MONTH
6.40 DU	ENGINEER'S FIELD OFFICE (Joint Use) (Type DU)	MONTH

**SECTION 6.94 A - Concrete Sump**

6.94A.1. Description. This section describes the work of constructing concrete sumps 18" x 18" x 24" deep complete with grating cover, at the locations shown on the plans.

6.94A.2. Materials. Materials shall comply with the requirements of the sections listed below.

<u>Material</u>	<u>Section</u>
Concrete	3.05, Class B-32, Type IIA.
Grating	2.17, Type 1
Welded wire fabric	2.25.
Broken stone	6.20
Filter fabric	6.68

6.94A.3. Methods. Excavation shall be made sufficient to permit the construction of new concrete sump 18" x 18" x 24" deep. Depth of excavation shall be such that the sump complete with broken stone subbase and grating cover at the top, in their final position at the completion of the work, shall be in their proper locations and proposed grade as shown on the plans. Spaces between the completed structure and sides of the excavation shall be backfilled with acceptable materials, compacted to the satisfaction of the Engineer.

Sumps shall be constructed in accordance with the details shown on the plans, and as directed by the Engineer. Except when the use of precast sumps is permitted, new sumps shall be constructed, complete, in place at the locations shown on the plans. Shop drawings showing sump details, including grating support shall be submitted for the Engineer's approval.

6.94A.4. Measurement. The quantity to be measured for payment shall be the number of sumps constructed, complete in place, to the satisfaction of the Engineer.

6.94A.5. Prices to Cover. The contract price for each sump shall cover the cost of furnishing all labor, materials, equipment, insurance and incidentals required to complete the work including, but not limited to, excavation and backfilling, all in accordance with the plans, the specifications and the directions of the Engineer.

*Payment will be made under:*

Item No.	Item	Pay Unit
6.94 A	CONCRETE SUMP WITH GRATING	EACH

The Section below supersedes and replaces Section 7.13 of NYC DOT  
Standard Specifications dated May 16, 2022

## **SECTION 7.13 – Maintenance of Site**

**7.13.1. DESCRIPTION.** This section describes the maintenance, protection, and cleanup of the construction site. The Contractor is placed on notice that a safe and clean site throughout all phases of the work and during all operations must be provided by the Contractor, and further that the monitoring by the City of the Contractor's site maintenance, site protection and site cleanup is considered for the purposes of the contract to be a Project objective necessary to eliminate and/or mitigate public disruption and inconvenience, and to insure public health and safety. The Contractor shall therefore, at all times, conduct this operation in a manner which promotes a clean site and ensures the convenience, safety and health of general users consisting of, but not limited to, the motorist, the pedestrian, and the abutting property owners/tenants, as well as those of the Contractor's employees. This includes compliance with the Contractor Code of Conduct in **Section 1.06.19**.

The provisions of this section are supplementary to and do not abrogate the General Conditions (Section 1.06) or the General Notes on the Contract Drawings relating to the protection and cleanup of the site, and the delivery and storage of materials at the site. Furthermore, any conditions pertaining to the maintenance, protection, and cleanup of the construction site during the life of the contract which are addressed in the General Conditions and in the General Notes on the Contract Drawings, whether or not addressed under this Section, shall be deemed as having been addressed under this Section.

### **7.13.2. METHODS.**

#### **(A) GENERAL**

Work under this Item shall start from the date of written notice to commence work or from the actual start of construction work at the site, whichever is later.

The Contractor shall be responsible for the maintenance of the contract streets or portions of streets pursuant to Article 7 of the Standard Construction Contract.

The Contractor shall provide the necessary personnel and equipment for adequate site maintenance within and adjacent to the contract site and all detour routes. The Contractor shall keep the work site and adjacent areas free and clean from all rubbish, debris, dust, idle construction equipment, discarded or leftover construction material and excavated material as outlined below. The Contractor shall also keep all haul routes outside the work site free and clean from all rubbish, debris and dust resulting from the Contractor's operations.

The Contractor shall protect the public from damage to persons and property, which may result directly or indirectly from any construction operation. Such protection shall include, but not be limited to, providing proper street drainage and diversion of runoffs from private properties by such means as sandbagging or pumping, controlling soil erosion and/or soil migration.

All existing Fire Department Communication facilities shall be protected, and provisions made for their continuous operation during construction. ALL ALARM BOXES AND POSTS MUST REMAIN ACCESSIBLE. If, due to the Contractor's operations, Fire Alarm Service is inadvertently interrupted or Fire Communication System equipment or facilities are damaged, the Contractor will be held responsible and shall replace them at its own expense and in accordance with Fire Department requirements.

The Contractor shall be fully responsible for maintaining the completed work in an acceptable condition and protecting the completed work until relieved of such responsibility by acceptance of the contract or the completed items of work. Upon completion of each phase of work, or when ordered by the Engineer, and before acceptance and final payment are made, the Contractor shall remove all surplus and discarded material, rubbish, equipment, debris, and temporary structures from the site, and restore the working site as directed by and to the satisfaction of the Engineer. All sewers, water mains, appurtenant structures, etc., shall be clean, free from debris and deposits.

**(B) MAINTENANCE OF STREETS**

Maintenance of streets and detours for vehicles shall include any repairs, as directed, including the filling of pre-existing and new potholes that may be necessary due to usage of streets by traffic. This repair work will be paid for under Item No. 4.02 CB - ASPHALTIC CONCRETE MIXTURE, or 4.02 CA - BINDER MIXTURE, as provided in the Bid Schedule.

Also, the Contractor shall provide reasonably safe and convenient walkways and passageways for pedestrian traffic. Where required by the Contract Documents or when ordered by the Engineer, the Contractor shall construct and maintain, as directed, temporary asphalt walkways and ramps in accordance with the requirements of Subsection 7.13.2.(G)(1), below, temporary wood plank or steel plate ramps or other configurations and materials, as may be required, and provide temporary pedestrian passageways (as per the NYC Department of Transportation's Standard Details of Construction, Standard Drawing H-1004, or as otherwise approved). The Contractor shall make the surface(s) of the pedestrian pathway(s) safe by eliminating ponding conditions, removing debris, sweeping, and wetting for dust control. All walkways and passageways must be in compliance with all ADA requirements.

The Contractor shall maintain access to all abutting properties and pedestrian usage of sidewalk areas, both old and new, at all times, as directed by the Engineer and as shown on the Contract Drawings, except at "Sidewalk Closings" as designated or as directed.

The Contractor shall maintain the traveled way in such a condition and conduct operations in such a manner that snow, and ice may be readily removed by others as and when necessary, and in such a manner that proper drainage is provided for the melting of snow in the banks resulting from normal plowing. However, the Contractor will not be responsible for snow or ice removal on the pavement or traveled way opened for public usage, except within the limits of the work zone(s) which may include, but is not limited to, stairway, promenades, esplanade areas, and sidewalk, including those fronting the Contractor's office and the Engineer's field office all of which will be the responsibility of the Contractor. In order to minimize the amount of salts entering the storm sewer system, snow melt must not be used in place of shoveling, but must be used after all standing snow is removed. This does not prohibit applying reasonable amounts of snow melt prior to snowfall.

**(C) CONTROL OF DUST AND DEBRIS**

The Contractor shall control dust and debris within the work area and the traveled way. The Contractor shall mitigate material spilling from trucks with the use of tarpaulin covers. All dust producing materials shall be wet down with water to the extent necessary to minimize dust. When public or local inconvenience is caused by dust occasioned by the sweeping and cleaning operations, the Contractor shall furnish and sprinkle water onto the affected surfaces during the sweeping and cleaning operations; however, the application of water shall not be used as a substitute for sweeping.

The Contractor shall perform all work operations so that dust and debris is minimized within the work zone and mitigated before any of it leaves the work zone. Movement of dust and debris by wind, vehicles, persons, and the Contractor's operations shall be cause for sweeping and watering to be implemented immediately as directed by the Engineer. Also, should dust and dirt cover over all or portions of the work site it shall also be cause for immediate sweeping and watering by the Contractor.

All water furnished and applied under this item shall be free from harmful materials and shall be reasonably clean. Water shall be delivered in tanks or tank trucks, or by use of hydrants as permitted by the Department of Environmental Protection; however, no guarantee is made by the City as to the availability of suitable hydrants at the site. Where no suitable hydrants exist at the site, the Contractor shall be required to furnish water in tanks or tank trucks at no additional cost to the City.

**(D) CLEANING OF SITE AND WASTE DISPOSAL**

The Contractor shall be responsible for the removal of all rubbish and debris from the site of the project. The Contractor shall remove all piles of rubbish, debris, waste material and wood cratings as a result of the Contractor's operations as they accumulate. When directed by the Engineer the Contractor shall cart them away from the site. The Contractor shall employ and keep engaged for this purpose an adequate force of laborers.

The Contractor shall at the beginning and end of each day be required to pick up all litter, trash, and debris (excluding garbage and recycled material set to be picked up by scheduled private and/or public sanitation pickups) adjacent to and within the work zone on a daily basis, seven (7) days a week. The Contractor shall also during the day keep clean all roadways, sidewalks and other places in which the work is being performed or which are to be used in connection therewith.

The Contractor shall protect the site against unauthorized dumping of waste materials by patrolling the site and reporting violations to the Engineer, and should any unauthorized dumping occur, it shall be immediately removed by the Contractor to the Engineer's satisfaction.

While performing the above site cleaning work, the Contractor shall have available an approved mechanical street sweeper, with operator, suitable for removing dirt, debris, dust and loose stones; a sprinkler truck; adequate size pick-up truck with driver and laborers; an adequate supply of brooms, sixteen (16) inch wide or larger; and necessary hand tools and materials. The Contractor shall arrange to have necessary persons and equipment assigned to satisfy concerns relating to required clean up and restoration work. These persons with equipment shall be available to correct all matters requiring attention and shall be immediately available to respond to directives issued by the Engineer regarding specified problems of maintenance and cleaning.

The Contractor shall perform this work during the normal or extended working days. However, when required in accordance with the approved schedule or directed, the Contractor shall be prepared to extend this work beyond the normal workday, including weekends.

The Contractor shall provide trash receptacles for use by its construction staff. The trash shall be periodically removed and disposed of in compliance with local ordinances.

(E) DISPOSAL OF REMOVED MATERIALS

Except as may be otherwise specified herein or in the General Conditions, all materials which are permanently removed from the existing construction by the Contractor in accordance with the Contract Documents shall become the Contractor's property and shall be disposed of by him away from the site.

In addition, it is the intent of NYCDDC to have all metals that are excavated and removed from the site, such as iron castings street hardware (i.e., manhole frames and cover, valve box covers, hydrants, etc.), ductile iron sewer pipe, steel and ductile iron water main pipe, trolley track rails, etc. (excluding steel reinforcement embedded in concrete), recycled provided that they are not deemed contaminated or hazardous. Therefore, the Contractor shall agree to make every effort possible to recycle said metals removed from the site. As a record of such compliance, the Contractor shall be required to keep an accurate log of said materials that are excavated and removed from the site and where and how said materials are either processed for reuse or disposed of away from the site. A copy of said log shall be submitted to the Engineer along with the invoice submitted by the Contractor for payment each month.

(F) REMOVAL OF SURPLUS PLANT AND EQUIPMENT

When ordered by the Engineer, the Contractor shall be required to promptly move from any location within the contract area all such items of plant and equipment determined to be no longer necessary for the effective prosecution of the work at such point, to other locations to be designated by the Engineer. If, in the opinion of the Engineer, plant and equipment are no longer required on any portion of the work, they shall be removed from the site when so ordered.

Where access to regularly scheduled private and/or public sanitation pickups, such as garbage and recycled materials, is blocked due to the Contractor's operations, the Contractor shall coordinate a schedule for collection of said materials, and/or shall collect and transport garbage and recycled materials to collection points, as directed by the Engineer, for disposal by public or private collections, as appropriate.

Waste material shall not be dumped in or on any part of the City's property except by special permission of the Engineer. Concrete mixing trucks shall not be washed on City streets nor shall the waste material from the washing out of concrete mixing trucks be discharged to any street, public property, sewer manhole, catch basin, sewer, street gutter, or other above or below ground structures. All excavated materials falling on roadways and sidewalks shall be promptly swept up and removed.

## (G) MAINTAINING ACCESS TO PROPERTIES AT CUT AND FILL LOCATIONS

When it is necessary to cut or fill at abutting properties in accordance with the contract requirements, the Contractor shall immediately commence construction to provide entrance to and egress from said properties as shown on the Contract Drawings and/or by one of the following methods, or modifications made thereto, when so ordered by the Engineer:

(1) "Asphalt Ramps"

Temporary access ramps shall be made hard and smooth surfaced with asphaltic material (to be paid for under Item No. 4.02 CB or 4.02 CA, as provided in the Bid Schedule) The slope of temporary ramps at driveways and transition areas shall be approximately 25% [approximately a three (3") inch rise in one (1') foot] and be limited to a width of not more than eight (8') feet for single driveways and not more than twelve (12') feet for double driveways. The slope of temporary ramps at street hardware shall range between 1:10 and 1:6 (rise:run). The slope of temporary pedestrian ramps shall be limited to a width of not less than four (4') nor more than five (5') feet and a slope of approximately 1:12.

(2) "Benching"

In locations where embankments are to be constructed on existing slopes or against existing embankments with slopes steeper than 1 (vertical) on 3 (horizontal), slopes shall be benched as shown on the Contract Drawings. Benches shall be constructed as a "Temporary Retaining Wall" (Item No. 8.12). Access to abutting properties shall be provided as shown on the Contract Drawings or as per the details shown on the NYC Department of Transportation's Standard Details of Construction, Standard Drawing for Temporary Wooden Steps (Item No. 7.15).

(3) "Specified"

By methods specified and detailed on the Contract Drawings.

## (H) FINAL CLEARANCE OF SITE

Immediately after the completion of the contract and before final acceptance of the Work by the Department, the Contractor shall remove all surplus material, temporary structures, and debris resulting from the Contractor's operations. Any painted markings (layout survey, etc.), excluding utility markings made under 16 NYCRR Part 753 (utility markings made under Part 753 shall not be removed), that have been placed by the Contractor and which are still remaining at the end of the contract shall be removed. Removal of painted markings shall be done using an approved power-washing method. The entire area shall be cleared and left in a neat presentable manner satisfactory to the Commissioner.

If as a result of the Contractor's operations, obstructions have fallen into a navigable waterway, they must be removed and the waterway and channel cleared; and the Contractor must obtain a release from the United States Coast Guard.

**7.13.3. STORAGE OF MATERIALS AND EQUIPMENT.** Roadways, sidewalks, gutters, crosswalks, and driveways shall at all times be kept clear and unobstructed unless a permit has been obtained from NYC Department of Transportation authorizing encumbrance of the roadway and/or sidewalk with equipment and/or material, provided it is in a manner which will not prevent the safe passage of vehicular traffic on such roadway designated to remain open, or the safe passage of pedestrians on such sidewalk and crosswalks, or block the normal drainage flow within the streets.

## (A) DELIVERED MATERIALS NOT TO OBSTRUCT TRAFFIC

All materials delivered upon but not placed in the work shall be neatly piled so as not to obstruct public travel and shall be removed from the line of the work, at the direction of the Engineer, at no additional cost to the City. Unless the materials are so removed by the Contractor upon notice from the Engineer, the materials may be removed by the Commissioner and the expense thereof charged to the Contractor.

## (B) PILING OF MATERIALS DELIVERED TO WORK SITE

Materials placed on the sidewalk or roadway shall be piled or stacked in a satisfactory and safe manner, enclosed with plastic barrels (Section 6.87) or barricades (Section 6.28 AA or 6.28 BA), and with pedestrian steel barricades (Section 7.36), "WARNING: KEEP OUT" signs (Section 6.25), and heavy duty safety orange construction fencing. The heavy duty safety orange construction fencing shall be safety orange in color, of heavy duty construction grade flexible plastic (light duty plastic screening fence will not be accepted), have a minimum height of four (4') feet, and shall be of a type approved by the Engineer. The heavy duty safety orange construction fencing shall be held vertically in place for its full length and shall be securely attached to barrels, utility poles, or a combination thereof, or other traffic control devices shown on the Contract Drawings or directed, in a manner approved by the Engineer. Loose materials shall be covered with tarpaulins, suitably held down. Areas adjacent to stored materials shall be kept clean and watered as required and as directed by the Engineer. When such materials are removed, the sidewalks and roadways must be immediately swept clean by the Contractor and control of dust shall be mitigated in accordance with the requirements of Subsection 7.13.2.(C), above.

Materials to be used in the work shall be compactly piled within limits to be designated by the Engineer. Sand and coarse aggregate may be piled within the roadway area. All old and such new material as has been approved, except sand and coarse aggregate, shall be neatly piled by the Contractor on the front half of the sidewalk, on planks or plates, if the same be flagged or otherwise improved.

Stored material shall be neatly stacked, placed at locations designated by the Engineer, and suitably enclosed or covered, protected, and wet down, as stipulated above. Streets under such construction material or equipment shall be shielded by wooden planking, skids or other protective covering approved by the Engineer. All pipes, fittings and appurtenances must be carefully stored, as approved by the Engineer, so as to prevent surface drainage, excavation material or other foreign matter from entering into the pipes, fittings and appurtenances.

Waste material and excavated material will under no conditions be permitted to remain on the work site or

Provisions must be made by the Contractor to maintain curb-line drainage through storage areas. Stored materials shall not block the normal drainage flow or cause ponding conditions within streets and shall not be placed within fifteen (15') feet of any fire hydrant (working or not), at bus stops, within tree root zone areas, or any other areas as set forth in the rules of the department the obstruction of which would impair the safety or convenience of the public (also see General Notes on Contract Drawings for any additional information). In a street upon which there is a surface railroad, construction materials or equipment shall not be placed nearer to the track than five (5) feet.

The Contractor shall not be permitted to store, stockpile or lay down any construction material within the boundaries of tree pits or critical root zone (CRZ) of existing trees. This material includes but is not limited to lumber, fuel and oil containers, pipes, pipe fittings, barricades, hand tools, hoses, hardware, bricks, salvaged stone or granite, trash receptacles, or asphalt. Bulk material, equipment, or vehicles shall not be stockpiled or parked within the CRZ of any tree, or within ten (10') feet of the trunk (whichever is greater). This is done to minimize surface and subsurface root and soil compaction. This applies to all CRZs within or outside the project limit line. CRZ is calculated as  $(DBH \times 1.5 \text{ ft} = \text{Radius})$ . The radius calculation is equal to the critical root zone.

When no work is in progress, at least one half of the roadway must be left clear at all times.

The Contractor must remove any stored materials/equipment from the project street(s), as directed by the Engineer, within forty-eight (48) hours' notice, at no additional cost to the City. Payment for compliance with such a directive shall be deemed included in the unit price bid for this "Maintenance of Site" item.

(C) ILLUMINATION OF BUILDING MATERIAL AND EQUIPMENT ON STREETS

Pursuant to Section 19-121 of the Administrative Code of the City of New York, the Contractor's attention is directed to the following:

1. Whenever a permit is issued for any construction material or equipment, the outer surface of such construction material or equipment shall be clearly marked with high intensity fluorescent paint, reflectors, or other marking which is capable of producing a warning glow when illuminated by the headlamps of a vehicle or other source of illumination.
2. Each approved storage area shall have at least one (1) sign identifying the Contractor's name, Project ID/Name, and the phone number of the Engineer's Field Office.
3. Violations. Any person who shall violate any of the above provisions, upon conviction thereof, shall be subject to the Criminal penalties pursuant to Section 19-149 of the Administrative Code of the City of New York or Civil penalties pursuant to Section 19-150 of the Administrative Code of the City of New York, or both such fines and imprisonment.

(D) STORAGE WITHIN THE PROJECT LIMITS

The Contractor will not be permitted to store construction equipment, construction material or excavated material within the project limits, except where specifically approved by the Engineer and only under the following conditions:

The Contractor will not be permitted to allow the personal vehicles of the Contractor's work force to be stored, parked, or to stand within the limits of any designated work area or in "no parking", "no standing", and/or other restricted zones; vehicles so stored, parked, or found standing may be ticketed and/or towed at the owner's expense. This restriction shall exclude Contractor owned vehicles transporting and/or storing specialized equipment and/or materials necessary for the execution of ongoing contract work, as approved by the Engineer. The Contractor shall be responsible for properly notifying the Contractor's work force of these restrictions.

Payment for traffic control devices such as plastic barrels, barricades, pedestrian steel barricades, and warning signs used to enclose stored materials and equipment within the project limits will be paid for under the appropriately scheduled items; however, when no appropriately scheduled item or items are provided in the bid schedule, the cost of those items shall be deemed included under all scheduled items.

Materials stored on site shall be "Installed in Place" within two (2) consecutive working days of delivery to the job site, unless otherwise specified or permitted by the Engineer. (Construction supervisor will be required to maintain accurate records of all delivery dates.) No material shall be stored on site during construction shutdowns and/or stoppages scheduled to last more than five (5) consecutive working days.

(E) STORAGE OUTSIDE THE PROJECT LIMITS

The Contractor may be permitted to occupy off site street/roadway areas for material storage, subject to their availability and conformance with City wide permitting requirements for storage of materials; however, this neither implies nor guaranties the Contractor the availability and/or approval of any off site street/roadway areas.

Materials and/or equipment must be stored safely and neatly as specified above, with appropriate Maintenance and Protection of Traffic devices separating the storage area from vehicular traffic and pedestrians. Loose materials must be properly and neatly stored.

No separate payment will be made for providing off site storage site(s) where approved or for providing any traffic control devices used for off-site storage, the cost of which shall be deemed included under all scheduled items.



**7.13.4. NONCONFORMANCE.** No payment will be made under Maintenance of Site for each calendar day during which there are deficiencies in compliance with the foregoing specification requirements, as determined by the Engineer and made evident by the Engineer's failure to sign documents each day approving payment to be made under this item.

The amount of such calendar day non-payment will be determined by dividing the unit price bid per month by thirty (30).

If the Contractor fails to maintain and protect the site, or any portion thereof, adequately and safely for a period of three (3) or more consecutive hours, the Engineer may correct the adverse conditions by any means deemed appropriate, including, but not limited to, "outside services," and shall deduct the cost of the corrective work from any monies due the Contractor. The cost of this work shall be in addition to the nonpayment for site maintenance listed above.

However, where continued nonconformance with the requirements of this specification is noted by the Engineer, and prompt Contractor compliance is deemed not to be obtainable, all contract work may be stopped by direct order of the Engineer, regardless of whether corrections are made by the Engineer as stated in the paragraph above.

Furthermore, in addition to the remedies specified above, in the event the Contractor shall fail to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of the contract and the specifications in the matter of providing facilities and services for the maintenance, protection and cleanup of the construction site, the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum shown per calendar day in Schedule A, for each instance of such failure, as liquidated damages and not as a penalty, for such default.

Any money due the City of New York under this provision shall be deducted from the amounts due or to become due to the Contractor for work performed under the contract.

**7.13.5. MEASUREMENT.**

(A) MAINTENANCE OF SITE (LUMP SUM)

Payment will be made by lump sum.

(B) MAINTENANCE OF SITE (PER MONTH)

The quantity to be measured for payment under this item shall be the number of months (to the nearest 1/4 month increment) that the Contractor satisfactorily provides for the Maintenance of Site in accordance with these specifications, including winter shut down, holiday embargo, and other work suspension periods for which the Contractor remains responsible for site maintenance. Measurement for this item shall not begin until actual construction work is started at the site.

Periods where the Contractor is demobilized and not continuing the site maintenance will not be measured for payment. The Engineer will provide written notice two weeks in advance that the Contractor is being deemed to be demobilized. For the avoidance of doubt, reduced activity during winter shutdowns, holiday embargos, and other work suspension periods as shown on the Contractor's approved CPM schedule do not count as demobilization, provided the Contractor continues to be responsible for site maintenance and responsive to notifications of nonconformance per **Subsection 7.13.4** above. Should such nonconformance occur during periods of demobilization, the liquidated damages described in **Subsection 7.13.4** above may be assessed during periods where maintenance of site is not being measured for payment.

In order to incentivize early completion, the City agrees to share the savings resulting from the reduction of the quantity measured for payment under this item.

If the determination of Substantial Completion is reached at least two (2) months earlier than the Substantial Completion date set forth in the Notice to Proceed letter, plus any approved time extensions, the Contractor and the City will evenly split the saved amount. This payment will be in addition to any payments of incentive for early completion if one is specified for the Project.

For example, using a contract with a 30-month duration for achievement of substantial completion, the following would apply under these two scenarios:

1. Project substantial completion is achieved in 28.5 months: Because the contract was completed within two (2) months of the scheduled substantial completion date, the contractor is entitled to be paid the 28.5 month project duration for the Maintenance of Site, with no additional amounts due to the contractor from any savings.
2. Project substantial completion is achieved in 26 months: Because the contract was completed more than two (2) months prior to the scheduled substantial completion date, the contractor is entitled to be paid the 26 month project duration plus half of the four months saved, amounting to 28 months to be paid to the contractor for the Maintenance of Site.

**7.13.6. PRICE TO COVER.**

(A) MAINTENANCE OF SITE (LUMP SUM)

The lump sum price bid for Maintenance of Site shall include the cost of furnishing all labor, materials, plant, equipment, insurance and incidentals required to maintain, protect and clean up the site, all in accordance with the Contract Drawings, these specifications, and the directions of the Engineer. Payment will be made in proportion to the percentage of actual contract completion. The final payment for this item will be in direct proportion (whether higher or lower) to the final contract value as compared to the original contract value.

(B) MAINTENANCE OF SITE (PER MONTH)

The unit price bid per month for Maintenance of Site shall include the cost of furnishing all labor, materials, plant, equipment, insurance and incidentals required to maintain, protect and clean up the site, all in accordance with the Contract Drawings, these specifications, and the directions of the Engineer.

Where no separate item is provided for this work, the cost thereof shall be deemed to be included under all scheduled items.

*Payment will be made under:*

Item No.	Item	Pay Unit
7.13 A	MAINTENANCE OF SITE	L.S.
7.13 B	MAINTENANCE OF SITE	MONTH

## SECTION 7.35 - PEDESTRIAN CHANNELIZER

### 7.35.1. INTENT.

This section describes the work of providing interlocking Pedestrian Channelizers to be used as temporary pedestrian access route between pedestrian and construction work areas when directed by the Engineer.

Pedestrian channelizer must provide the same level of pedestrian guidance as concrete or plastic barrier, but should be light weight, easier to transport, install and remove with interlocking arrangements.

### 7.35.2. MATERIALS.

The work will consist of furnishing, maintaining, relocating, and removing Pedestrian Channelizer in sidewalk areas as per the specifications, as shown on the Contract Drawings, or where otherwise directed by the Engineer.

Pedestrian Channelizer units must meet the requirements of the following standards:

- a. 2010 ADA Standards for Accessible Design
- b. 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)
- c. 2009 Manual on Uniform Traffic Control Devices (MUTCD), with FHWA Revisions and NYS Supplements

Product should meet the crash test and evaluation criteria contained in the American Association of State Highway and Transportation Officials' (AASHTO) Manual for Assessing Safety Hardware (MASH) and have a FHWA acceptance letter.

Acceptable products include:

- a. ADA PEDESTRIAN BARRICADE – STRONG WALL by PLASTICADE
- b. ADA COMPLIANT PEDESTRIAN BARRICADE like Safety Rail & Safety Wall by PSS
- c. Urbanite 57000 Series by Urbanite
- d. Plastic Safety System Safety Wall by PAUL PETERSON SAFETY DIVISION.
- e. Or approved equivalent

Battery operated flashing units as approved by the Engineer.

### 7.35.3. METHODS.

Pedestrian Channelizer units of the various sizes required must be furnished to the site, complete, ready to use. All units must be in good condition and acceptable to the Engineer. Pedestrian Channelizer installed must meet the requirements of the standards listed in **Section 7.35.2** above.

The Contractor must install pedestrian channelizer by placing them where shown on the Contract Drawings or where otherwise directed by the Engineer. Adjacent units must be interlocked. Weights (sand or water ballast in the unit, sandbags, concrete blocks, etc.) must be used per the manufacturer's recommendations, as necessary to ensure stability, or as directed by the Engineer. Weights must not interfere with pedestrian travel.

The minimum number of interlocked barricade units in a given run must be two (2), unless otherwise approved by the Engineer. Where less than three (3) units are required and approved by the Engineer, additional measures must be taken by the Contractor to stabilize the shorter length of interlocking barricade and prevent overturning.

At corners, units four (4) feet or less in length must be used to form smooth curved runs of barricade.

Contractor must continuously maintain the temporary pedestrian steel barricades, where shown on the Contract Drawings or directed by the Engineer, until ordered by the Engineer to remove the barricades at the completion of a work stage. Should a unit or units of barricades become damaged or otherwise unacceptable to the Engineer, the Contractor must replace said units within twenty-four (24) hours of notice by the Engineer, at no additional cost to the City.

Battery operated flashing units will be installed on every alternate pedestrian channelizer or as approved by the Engineer.

#### **7.35.4. MEASUREMENT.**

The quantity to be measured for payment will be the number of linear feet of Pedestrian Channelizer constructed and placed, complete, based upon the summation of the lengths of the individual units so constructed and placed.

Payment will be made for only the initial installation at any location. Whenever Pedestrian Channelizer are moved to a new location, as required by the Contract Drawings or directed by the Engineer, payment will be made in the same manner as if it were an initial installation. Whenever the Contractor proposes to move Pedestrian Channelizer to a new location, it is subject to approval of the Engineer and must be in accordance with the latest approved progress schedule. Minor movement of the pedestrian channelizer within a work area will not be considered as a movement to a new location and will not entitle the Contractor to additional payment. Minor movement within a work area includes, but is not limited to

- Movement from one side of the roadway to the other side
- Movement to adjust the roadway or work zone width
- Movement required to access the work zone or to secure the work zone
- Linear movement of less than one block within an established work zone
- Rearrangement within a work area

No payment will be made: for non-interlocked units of barricade; for barricade units greater than four (4') feet in length used in corner quadrants; for movements of pedestrian channelizer made for the Contractor's convenience; for movement of barricades at a given location at the end of a work period and subsequent replacement at the same location at the beginning of the next work period; for movement of barricades at a given location during a work period and subsequent replacement at the same location during the same work period; or for the interchanging of barricades between initial installations.

**7.35.5. PRICE TO COVER.**

The contract price bid per linear foot for PEDESTRIAN CHANNELIZER will cover the cost of furnishing all labor, materials, plant, equipment, insurance, battery operated flashing units and necessary incidentals required to furnish, install, maintain, relocate, and remove PEDESTRIAN CHANNELIZER, complete with weights for stability, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Where there is no scheduled item for temporary Pedestrian Steel Barricades, the cost of furnishing, installation, maintenance, relocation, and subsequent removal of PEDESTRIAN CHANNELIZER as required will be deemed included in the unit price bid for the Maintenance and Protection of Traffic Item.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
7.35	PEDESTRIAN CHANNELIZER	L.F.

**SECTION 7.70 TPR – TEMPORARY PEDESTRIAN RAMP (Not a Pay Item)****7.70TPR.1. INTENT.**

This section describes the work of providing Temporary Pedestrian Ramps (TPRs) near new pedestrian construction work areas and the ADA guidelines. TPRs must provide access to sidewalk routes when pedestrian ramps are not accessible due to construction activities going on or around pedestrian ramps.

The work will consist of furnishing, installation, maintaining, relocating, and removing TPRs in order to access sidewalk areas as shown on the Contract Drawings or where otherwise directed by the Engineer.

TPRs must consist of temporary pedestrian ramp units having a geometry similar to that shown on the Contract Drawings, as directed the Engineer and complying with the following requirements:

- a. TPR running slope must not exceed 1:12 ramp slope, which equals 4.8 degrees slope or one foot of wheelchair ramp for each inch of rise. For instance, a 30-inch rise requires a 30-foot handicap wheelchair ramp.
- b. Cross slope must not exceed 1:48.
- c. Handrails must be provided on both sides if rise is more than 6 inches.
- d. A minimum 5' x 5' flat, unobstructed area at the top and bottom of the ramp
- e. A Minimum width of 36 inches of clear space across the wheelchair ramp.
- f. Maximum run of 30 feet will be allowed ramp before a rest or turn platform.
- g. Ramp handrail height will be between 34" and 38" in height on both sides of the wheelchair ramps.
- h. The TPR must allow for normal street drainage.

**7.70TPR.2. MATERIALS AND METHODS.**

(A) LUMBER TPR: Lumber must have a slip-resistant surface. Use pressure treated wood for most of the wood material. Lumber must be preservative-treated southern pine, grade #2 or better. Pressure treated lumber must resist rot and decay with level of treatment as per American Wood Council latest standards. Decking board for the TPR will be at a minimum 2" thick.

(B) ALUMINUM TPR: Aluminum must be high traction (e.g., textured extruded aluminum surface), dock plate with a coefficient of friction not less than 0.5 and made from high strength, lightweight aluminum; it must be slip-resistant and have a self-adjusting ground transition plate. The Ramp, Step, and Platform system is designed to be a rigid, free-standing structure. All footplates must be fastened securely to a concrete surface or 12" minimum diameter footings in order to achieve full structural integrity. Footing depth will depend on local building code.

Fastening all platforms to the building or modular building with lag screws is highly recommended.

- (C) FIBERGLASS/PLASTIC TPR: Fiberglass/ Plastic ramps must be able to take minimum wheelchairs, foot traffic etc., not less than 550 lbs., must be ADA compliant and adapts to varying curb heights from minimum of 2.5" to 7". Must be anti-slip with high visibility surface and must be bolted for maximum stability and security. Coefficient of friction will not be less than 0.5.

All ramp handrails and ramp guardrails are designed to withstand a concentrated load of 200 pounds applied in any direction on the top of the rail.

All ramp handrails are designed to be continuous along ramp runs and in between the inside corner of 90 degree and 180 degree turns in ramp direction. Handrails are not interrupted by posts or other obstructions.

Platforms and landings will be designed to carry a uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds in an area of one square foot.

Walking surfaces for items A, B & C above must be designed to have a coefficient of friction no less than 0.50 in all directions of travel.

### **7.70TPR.3. METHODS.**

All units must be in good condition and acceptable to the Engineer.

The Contractor must install the TPR by placing them where shown on the Contract Drawings, specifications and as directed by the Engineer. All the modular ramps will be assembled as per manufacturer's instructions.

If the modular ramps are pre-assembled and transported to their locations, Contractor must use utmost care in the delivery and installation of these units.

Units can also be fabricated/constructed at site with the approval of the Engineer.

Contractor must continuously maintain the TPR, where shown on the Contract Drawings or directed by the Engineer, until ordered by the Engineer to remove the completion of a work stage. Should a unit or units of barricades become damaged or otherwise unacceptable to the Engineer, the Contractor must replace said units within twenty-four (24) hours of notice by the Engineer, at no additional cost to the City.

### **7.70TPR.4. MEASUREMENT AND PAYMENT**

The price of TPR will be deemed included in the prices bid for all the scheduled contract items.

**SECTION 9.23 – ASPHALT, FUEL, AND STEEL PRICE ADJUSTMENT ALLOWANCE**

9.23.1 SCOPE AND INTENT

(A) This section will provide for additional compensation to the Contractor for increases, or repayment by the Contractor for decreases, in the price of asphalt, fuel, or steel products.

(B) Price Adjustments will be made only for eligible work as defined below. With respect to asphalt and steel eligible work items, price adjustment will be paid, if eligible, only after the items have been permanently incorporated into the Work and accepted by the Commissioner. With respect to fuel, price adjustment will be paid, if eligible, only after fuel has been delivered to the Project site.

(C) No adjustment will be provided for any extra work paid by fixed price in accordance with the Standard Construction Contract Article 25.3.2 or paid for on a time and material basis per Standard Construction Contract Article 26. Additional quantities of existing Contract pay items at original bid prices will be considered eligible for asphalt, fuel, and steel price adjustments.

(D) Temporary work performed by the Contractor at its own expense will not be eligible for price adjustment. Notwithstanding the foregoing, temporary asphalt will be eligible if shown on the Contract Drawings or required to complete the Work and must be approved in advance by the Engineer.

(E) The Contractor, its Subcontractor(s) and/or Materialmen, must, when directed by the Commissioner, provide any and all Project documents and/or records the Commissioner deems pertinent to his/her determination with respect to the price adjustment. If requested by the Commissioner, the Contractor, its Subcontractor(s) and/or Materialmen, must provide copies of Project documents and/or records.

(F) Failure by the Contractor, its Subcontractor(s) and/or Materialmen, to comply strictly with the requirement to provide Project records will constitute a waiver of any claim for additional compensation the Contractor may have in connection with the price adjustment request.

(G) Project documents and/or records include, without limitation, Bid and Contract Documents, shop drawings, manufacturing and/or shipping data, as-built drawings, books of account, financial statements, invoices, vouchers, records, daily job diaries and reports.

(H) If the Contractor is paid additional compensation in accordance with this Section, the Contractor must pay a properly allocated share of such additional compensation to the applicable Subcontractor(s) and/or Materialmen.

9.23.2 PRICE ADJUSTMENT VALUES

(A) The monthly average asphalt prices, monthly average fuel prices, steel cost basis and steel index values will be posted on the NYS Department of Transportation (NYSDOT) website: <https://www.dot.ny.gov/main/business-center/contractors/construction-division/fuel-asphalt-steel-price-adjustments>

(B) Historical index values are available as issued Engineering Bulletins on the NYSDOT website: <https://www.dot.ny.gov/eieb>



## 9.23.3 ASPHALT PRICE ADJUSTMENT

## (A) Price Changes.

The asphalt price adjustment will be based solely on the price changes for asphalt as determined by the formulas below. No adjustment will be made if the monthly average posted price is within \$15.00 of the asphalt index price. No consideration will be given to the situation where the price paid by the Contractor, its Subcontractors, or the Contractor's or Subcontractor's supplier(s) exceeds the monthly average posted price.

## (B) Applicability.

The asphalt price adjustment will apply to all permanent asphalt pavement items. The asphalt price adjustment will apply to temporary asphalt pavement if the temporary asphalt is shown on the Contract Drawings or approved in advance by the Commissioner. No price adjustment will be made for tack coat or pothole cold patch.

## (C) Prices.

The asphalt index price and the monthly average posted price are defined as follows:

1. Asphalt Index Price. The asphalt index price is a price per ton of binder (also referred to as liquid bitumen or asphaltic cement) used solely as a basis from which to compute asphalt price adjustments. The asphalt index price will be the monthly average posted price for the month and year the bid opening for the Project.
2. Monthly Average Posted Price. The monthly asphalt index prices will be determined by NYSDOT using the methods set forth in NYSDOT Standard Specification Section 698.

## (D) Quantity.

The quantity of asphalt in tons considered for adjustment will be determined by the tons of asphalt actually placed. This will be calculated using the measured volume of asphalt placed, and the asphalt's in-place density, as measured in the field. Quantities of asphalt will be measured to the nearest 0.1 ton.

## (E) Adjustment.

Asphalt price adjustment will be based on the following formulas:

1. When price increases: Price Adjustment = (Quantity of Asphalt) x (Monthly Average Posted Price – Asphalt Index Price - \$15.00)
2. When price decreases: Price Adjustment = (Quantity of Asphalt) x (Monthly Average Posted Price – Asphalt Index Price + \$15.00)

## (F) Payment of the Price Adjustment.

The Contractor is required to keep a log of all asphalt incorporated into the Project that is eligible for the price adjustment. The log must keep track of the date when the asphalt was purchased, the quantity of the asphalt, the Asphalt Index Price and the Monthly Average Posted Price, as determined in accordance with 9.23.3.C.

When the adjustment amount, calculated in accordance with 9.23.3.E, exceeds \$10,000.00 for all eligible asphalt incorporated into the Project, the Contractor must submit with its monthly payment requisition, the request for payment of the asphalt price adjustment.

## 9.23.4 FUEL PRICE ADJUSTMENT

## (A) Price Changes.

The fuel price adjustment will be based solely on the price changes for fuel as determined by the formulas below. No adjustment will be made if the monthly average posted price is within \$0.10 per gallon of the fuel index price. No consideration will be given to the situation where the price paid by the Contractor, its Subcontractors, or the Contractor's or Subcontractor's supplier(s) exceeds the monthly average posted price.

## (B) Applicability.

The intent of the fuel price adjustment is to cover on-site equipment and vehicles only as delineated below.

1. The fuel price adjustment will apply for fuel used in:
  - a. Diesel equipment used on site, such as backhoes, excavators, cranes.
  - b. Stationary equipment used on site, such as trailer or skid mounted compressors, generators, or light towers.
  - c. Gasoline or diesel trucks and vans that are assigned to the site full-time, which may be used for off-site pickups and deliveries.
  - d. Equipment used for temporary heating.
2. The fuel price adjustment will not apply to:
  - a. On-site gasoline powered hand tools, such as chainsaws, cut-off saws, pressure washers, small generators, etc.
  - b. Vehicles (cars, pickup trucks) that are also used for commuting.
  - c. Delivery vehicles.
  - d. Any equipment at the Contractor's shop, manufacturer's shop, or other off-site facility.

## (C) Prices.

The fuel index price and the monthly average posted price are defined as follows:

1. Fuel Index Price. A price per gallon of fuel used solely as a basis from which to compute fuel price adjustments. The fuel index price will be the monthly average posted price for the month of the bid letting.
2. Monthly Average Posted Price. The monthly fuel index prices will be determined by NYSDOT using the methods set forth in NYSDOT Standard Specification Section 698.

## (D) Quantity.

The quantity of fuel in gallons considered for adjustment will be determined by invoices for fuel delivered to the Project site. Quantities of fuel will be measured to the nearest 0.01 gallon.

## (E) Adjustment.

Fuel price adjustment will be based on the following formulas:

1. When price increases: Price Adjustment = (Quantity of Fuel) x (Monthly Average Posted Price - Fuel Index Price - \$0.10)
2. When price decreases: Price Adjustment = (Quantity of Fuel) x (Monthly Average Posted Price - Fuel Index Price + \$0.10)

## (F) Payment of the Price Adjustment.

The Contractor is required to keep a log of all fuel incorporated into the Project that is eligible for the price adjustment. The log must keep track of the date when the fuel was purchased, the quantity of the fuel, the Fuel Index Price and the Monthly Average Posted Price, as determined in accordance with 9.23.4.C.

When the adjustment amount, calculated in accordance with 9.23.4.E, exceeds \$10,000.00 for all eligible fuel delivered to the Project site, the Contractor must submit with its monthly payment requisition, the request for payment of the fuel price adjustment.

## 9.23.5 STEEL PRICE ADJUSTMENT

## (A) Applicability.

The intent of the steel price adjustment is to cover steel materials as follows. For the purposes of this section, steel includes all steel alloys, stainless steel alloys, iron, and ductile iron.

1. Steel price adjustment will apply to groups of similar material content.
2. The steel price adjustment will apply to the following Material Groups:
  - a. Structural steel
  - b. Reinforcing bars
  - c. Steel water mains, appurtenances, and valves
  - d. Ductile iron water and sewer pipes, appurtenances, fittings, and valves
  - e. Steel piles and minipiles casings
  - f. Municipal steel and iron castings (manhole covers, sewer grates, etc.)
3. The steel price adjustment will not apply to the following:
  - a. Steel in fabricated elements, such as traffic signal cabinets, or electrical fixtures and boxes
  - b. Handrails, access ladders, edging strips and other miscellaneous metals
  - c. Anchor bolts and fasteners

(B) For each Material Group listed, the Contractor must also identify the parties whose relationship establishes the invoice date. If the parties are known, they must be identified by name. If the two parties are not known, they must be identified by role (Contractor, Subcontractor, Materialman, fabricator, etc.). Different parties may be identified for scopes within a Material Group for the purposes of establishing an invoice date. If the Contractor does not provide a list of materials to which to apply the steel price adjustment, no steel price adjustment will be made.

(C) If the percentage change for a given month does not exceed 5% plus or minus, from the benchmark steel index, no adjustments will be made for materials invoiced that month.

(D) The percentage change for each material group identified in Article 9.23.5.A.2 above will be determined using the month that the largest value of materials were invoiced.

(E) The weight of the steel must exclude minor appurtenances individually weighing less than 5 lbs (i.e., nuts, bolts, washers, etc.) and non-steel components, such as door insulation or glazing. Precast or prestressed concrete items must have total reinforcing steel weight listed on the approved shop drawings. The following sources must be used, in declining order of precedence, to determine the weight of steel: approved shop drawings; verified shipping documents; Contract Documents; industry standards (i.e., AISC Manual of Steel Construction, AWWA Standards, etc.); and manufacturer's data.

1. Indexes and Prices. Adjustments are based on the Producer Price Index (PPI) for Semifinished Steel Mill Products (WPU 101702). PPI values are published by the US Department of Labor, Bureau of Labor Statistics (BLS). Recent PPI values are posted on the NYSDOT website linked above. The Cost Basis, Benchmark Steel Index, Monthly Steel Index, and the Percentage Change are defined as follows:
  - a. Cost Basis (CB). An average price of steel products in dollars per ton used solely as a cost basis from which to compute steel price adjustments. The cost basis for original Contract bid price items and additional work at the original Contract bid price will be the cost basis listed for the month of the bid letting. The cost basis for additional work at agreed price will be the value of the cost basis for the month the agreed price was submitted to the Commissioner.
  - b. Benchmark Steel Index (BI). The benchmark steel index for original Contract bid price items and additional work at the original Contract bid price will be the value of the preliminary PPI for the month of the bid letting. The benchmark steel index for additional work at agreed price will be the value of the preliminary PPI for the month the agreed price was submitted to the Commissioner.
  - c. Monthly Steel Index (MI). Value of the final PPI for the month the material is invoiced.
  - d. Percent Change. The percent change in any given month will be determined as follows:

$$\text{Percentage Change} = \left( \frac{MI - BI}{BI} \right) \times 100$$

(F) The quantity of steel for adjustment of each Material Group will be measured to the nearest 0.1 tons.

1. Percent Change Greater Than +5%. If the Percentage Change is greater than +5% from the benchmark steel index, Price Adjustments will be made for materials invoiced that month. The Contractor must provide the Commissioner a detailed list of the weight of eligible materials within 60 calendar days after installation, including: the Contract pay item, the weight of steel, the month(s) of invoice, the source used to determine the weight, and if requested by the Engineer, copies of invoices to verify the month of invoice.
2. Percent Change -5% to +5%. If the Percentage Change is between -5% and +5%, inclusive, from the benchmark steel index, no adjustments will be made for materials invoiced that month.
3. Percent Change Lower Than -5%. If the Percentage Change is lower than -5% from the benchmark steel index, a Price Adjustment will be charged to the Contractor for materials invoiced that month. The Contractor must provide the Commissioner a detailed list of the weight of eligible materials within 60 calendar days after installation, including: the Contract pay item, the weight of steel, the month(s) of invoice, the source used to determine the weight, and copies of invoices to verify the month of invoice.

(G) Adjustment.

Steel price adjustment will be made for all the materials which the Contractor opted to apply the steel price adjustment, based on the following formulas:

1. When price increases:

$$Price\ Adjustment = \left[ \left( \frac{MI - BI}{BI} \right) - 0.05 \right] (CB) Qty$$

2. When price decreases:

$$Price\ Adjustment = - \left[ \left( \frac{MI - BI}{BI} \right) + 0.05 \right] (CB) Qty$$

(H) Payment of the Price Adjustment.

Steel Price Adjustment will be paid once during the Project duration for each eligible Material Group after the final PPI is available to set the Monthly Steel Index for the invoice month determined in Article 9.23.5.D above.

9.23.6 MEASUREMENT AND PAYMENT

(A) The fixed sum shown in the Bid Schedule for Price Adjustments Allowance will be considered the price bid for this item. The fixed sum is not to be altered in any manner by the bidder. Should the amount shown be altered, the new figures will be disregarded and the original price will be used to determine the total amount bid for the Contract. The fixed sum payment made under this item will be equal to the sum of payments and credits for price adjustments, as approved by the Commissioner, with no markup for overhead, profit, or other fees allowed. The fixed sum amount is included in the bid solely to ensure that sufficient monies will be available to pay the Contractor for the price escalation adjustment payments as delineated herein, which may be more or less than the fixed sum amount.

*Payment will be made under:*

Item No.	Item	Pay Unit
9.23	PRICE ADJUSTMENTS	F.S.

**SECTION 9.28 –Expanded Work Allowance****9.28.1. PURPOSE**

An Allowance has been established for the items set forth in sub-Section 9.28.3 below (“Expanded Work Allowance” or “EWA”). Payment for the items set forth in sub-section 9.28.3 (“Expanded Work Items”) may be made through the EWA, as directed by the Engineer. “Extra Work”, “overrun”, and “Allowance” are defined by the Standard Construction Contract (see Articles 2.1.16, 26.1, and 2.1.4, respectively) and nothing in this Section alters, or will be deemed to alter the interpretation or application of, the Standard Construction Contract, including but not limited to Articles 25, 26, 28, and 78 of the Standard Construction Contract.

**9.28.2. PROCESS**

(a) If the Engineer determines that use of the EWA is appropriate, in their sole discretion, the Engineer will prepare a written scope document for the Expanded Work Items for the Contractor’s execution (“EWA Scope Memo”). The EWA Scope Memo will set forth the maximum amount payable from the EWA prior to the execution of a final cost memorandum (“Maximum Amount”), in accordance with this Section. The Maximum Amount may be increased from time to time by the Engineer, in their sole discretion, except that the Maximum Amount may not exceed 80% of the Engineer’s estimated total cost for such Work (the “Estimated Cost”) unless and until a final cost is determined and a final cost memorandum (“Final Cost Memo”) executed in accordance with this Section.

(b) Neither the Maximum Amount nor the Estimated Cost will be deemed to be the final cost of the Expanded Work Items. The final cost for the Expanded Work Items will be determined in accordance with Article 26 of the Standard Construction Contract. The Contractor must submit its detailed price proposal for the Expanded Work Items, calculated in accordance with the Contract, within the time period set forth in the EWA Scope Memo or within 90 Days after the executed EWA Scope Memo is issued to the Contractor, whichever is sooner.

(c) Once the EWA Scope Memo is executed and the Contractor is directed to proceed with the Work, DDC will make progress payments, as provided in the Contract, up to the Maximum Amount or until the submission period has expired, whichever occurs sooner.

(d) DDC will not make any progress payments for the performance of the Expanded Work Items beyond the submission period set forth in sub-Section C, above, unless and until a final cost has been determined and a Final Cost Memo executed in accordance with this Section. No amounts above the Maximum Amount set by the Engineer will be payable from the EWA, unless and until a final cost has been determined and a Final Cost Memo executed in accordance with this Section. In all events, the Contractor shall promptly and diligently comply with the Engineer’s direction and perform all Work required by the Contract and the EWA Scope Memo.

(e) Upon receipt of the Contractor’s cost detailed proposal, DDC will evaluate the proposal and initiate negotiations, as necessary, to determine the final cost of the Expanded Work Items in accordance with Article 26 of the Standard Construction Contract. The Contractor is responsible to furnish time and material records in accordance with Article 28 of the Standard Construction Contract until a Final Cost Memo is executed. If the parties cannot agree on a unit

price or fixed price, the Contractor will be paid on the basis of time and material records in accordance with Article 26 the Standard Construction Contract.

(f) A Final Cost Memo will be prepared by the Engineer to be executed by the parties. The total net sum of the amounts added and/or credited under the EWA Scope Memo and payment of the finalized Final Cost Memo constitutes full accord and satisfaction for the costs resulting from the Expanded Work Items. In the event the EWA is insufficient to pay the full amount of the Final Cost Memo, the parties agree to execute change order documents for the remaining funds, subject to registration in accordance with the New York City Charter.

### **9.28.3. PRICE TO COVER.**

Expanded Work Items are those items set forth below. The EWA may be used, in the Engineer's discretion, for the following Expanded Work Items:

- (a) Non-material changes in the Work necessary to complete Contract Work due to site conditions that differ from those included in the Contract Documents and that could not have been anticipated by the Contractor.
- (b) Non-material changes in the Work directed by the Commissioner that result in a net change in the cost to the Contractor for the Work to be performed under this Contract, including but not limited to the following:
  - (i) Overruns of unit price items and quantity increases in portions of work within a lump sum item.
  - (ii) NYCDOT traffic stipulations or permit requirements that significantly differ from those included in the Contract Documents and that could not have been anticipated by the Contractor.
  - (iii) Changes to the sizes of materials or changes to specifications of materials.
  - (iv) Materials/structures not included in the Contract Documents that are necessary to complete Contract Work and that could not have been anticipated the Contractor.

### **9.28.4. BASIS OF PAYMENT.**

(a) The fixed sum must be considered the price bid for this item. The fixed sum is not to be altered in any manner by the bidder. Should the amount shown be altered, the new figures will be disregarded, and the original price will be used to determine the total amount bid for the contract.

(b) The payment(s) made under this item will be equal to the Final Cost Memo prepared by the Engineer and executed by the parties in accordance with 9.28.2(f) above as proof of work performed for this item as approved by the Engineer.

(c) The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule and shall not be varied in the bid. The "fixed sum" amount is included in the

bid solely to ensure that sufficient monies will be available to pay the Contractor for this work, which may be more or less than the fixed sum amount.

(d) The price will cover the cost of all labor, materials, equipment, insurance and incidentals necessary to complete the work under this section in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

*Payment will be made under:*

Item No.	Item	Pay Unit
9.28	EXPANDED WORK ALLOWANCE	F.S.



**SECTION HW-900H - ALLOWANCE FOR CITY WORK ACCELERATION**

Under this Section, the Contractor will be paid for City work deemed necessary by DDC's Commissioner to accelerate the City work items in the project during critical periods but the use of this item will expire on the original contract substantial completion date. Such accelerated City work includes:

- A. 100% of the premium portions of overtime pay for working during non-scheduled work hours which shall be defined as those hours of work outside the permissible hours stated in the original contract OCMC Traffic Stipulations; or,
- B. The premium portion of overtime pay for overtime actually worked beyond the 40-hour work week but within the permissible hours of work stated in the original contract OCMC Traffic Stipulations; or,
- C. All other incidental expenditures caused by modifications of project site regulations or administrative requirements ordered by the Commissioner that result in additional costs to perform contract work as specified.

Such accelerated City work shall be paid for under this item in accordance with the requirements of **Articles 25 and 26** of the Standard Construction Contract.

Payment made under this Fixed Sum item shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to accelerate the City work as ordered by DDC's Commissioner.

No guarantee is given that this allowance item will in fact be required in this contract. The estimated "fixed sum" amount shown in the Bid Schedule is included in the total bid solely to insure a method of payment for any accelerated work performed by the Contractor, as directed by DDC's Commissioner.

*Payment will be made under:*

Item No.	Item	Pay Unit
HW-900H	ALLOWANCE FOR CITY WORK ACCELERATION	F.S.

## SECTION GI-PPCP-DC — STACKED DRAINAGE CELLS

### GI-PPCP-DC.1 INTENT

This section describes the installation of the polyethylene STACKED DRAINAGE CELLS. The purpose of the STACKED DRAINAGE CELLS is to provide subsurface storage for stormwater management.

### GI-PPCP-DC.2 DESCRIPTION

Under this section, the Contactor must furnish and install all STACKED DRAINAGE CELLS in accordance with the Contract Drawings, the specifications, the New York City Department of Environmental Protection Standard Designs and Guidelines for Green Infrastructure Practices, current edition, and as directed by the Engineer.

### GI-PPCP-DC.3 REFERENCES

- (A) STACKED DRAINAGE CELLS must conform to the latest standards of the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), and the American Water Works Association (AWWA) as applicable.
- (B) STACKED DRAINAGE CELLS must conform to the following ASTM standards:
  - (1) ASTM D1248 Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable
  - (2) ASTM D2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
  - (3) ASTM D2412 Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
  - (4) ASTM D6088 Standard Practice for Installation of Geocomposite Pavement Drains.
  - (5) ASTM D7001 Standard Specification for Geocomposites for Pavement Edge Drains and other High-Flow Applications
  - (6) ASTM F2418 Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers

### GI-PPCP-DC.4 QUALITY CONTROL

Contractor must have manufacturer's representative available for site review if requested by the Engineer.

**GI-PPCP-DC.5 DELIVERY, STORAGE, AND HANDLING**

- (A) Protect STACKED DRAINAGE CELLS and other materials from damage during delivery, and store UV sensitive materials under tarp to protect from sunlight when time from delivery to installation exceeds two weeks. Storage of materials should be on smooth surfaces, free from dirt, mud, and debris.
- (B) Handling is to be performed with equipment appropriate to the materials and site conditions, and may include hand, handcart, forklifts, and extension lifts.
- (C) Cold weather:
  - (1) Care must be taken when handling plastics when air temperature is 40 degrees or below, as plastic becomes brittle.
  - (2) Contractor must not use frozen materials or materials mixed or coated with ice or frost.
  - (3) Contractor must not build on frozen ground or wet, saturated, or muddy subgrade.

**GI-PPCP-DC.6 PRE-INSTALLATION CONFERENCE**

- (A) Prior to the start of the installation, a pre-installation conference must occur with the representatives of the Engineer, the Contractor, the excavation contractor, the STACKED DRAINAGE CELLS installation contractor, and the manufacturer's representative.

**GI-PPCP-DC.7 PROJECT CONDITIONS**

- (A) Contractor must coordinate installation of the STACKED DRAINAGE CELLS with other on-site activities to eliminate all non-installation related construction traffic over the completed stacked drainage cell system. In no case at any time must loads heavier than the design loads of the panel type being installed be allowed over the system.
- (B) Contractor must protect adjacent work from damage during the installation of the STACKED DRAINAGE CELLS.
- (C) Contractor is responsible for any damage to the system during construction.

**GI-PPCP-DC.8 SUBMITTALS**

- (A) All submittals must be submitted prior to purchase and must be made in accordance with the requirements of the NYC Department of Transportation Standard Highway Specifications, General Conditions, Subsections 1.06.13 and 1.06.31, current edition.
- (B) Contractor must submit catalog data for STACKED DRAINAGE CELLS and other appurtenances.
- (C) Drawings must include typical section details as well as the minimum cover requirements and STACKED DRAINAGE CELLS configuration.

- (D) Contractor must submit manufacturer's product data, including compressive strength and unit weight.
- (E) Contractor must submit the manufacturer's protection recommendations and installation instructions.
- (F) Contractor must submit product sample for review. Reviewed and accepted samples will be kept on site for comparison purposes and will not be returned to the Contractor.

**GI-PPCP-DC.9 CHEMICAL AND PHYSICAL REQUIREMENTS**

- (A) Drainage cell units must be injection molded plastic cells stacked to form a 90% void modular structure of predesigned height. The STACKED DRAINAGE CELLS must be as uniform as commercially practicable in color, capacity, density, and other physical properties.

**Table GI-PPCP-DC – Stacked Drainage Cell Requirements**

<b>Property</b>	<b>Description</b>	<b>Value</b>
Void Area	Volume available for water storage	90%
Surface Void Area	Percentage of exterior available for infiltration	90%
Compressive Strength	ASTM S2421 and ASTM F2418	240.2 psi
HS-20 Min. Cover	Min. cover required to support HS-20 loads	6 inches
Maximum Cover	Max. allowable cover depth	< 16.7 feet
Unit Weight	Weight of plastic per cubic foot	7.55 lb./cf
Service Temperature	Safe temperature range for use	-14°F to 185°F

- (B) Visible defects, such as cracks, creases, crazing, non-uniformly pigmented areas, or undispersed raw materials must not be acceptable and will result in rejection of the STACKED DRAINAGE CELLS by the Engineer.
- (C) Any fittings necessary must be manufactured to the requirements of ASTM D 3212 and this Specification.

**GI-PPCP-DC.10 CONSTRUCTION METHODS**

- (A) Excavation
  1. Base of the excavation for the STACKED DRAINAGE CELLS must be uniform, level, and free of lumps, debris, or soft yielding subgrade areas.
  2. Unsuitable soils or conditions: All questions about the base of excavation shall be directed to the Engineer, who shall approve the subgrade conditions prior to placement of stone.
    - a. If unsuitable soils are encountered at the subgrade, or if the subgrade is

pumping or appears excessively soft, repair the area in accordance with the contract drawings and as directed by the Engineer.

b. If indications of the water table are observed during excavation, the Engineer must be contacted to provide recommendations.

c. Do not begin installation of STACKED DRAINAGE CELLS until unsatisfactory subgrade conditions are accepted by the Engineer.

(B) Base Preparation

1. Place a thin layer (3" unless otherwise specified) of clean open-graded stone base, over the subgrade to establish a level working platform for the STACKED DRAINAGE CELLS. Level to within  $\frac{1}{2}$ " (+/-  $\frac{1}{4}$ ") or as shown on the plans. Bedding materials must be prepared in accordance with the contract documents.

(C) Installation

1. Geogrid must be in accordance with specification GI-PPCP-BXG Biaxial Geogrid.
2. Install STACKED DRAINAGE CELLS in layers in accordance with the contract drawings. STACKED DRAINAGE CELL components must be connected to all other components for each layer. Layers must stack on top of each preceding layer evenly. No vertical connection between layers is required. The panels are to be oriented and at the required depth as per the contract drawings.
3. Wrap the STACKED DRAINAGE CELLS top and sides in specified microgrid material in accordance with specification GI-PPCP-MG Microgrid, and/or as approved and directed by the Engineer. Use special care to avoid any damage to microgrid during installation.

(D) Backfilling

1. Backfill and fill with recommended materials as follows:
  - a. Place clean open graded stone base around the perimeter of STACKED DRAINAGE CELLS in lifts with a maximum thickness of 6". Each lift must be placed around the entire perimeter such that each lift is no more than 24" higher than the side backfill along any other location on the perimeter of the STACKED DRAINAGE CELLS.
  - b. Open graded stone base shall be carefully placed and compacted in the perimeter spaces around the STACKED DRAINAGE CELLS. No fill shall be placed over top of STACKED DRAINAGE CELLS until the perimeter backfill has been completed.
  - c. Each lift must be compacted at the specified moisture content to a minimum of 95% of the Standard Proctor Density or until no further densification is observed. The side lifts must be compacted by walk plate compactor.
  - d. Use special care to ensure the compaction process does not allow machinery to come into contact with the STACKED DRAINAGE CELLS due to the potential for damage to the Microgrid and STACKED DRAINAGE CELLS.
  - e. No compaction equipment is permissible to operate directly on STACKED

DRAINAGE CELLS.

f. During construction, keep the STACKED DRAINAGE CELLS free from foreign matter. The cells must be left thoroughly clean to the satisfaction of the Engineer.

**GI-PPCP-DC.12 MEASUREMENT**

The quantity to be measured for STACKED DRAINAGE CELLS must be the number of CUBIC YARDS of a single layer of drainage cell units installed multiplied by the number of stacked drainage cell layers that achieve the final height and area shown in the Contract Drawings or as directed by the Engineer.

**GI-PPCP-DC.113 PRICE TO COVER**

The contract price bid for STACKED DRAINAGE CELLS must be a unit price bid per CUBIC YARD and must cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work of furnishing and installing drainage cell as shown in the Contract Drawings including, but not limited to, furnishing and installing fittings, connecting and joining cells to other cells; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

***Payment will be made under:***

Item No.	Item	Pay Unit
GI-PPCP-DC	STACKED DRAINAGE CELLS	C.Y.

**SECTION GI-PPCP-MG — MICROGRID****GI-PPCP-MG.1 INTENT**

This section describes the MICROGRID. The purpose of the microgrid is to prevent the clean open graded stone base from entering the stacked drainage cells, while allowing for the free flow of water within the system.

**GI-PPCP-MG.2 DESCRIPTION**

Under this section, the Contractor must furnish and install the microgrid in accordance with the Contract Drawings, the specifications, the NYC DEP Standard Design and Guidelines for Green Infrastructure Practices, current edition, and as directed by the Engineer.

**GI-PPCP-MG.3 SUBMITTALS**

- (A) The contractor, prior to the start of work, must submit to the Engineer for approval two (2) labeled samples of the microgrid in accordance with the requirements of Sections 1.06.13 and 1.06.31 of the NYC DOT Standard Highway Specifications, current edition. The label must include the manufacturer's product name, the type of fabric, and the weight of grade of the material. Microgrid used in the work must conform to the approved samples.
- (B) Certified material test reports showing that the microgrid meet the specified requirements must be submitted for each shipment and identified with specific lots prior to installing materials. Material test reports must meet the requirements of the criteria outlined herein.
- (C) The manufacturer must submit certified test data to cover each shipment of material.

**GI-PPCP-MG.4 MATERIALS**

- (A) Chemical and Physical Requirements
  - (1) The microgrid must be defined as a system that allows for long-term, adequate liquid flow normal through the microgrid with limited flow loss across the plane of the geotextile. The microgrid must be composed of high molecular weight, high tenacity multifilament polyester yarns woven into a stable network placed under tension. The high strength polyester yarns must be coated with polyvinyl chloride (PVC) material that retain their dimensional stability relative to each other, including selvages. The microgrid must have no tears or defects which adversely alter its physical properties. The microgrid must be inert to biological degradation and must be resistant to naturally encountered chemicals, alkalis, and acids.
  - (2) Minimum Average Roll Value (MARV): Property value calculated as typical minus two standard deviations. Statistically, it yields a 97.7 percent degree of confidence that any sample taken during quality assurance testing will exceed value reported. Typical Roll

Value is represented by (TRV). Minimum Average Roll Values (MARVs) in the machine direction determined in accordance with ASTM D4759-02.

Table : Microgrid Requirements

Tensile Properties	Test Method	MARV lbs./ft
Ultimate Strength – Machine Direction (MD)	ASTM 4595	1,700 +/- 5%
Ultimate Strength – Cross Machine Direction (XMD)	ASTM 4595	1,400 +/- 5%
Creep Limited Strength - MD	ASTM 5262	1,070 +/- 5%
Creep Limited Strength - XMD	ASTM 5262	880 +/- 5%
T <sub>al</sub> = Long Term Design Strength - MD	NCMA 97	900 +/- 5%
T <sub>al</sub> = Long Term Design Strength - XMD	NCMA 97	730 +/- 5%
Aperture Size (inches)	Measured (inches)	0.08 +/- 5%
Ultraviolet Resistance (500 hours)	ASTM D4355	78%

### GI-PPCP-MG.5 METHODS

- (A) Each microgrid roll must be wrapped with an overlaying material that will protect the material, including the ends of the roll, from damage due to shipment, water, sunlight, and contaminants. The protective wrapping must be maintained during periods of shipment and storage. During storage, rolls must be elevated off the ground and adequately covered to protect them from the following: site construction damage, precipitation, extended ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, and any environmental condition that may damage the physical property values of the microgrid.
- (B) Excavation must be made to dimensions enough to accommodate placement of the clean open graded stone, stacked drainage cells, microgrid and leveling course for the precast porous concrete panels. Any overcut underlying soil must be removed from the excavation and the bottom must be compacted **only** as specified and required elsewhere. The extra depth will be filled with clean open graded stone materials as required after installation of geo-grid. No additional payment will be made for extra clean open graded stone used to compensate for overcut subbase. Where applicable, Temporary Support must be provided for trench walls to prevent it collapse when directed by the Engineer. The contractor must protect the road pavement along the saw cut line.

Prior to installation of microgrid, the stacked drainage cells must be set in their final configuration and/or as directed and approved by the Engineer. If the microgrid is damaged during installation, the damaged section(s) must be removed, and the damaged area must be covered with a patch of new fabric which will overlap the undamaged fabric with twelve (12") inches in all directions. The Contractor must make such repair work as directed by Engineer at no extra cost to the city. Overlaying material must be placed within the same work shift whether the fabric is subject to damage from sunlight or not.



**GI-PPCP-MG.6 MEASUREMENT**

The quantity of MICROGRID to be measured for payment must be the number of square yards installed at the site, in its final position, to the satisfaction of the Engineer. Measurement must be made to the nearest square yard installed. No quantity will be included for material used for repair of tears or for material used to provide the overlaps.

**GI-PPCP-MG.7 PRICE TO COVER**

The contract price for MICROGRID must be a unit price bid per SQUARE YARD and must cover the cost of furnishing all labor, material, equipment, insurance, submittals, and incidental expenses required to complete the work; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

***Payment will be made under:***

Item No.	Item	Pay Unit
GI-PPCP-MG	MICROGRID	S.Y.

## SECTION GI-PPCP-BXG — BIAXIAL GEOGRID

### GI-PPCP-BXG.1 INTENT

This section describes the installation of the BIAXIAL GEOGRID. The purpose of the biaxial geogrid is to improve the structural integrity of the precast porous concrete panels. This is accomplished by confining and distributing load forces by providing soil base reinforcement.

### GI-PPCP-BXG.2 DESCRIPTION

Under this section, the Contractor must furnish and install the biaxial geogrid in accordance with the Contract Drawings, the specifications, the NYC DEP Standard Design and Guidelines for Green Infrastructure Practices, current edition, and as directed by the Engineer.

### GI-PPCP-BXG.3 SUBMITTALS

- (D) The contractor, prior to the start of work, must submit to the Engineer for approval two (2) partial panel section with all characteristics the same as a full-sized panel, 12"x12" square, with manufacturer's name, labeled samples of the biaxial geogrid in accordance with the requirements of Sections 1.06.13 and 1.06.31 of the NYC DOT Standard Highway Specifications, current edition. The label must include the manufacturer's product name, the type of fabric, and the weight of grade of the material. Biaxial geogrid used in the work must conform to the approved samples.
- (E) Certified material test reports showing that the biaxial geogrid meet the specified requirements must be submitted for each shipment and identified with specific lots prior to installing materials. Material test reports must meet the requirements of the criteria outlined herein.
- (F) The manufacturer must submit certified test data to cover each shipment of material.

### GI-PPCP-BXG.4 MATERIALS

- (B) References
  - (3) American Society for Testing and Materials (ASTM) and other testing standards, in any case the Current Edition will be the reference:
    - a. ASTM D4355 Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc-Type Apparatus
    - b. ASTM D4759-11 Standard Practice for Determining the Specification Conformance of Geosynthetics
    - c. ASTM D5818-11 Standard Practice for Exposure and Retrieval of Samples to Evaluate Installation Damage of Geosynthetics
    - d. ASTM D6637 Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method

- e. ASTM D7748 Test Method for Flexural Rigidity of Geogrids, Geotextiles and Related Products
- f. ASTM D7864 Standard Test Method for Determining the Aperture Stability Modulus of Geogrids

(C) Chemical and Physical Requirements

- (1) The biaxial geogrid must be defined as a system that allows for long-term, adequate liquid flow normal through the biaxial geogrid with limited flow loss across the plane of the grid. The biaxial geogrid must exhibit high tensile strength in both longitudinal and transverse directions.
- (2) The biaxial geogrid must have a Mid-Rib Width of 0.14 inches and a minimum Radial Stiffness @ 0.5% Strain of 321 kN/m (22,000 lb./ft.) when tested in accordance with ASTM D6637 and a Flexural Rigidity of 2,100,000 mg-cm when tested in accordance with ASTM D7748.
- (3) The biaxial geogrid must have an Ultraviolet Degradation of 100% when tested in accordance with ASTM D4355. Biaxial Geogrid must be manufactured using an extrusion process resulting in a polypropylene sheet that is specifically shaped to create a triplanar reinforcing structure that produces a large, concave-shape rib. High profile ribs and junctions must be so configured to interlock and distribute stress of the loads above the grid onto the base below.
- (4) Minimum Average Roll Value (MARV): Property value calculated as typical minus two (2) standard deviations. Statistically, it yields a 97.7 percent degree of confidence that any sample taken during quality assurance testing will exceed value reported. Typical Roll Value is represented by (TRV).
- (5) The biaxial geogrid must have no tears or defects which adversely alter its physical properties. The biaxial geogrid must be inert to biological degradation and must be resistant to naturally encountered chemicals, alkalis, and acids.

**Table GI-PPCP-BXG – Biaxial Geogrid Technical Characteristic Requirements**

Technical Characteristics	Units	MD Values <sup>1</sup>	XMD Values <sup>1</sup>
Rib Pitch <sup>2</sup>	mm (in)	32 (1.26)	32 (1.26)
Minimum Rib Thickness	mm (in)	2.5 (0.1)	2.1 (0.08)
Rib Shape		Inverted T Beam	Rectangular

**Table GI-PPCP-BXG – Structural Integrity Requirements of Biaxial Geogrid**

Description	Units	MD Values
Aperture Stability <sup>3</sup>	N-m/deg	0.45
Overall Flexural Rigidity <sup>4</sup>	mg-cm	2,100,000
Radial Stiffness at low stain @ 0.5% Strain <sup>5</sup>	kN/m (lb./ft.)	321 (22,000)

**Table GI-PPCP-BXG – Durability Requirements of Biaxial Geogrid**

<b>Description</b>	<b>Units</b>	<b>MD Values</b>
Resistance to Installation Damage <sup>6</sup>	%SC / %SW / %GP	95 / 96 / 90
Resistance to Long Term Degradation <sup>7</sup>	%	100
Resistance to UV Degradation <sup>8</sup>	%	100

## Table Notes:

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-11. Machine direction is presented as (MD). Cross machine direction is presented as (XMD).
2. Nominal dimensions.
3. Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) movement to the central junction of a 9-IN x 9-IN specimen restrained at its perimeter in accordance with ASTM S7864-15.
4. Resistance to bending force determined in accordance with ASTM D7748, using specimens of width two (2) ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs, and of length sufficiently long to enable measurement of the overhang dimension.
5. Radial stiffness is determined from tensile stiffness measured in any in-plane axis from testing in accordance with ASTM D6637/D6637M-15, tolerance +/- 2%.
6. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress in clayey sand (SC), well graded sand (SM), and crushed stone classified as poorly graded gravel (GP). The geogrid shall be sampled in accordance with ASTM D5818-11 and load capacity shall be determined in accordance with ASTM D6637.
7. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments.
8. Resistance to loss of load capacity or structural integrity when subjected to ultraviolet light and aggressive weathering.

**GI-PPCP-BXG.5 CONSTRUCTION METHODS**

- (C) Each biaxial geogrid roll must be wrapped with an overlaying material that will protect the material, including the ends of the roll, from damage due to shipment, water, sunlight, and contaminants. The protective wrapping must be maintained during periods of shipment and storage. During storage, rolls must be elevated off the ground and adequately covered to protect them from the following: site construction damage, precipitation, extended ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, and any environmental condition that may damage the physical property values of the geogrid.

- (D) Excavation must be made to dimensions enough to accommodate placement of the biaxial geogrid, clean open graded stone, drainage cells, microgrid geotextile and leveling course with precast porous concrete panels. Any overcut underlying soil must be removed from the excavation and the bottom must be compacted **only** as specified and required elsewhere. The extra depth will be filled with clean open graded stone materials as required after installation of geogrid. No additional payment will be made for extra clean open graded stone used to compensate for overcut subbase. Where applicable, temporary support must be provided for trench walls to prevent it collapse when directed by the Engineer. The contractor must protect the pavement section at the saw cut line along the roadside.
- (E) Prior to installation of biaxial geogrid, the drainage cells must be set in their final configuration as approved by the Engineer. If the biaxial geogrid is damaged during installation, the damaged section(s) must be removed, and the damaged area must be covered with a patch of new fabric which will overlap the undamaged fabric with twelve (12) inches in all directions. The Contractor must make such repair work as directed by the Engineer at no extra cost to the city. Overlaying material must be placed within the same work shift whether the fabric is subject to damage from sunlight or not.

**GI-PPCP-BXG.6 MEASUREMENT**

The quantity of BIAXIAL GEOGRID to be measured for payment must be the number of SQUARE YARDS installed at the site, in its final position, to the satisfaction of the Engineer. Measurement must be made to the nearest square yard installed. No quantity will be included for material used for repair of tears or for material used to provide the overlaps.

**GI-PPCP-BXG.7 PRICE TO COVER**

The contract price for BIAXIAL GEOGRID must be a unit price bid per SQUARE YARD and must cover the cost of furnishing all labor, material, equipment, insurance, submittals, and incidental expenses required to complete the work; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

***Payment will be made under:***

Item No.	Item	Pay Unit
GI-PPCP-BXG	BIAXIAL GEOGRID	S.Y.

**SECTION GI-PPCP PRECAST POROUS CONCRETE PANEL****GI-PPCP.1 INTENT**

This section describes the installation of the PRECAST POROUS CONCRETE PANEL (PPCP). The purpose of the precast porous concrete panel is to provide the structural support of conventional pavement and to serve as a porous medium for infiltration of stormwater runoff through its surface.

**GI-PPCP.2 DESCRIPTION**

Under this section, the Contractor must furnish and install the precast porous concrete panels and accessories in accordance with the Contract Drawings, the specifications, the New York City Department of Environmental Protection Standard Designs and Guidelines for Green Infrastructure Practices, current edition, and as directed by the Engineer.

**GI-PPCP.3 MATERIALS****(A) References**

- (1) American Society for Testing and Materials (ASTM) and other testing standards, the Current Edition will be the reference:
- (2) ASTM C33 Standard Specification for Concrete Aggregates
- (3) ASTM C42 Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
- (4) ASTM C78 Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
- (5) ASTM C136 Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- (6) ASTM C1116 Standard Specification for Fiber-Reinforced Concrete
- (7) ASTM C1688 Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete
- (8) ASTM C1701 Standard Test Method for Infiltration Rate of In-Place Pervious Concrete
- (9) ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>)
- (10) ASTM D1751 Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)

- (B) Specifications from the current edition of the NYC DEP Standard Green Infrastructure Specifications, are necessary to complete the work of this ITEM, and include, but are not limited to:

- (1) Section GI-2.07 CLEAN OPEN GRADED STONE
- (2) Section GI-4.06 GI CONCRETE ELEMENTS
- (3) Section GI-5.10 STONE COLUMN
- (4) Section GI-5.10 OW OBSERVATION WELL
- (5) Section GI-PPCP-CH CAST-IN-PLACE CONCRETE HEADER
- (6) Section GI-PPCP-MG MICROGRID
- (7) Section GI-PPCP-DC STACKED DRAINAGE CELLS
- (8) Section GI-PPCP-BG BIAXIAL GEOGRID
- (9) Section GI-PPCP-CCD CAST-IN-PLACE CONCRETE CHECK DAM
- (10) Section GI-PPCP-CC CAST-IN-PLACE CONCRETE CURB

- (C) Specifications from the City of New York Department of Transportation, Infrastructure Design Standards, Standard Highway Specifications Volumes I and II, current edition, are necessary to complete the work of this item but not included herein and to be paid for separately include:

- (1) Section 1.06.48 ADDITIONAL PROVISIONS PERTAINING TO STREET PAVING AND INSTALLATION OF SIDEWALKS, SECT. D
- (2) Section 2.15 FILLER, EXPANSION JOINT, PREFORMED
- (3) Section 4.08 CURB, CONCRETE
- (4) Section 4.11AS EARTH EXCAVATION FOR STRUCTURES

- (D) PRECAST POROUS CONCRETE PANEL

- (1) The precast porous concrete panels must be supplied by a manufacturer having at least five (5) years of experience in the production and sale of porous concrete panels.
- (2) The manufacturer must provide a training program for the Contractor detailing handling and installation of the product.

Concrete average unit weight must be 120 lb./ft.<sup>3</sup> (+/- 4%). The average core compressive strength of the precast porous concrete panels must be a minimum of 2,000 psi at 28 days per ASTM C42. The manufacturer must cure the precast porous concrete panels. The precast porous concrete panels must

have a minimum infiltration rate of 250 inch/hr when tested in accordance with ASTM D1701.

- (3) Refer to Contract Drawings for precast porous concrete panel dimensions, thickness, and reinforcing requirements. The precast porous concrete panels supplied must be of the type(s) as shown in the Contract Drawings.
- (4) Fiber reinforcement must be utilized as a means of reinforcement to achieve the panel design load requirements. Reinforcing must be a product on the New York State Department of Transportation *Approved Materials, Equipment, Methods and Procedures* List, Material Code 711-01.
- (5) Minor adjustments of the limits of work will be considered by the Engineer to reduce the number of panels less than full length to eliminate cutting. Smaller lengths must only be used where necessary and appropriate to accommodate utilities and overall alignment or as shown on the Contract Drawings.
- (6) Installation of precast porous concrete panels must be in strict accordance with the manufacturer's recommendations, all information contained in this specification, and related contract drawings.
- (7) Permanent lifting points must be embedded in the panel surface for unloading, handling, installation, maintenance, removal, and reinstallation purposes. Refer to Contract Drawings for lifting point locations. Shop drawings are required. All panels must be provided with lifting point protection caps and approved lifting swivels for use in covering the embedded lifting points. Any altered unit must include a minimum of two (2) permanent lifting points.
- (8) Precast porous concrete panels must have a minimum average Flexural Strength of 400 psi when tested in accordance with ASTM C78. Panels must not be shipped until they have achieved 85% of the minimum flexural strength or higher as determined by the lab test results submitted. The void content must be from 15% to 25%, conforming to ASTM C1688.
- (9) Each individual precast porous concrete panel must be weighed, and the unit must be labelled with the weight, size, and date of manufacture.
- (10) All panels must be provided with spacers preventing slab to slab contact, as required by the Manufacturer.
- (11) Concrete must be tinted when specified

#### **GI-PPCP.4 METHODS**

##### **(A) GENERAL**

- (1) Before panels are installed, the Contractor must ensure that all materials and preparation for subbase and edge restraints are installed in accordance with Contract Drawings and specifications and accepted by the Engineer.
- (2) Do not damage drainpipes, underdrains, observation wells, roadway boxes,



manholes, or any other utilities during installation. Report any damage immediately to the Engineer. All damage must be replaced or repaired as part of the bid price of this item by the Contractor at no additional cost to the city.

(B) SUBGRADE PREPARATION

- (1) The subgrade under the clean open graded stone course (subbase) must not be compacted.
- (2) Prepared subgrades under all infiltration areas must not be compacted and must not be subjected to construction equipment traffic. Where erosion has caused accumulation of sediment or ponding on the subgrade, remove sediment with light equipment and/or manually. Scarify the underlying soils to a minimum depth of six-inches (6") with a York-type rake or equivalent equipment to the satisfaction of the Engineer.
- (3) Restore any subgrade areas damaged by erosion, ponding, or traffic compaction to design line and grades prior to installation of geogrid and clean open graded stone.
- (4) Any excess thickness of material placed over the soil subgrade to trap sediment transported by runoff from adjacent construction areas must be removed before placement of geogrid and storage reservoir layer. Keep area where precast porous concrete panels are to be installed free of sediment during the entire construction period. Any materials that are contaminated with sediment must be removed and replaced with clean materials.

(C) CAST-IN-PLACE CONCRETE HEADER

Cast-in-place concrete header must comply with Section GI-PPCP-CH and must be placed prior to the placement of the geogrid or open graded stone base.

(D) CAST-IN-PLACE CONCRETE CHECK DAM

Cast-in-place concrete check dam must comply with Section GI-PPCP-CCD.

(E) CAST-IN-PLACE CONCRETE CURB

Cast-in-place concrete curb must comply with Section GI-PPCP-CC.

(F) MICROGRID

Microgrid must comply with Section GI-PPCP-MG.

(G) STACKED DRAINAGE CELLS

Stacked drainage cells must comply with Section GI-PPCP-DC.

(H) BIAXIAL GEOGRID

Biaxial Geogrid must comply with Section GI-PPCP-BG.

## (I) CLEAN OPEN-GRADED STONE BASE

- (1) Clean open-graded stone base must comply with Section GI-2.07.
- (2) Clean open-graded stone base must be compacted to at least 95% Modified Proctor relative compaction per ASTM D1557. A minimum 200-pound walk-behind plate compactor must be used on each lift of six-inches (6"). Compaction using the plate compactor must include four (4) passes in each direction longitudinally along length of the trench.
- (3) The surface tolerance of the compacted clean open-graded stone base must be a maximum of +/- three-quarter inch ( $\frac{3}{4}$ " ) under a ten (10) foot straightedge in all directions.
- (4) Verify that the open-graded stone base, as shown on the Contract Drawings, has been properly placed within the trench and compacted as approved and accepted by the Engineer before the leveling course is placed.
- (5) Place and spread leveling course stone evenly over screed rails to achieve a thickness of two inches (2") minimum. Level the surface of leveling course stone with a screed, it must not be compacted.
- (6) The surface tolerance of the screed leveling course must be a maximum of a +/- one-quarter inch ( $\frac{1}{4}$ " ) under a ten (10) foot straightedge in all directions. The cost of any additional stone beyond the limits must be borne by the Contractor at no additional cost to the city.
- (7) Once installed, Contractor must not disturb screeded leveling course.

## (J) PRECAST POROUS CONCRETE PANEL PLACEMENT

- (1) Precast porous concrete panels must not be placed in heavy rain or snow or on a saturated or frozen base.
- (2) Precast porous concrete panels must only be lifted and placed using swivels and spreader chains. Chains, cables, or slings should never be wrapped around the panel for lifting under any circumstances. Swivels must be securely bolted snug but not over-tightened to avoid damage to the surface of the panel.
- (3) Contractor must keep skid steer, forklift, and all other heavy equipment off all unrestrained panels.
- (4) Lay panels in pattern(s) shown on approved shop drawings layout plan. Cut panels to complete installed length and pattern on approved shop drawings.
- (5) Contractor is responsible for installing precast porous concrete panels according to the Manufacturer's requirements for proper handling and installation.

To prevent any damage to panel edges, Contractor must place panels with the joint size specified without using metal hammers, pry bars or drift pins. Horizontal adjustments to the placement of laid slabs must be made with wood wedges and levers, and rubber mallets as needed. Joint widths and lines must be continually evaluated and straightened as necessary as paving proceeds to the satisfaction of the Engineer.

- (6) Panels must be placed parallel to the adjacent cast-in-place header as per approved shop drawings. Any adjustments must be made at the curb for irregular alignment.
- (7) Unless otherwise directed, adjacent slabs must be separated from each other by one-eighth inch (1/8") to provide open joints between panel slabs of one-eighth inch (1/8") wide using spacers provided by the manufacturer of the panels to ensure proper joint spacing. No joints must exceed one-eighth inch (1/8") in width unless otherwise directed by the Engineer in writing.
- (8) Panel to panel joints must be left open. No stone or sand is to be placed in joints.
- (9) Horizontal joint lines along header must not deviate more than  $\pm$  one-half inch (1/2") over 50 feet from reference string lines.
- (10) The precast porous concrete panels must be installed so that there is no lippage or surface unevenness greater than one-eighth inch (1/8") difference in height between panels and adjacent surfaces.
- (11) Contractor must complete any gaps at the edges of the paved area with panels cut according to manufacturer's requirements for minimum panel dimensions. Cut panels to meet installation dimensions as indicated on the approved panel layout shop drawings. End panels to be placed along the edge or corners must be cut with a masonry saw. Cut units must be no shorter than one-quarter (1/4) of a whole panel length and must still retain the minimum number of lifting points required.
- (12) Contractor must protect adjacent panels' surfaces from dust infiltration when cutting panels.
- (13) Contractor must finish outside edge joints as indicated on the approved installation plan with approved joint filler material.
- (14) After an area is completely paved, Contractor must complete a final setting of the precast porous concrete panels into the screed leveling course layer by trafficking with light-weight rubber-tired equipment approved by the Engineer.
- (15) Contractor must remove and replace any panels cracked or damaged during installation with equivalent replacement panels. Contractor must all reset panels not in conformance with specified installation tolerances to the satisfaction of the Engineer.
  - a) Hairline cracks (1/8" or smaller) with no vertical or horizontal displacement of panels shall be considered as to not interfere with the proper functioning

or performance of the system and are acceptable when immediately repaired upon observation per manufacturers recommendation. Where approved by the Engineer, larger cracks (1/8" or larger) with no vertical displacement may be repaired under the direction of the manufacturer. Any cracked panels with horizontal displacement of greater than 1/4" or a vertical displacement of any size shall be replaced.

b) The repairs must be properly finished and cured. The color of the repair area must match as closely as possible with the rest of the panel color. Repairs shall be made with a mixture of self-leveling polyurethane sealant for horizontal applications and cement, as directed by the manufacturer.

- (16) Contractor must warranty as noted in Schedule A of the Contract from the date of the initial acceptance of the installation that all installed panels are free of rocking or pumping as evidenced by visible vertical movement. Any panels observed to be moving or displacing must be removed, the screeding leveling course re-screeded, and the panels reset and/or replaced if cracked.
- (17) Contractor must verify and report to the Engineer in writing that the final surface elevations of the set panels are in conformance with the Contract Drawings. The final surface tolerance from grade elevations must not deviate more than  $\pm$  one-eighth inch (1/8") under a ten-foot (10') straightedge.
- (18) The surface elevation of set panels must be flush with all manholes and the top of utility structures.

#### (K) EDGE RESTRAINT

Edge restraints installed at exterior sides of precast porous concrete panels pavement must be as follows:

- (1) Edge restraints must be furnished and installed under other concrete items: Concrete Header, Section GI-PPCP-CH, Concrete Curb, Section GI-PPCP-CC, or GI Concrete Elements, Section GI-4.06, and as shown on the Contract Drawings, and must be paid under other contract items.
- (2) Expansion joint material must be placed per Contract Drawing details between edge restraints and panels. Cost to be included in the cost of the panels.
- (3) Manufacturer: Expansion Joint Material must be from a manufacturer listed in the current New York State Department of Transportation's approved list of Pre-Molded Resilient Joint Fillers.
- (4) Material Standards for Expansion Joint Material must comply with the requirements of Section 2.15, Type IV, in the New York City, Department of Transportation, Standard Highway Specification, current edition, and must be either one-quarter inch (1/4") or one-half inch (1/2") thick, as directed by the Engineer.
- (5) Backer rods and polyurethane joint filler must be provided on the curb side. Joint filler consisting of closed cell foam backer rod and polyurethane non-sag elastomeric sealant such as Sikaflex -2c NS TG, Akonaflex Expansion joint filler, or approved equal must be used.

## (L) PROTECTION

- (1) Immediately after precast porous concrete panels have been placed, insert plastic caps in lifter holes as provided.
- (2) After work in this section is complete, the Contractor will be responsible for protecting the precast porous concrete panel system from damage and/or contamination during the remainder of work on site. The surface of the precast porous concrete panels must be completely covered during the placement of adjacent soils or paving materials in a manner approved by the Engineer.

## (M) ACCEPTANCE

- (1) Prior to acceptance by the City for Substantial Completion, the Contractor must conduct percolation rate testing every hundred (100) linear feet of gutter but no less than three (3) per section of gutter in accordance with ASTM C1701. All testing must be done in coordination with and in the presence of the Engineer.
- (2) Testing locations will be chosen at the Engineer's discretion and in accordance with the ASTM requirements.
- (3) Contractor must provide testing results to the City of New York within seven (7) days after the completion of testing. The Contractor must review testing results with the City of New York. Precast porous concrete panels with infiltration rates below the minimum infiltration rate of 150 inches per hour prior to Substantial Completion must undergo corrective action (such as cleaning the failed panel, or cleaning the entire gutter run, or replacement of the failed panel) prior to the City issuing Substantial Completion.
- (4) After corrective action has taken place, then one other panel in the same contiguous length of porous gutter will be randomly selected by the Engineer and tested to ensure that the gutter meets the specified infiltration rate. If the selected panel fails to meet that rate, then the whole length of the gutter must be cleaned again, and the testing process repeated until passing results are obtained.

## (N) MAINTENANCE

Infiltration rate testing, in lieu of cleaning and maintenance, during the guarantee period will not be acceptable. The Contractor must conduct periodic maintenance and cleaning for the duration of the guarantee period after substantial completion, at minimum, as described below:

- At the end of Spring, to remove pollen and flowers, typically June-July
- At the end of Autumn, to remove fallen leaves, typically December-January
- Just prior to end of the Guarantee Period, unless the porous concrete panels were last cleaned within 120 calendar days.

- (1) Procedures for Maintenance and Cleaning:

- (A) The Contractor must remove all visible sediment deposits. Where sediment has accumulated in areas surrounding and/or upstream of the precast porous concrete panel system and may enter the porous concrete, the Contractor must also remove such visible sediment deposits.
- (B) The Contractor must use vacuum cleaning, regenerative air machines equipped with a specialized vacuum head that includes high pressure water nozzles. Walk behind and handheld equipment are not acceptable for use. This maintenance must remove sediment and debris that has clogged or blocked voids in the precast porous concrete panel.
- (C) Sediment and debris must be sufficiently removed after cleaning to allow the porous pavement to infiltrate stormwater runoff. This may require multiple passes of cleaning to meet the desired post-cleaning infiltration rate, as discussed below.
- (D) After cleaning of the precast porous concrete panel system and no later than three calendar (3) days after cleaning, the Contractor must conduct percolation rate testing every hundred (100) linear feet of gutter but no less than two (2)) per section of gutter in accordance with ASTM C1701. All testing must be done in coordination with and in the presence of the Engineer.
- (E) Testing locations will be chosen at the Engineer's discretion and in accordance with the ASTM requirements.
- (F) The Contractor must provide testing results to the City of New York within seven (7) days after the completion of testing. The Contractor must review testing results with the City. Precast porous concrete panels with infiltration rates below the minimum infiltration rate of 150 inches per hour specified must undergo corrective action (such as further cleaning or replacement).
- (G) After corrective action has taken place, then one other panel in the same contiguous length of porous gutter will be randomly selected by the Engineer and tested to ensure that the gutter meets the specified infiltration rate. If the selected panel fails to meet that rate, then the whole length of the gutter must be cleaned again, and the testing process repeated until passing results are obtained.

Cleaning will be deemed sufficient only if the minimum of 150 inch/hr infiltration rate required by the city has been met. The City will conduct field inspections to ensure the proper condition and performance of the precast porous concrete paving panel system. Visual inspections and infiltration tests will be used to determine the performance of porous concrete. If based on visual inspections and/or the test results reviewed by the Engineer, the City determines that the Contractor's performance of maintenance work is insufficient, the Contractor will submit a revised method or schedule for the maintenance of precast porous concrete paving panels. The Contractor must perform subsequent corrective maintenance work at no additional cost to the City.

- a. The Contractor must responsibly decant dirty water in accordance with DEP regulations.
- b. The equipment information, operating procedures including disposal, and

schedule for maintenance work must be submitted to the City at least 45 calendar days prior to start of maintenance and cleaning. Maintenance and cleaning cannot begin until approved by the Engineer.

#### **GI-PPCP.5 SUBMITTALS**

- (G) All materials requiring a submittal for review and approval must be submitted prior to purchase of those materials and must be made in accordance with the requirements of the NYC Department of Transportation Standard Highway Specifications, General Conditions, Subsections 1.06.13 and 1.06.31.
- (H) Shop drawings that must be submitted prior to pre-construction meeting include:
- (1) Installation plan showing layout of each precast porous concrete panel with identification mark intended for installation.
  - (2) Individual slab drawings detailing lifting points in surface, reinforcing, finishes, and all dimensions.
  - (3) Narrative of shipping, handling, and protection procedures.
- (I) Test results performed by an independent AASHTO Materials Reference Laboratory (AMRL) accredited testing laboratory of the following:
- (1) Density and void content results in accordance with ASTM C1688 Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete, and
  - (2) Flexural strength test results in accordance with ASTM C78 Flexural Strength of Concrete. Three (3) saw-cut concrete beams prepared specifically for testing purposes as per ASTM C78, with the same concrete mix and reinforcing characteristics would be representative of a full-size panel. Changes in reinforcement configuration for testing purposes will not be permitted. The Contractor must submit a drawing for approval of the concrete beams intended for testing with all the reinforcing and lifting hook placements indicated. No end caps on the beams intended for testing will be permitted. One percent (1%) of the total number of panels intended for the entire project will be tested for compliance with the specifications.
  - (3) Infiltration rate of Precast Porous Concrete Paving Panels in accordance with ASTM C1701 Standard Test Method for Infiltration Rate of In-Place Pervious Concrete. One percent (1%) of the total number of panels intended for the entire project will be tested for compliance with the specifications.
- (J) Particle size analysis in accordance with ASTM C136 for the open-graded stone leveling course with approved source(s) of supply noted.
- (K) Test method procedures to conduct percolation rate testing after installation in accordance with ASTM C1701 Test Method for Infiltration Rate of In-Place Pervious Concrete. The submittal must include information related to the testing apparatus being used (infiltration rings) for approval by the City.

**GI-PPCP.6 QUALITY CONTROL**

Quality Control Plan must be furnished by the Contractor and must receive approval from the Engineer at least five (5) working days prior to commencing any work.

The plan must include, but is not limited to, horizontal and vertical layout of the work, methods for the installation of the edge restraints, the methods for placing of the broken stone leveling course (base) and the placing of the panels.

A review of the Contractor's Quality Control installation plan will be done at a pre-construction meeting with the Contractor, the Contractor's panel installer mechanic/subcontractor, the panel manufacturer's representative (if present on the site), the Engineer and the project's Design Engineer.

The installation Contractor must be responsible for reviewing and complying with the Manufacturer's installation requirements including any required trainings, if applicable. The Contractor will be responsible for reviewing and abiding by the Manufacturer's Handling and Installation instructions.

**GI-PPCP.7 DELIVERY, HANDLING AND STORAGE**

- (A) Delivery of the precast porous concrete panels must be coordinated so as not to interfere with other construction in the project to avoid delays.
- (B) Precast porous concrete panels must be handled per Manufacturer recommendations which were included in the approved submittal.
- (C) Offloading of panels must be performed by trained and experienced equipment operators. Extra care must be taken while offloading the panels due to their unique structural characteristics. A forklift or similar machine with forks must be used to offload. Chains, cables, or slings must not be wrapped around slabs and only the lifting points must be utilized.
- (D) Precast porous concrete panels must be visually inspected for completeness, texture, and consistency with the approved shop drawings and the installation drawings. Minor spalls and cracks will be the basis for rejection. Defective panels will be inspected by the Engineer and the decision will be made at his sole discretion.
- (E) Panels must be stored such that they are kept free from mud, dirt, grass cuttings, accumulation of foliage and debris at all times.
- (F) Panels must not be exposed unsecured to vehicular and pedestrian traffic. Skid steer and forklift equipment must be kept off unsecured paving panels.
- (G) Geogrid, geofabrics, crushed stone, and liner materials must be kept clean and prepared for installation.
- (H) Stored panels must be placed on a level or nearly level paved surface. In dusty environment, panels must be covered to prevent dust and debris from settling on panel surfaces.



**GI-PPCP.8 MEASUREMENT**

The quantity to be measured for GI-PPCP PRECAST POROUS CONCRETE PANEL must be the number of SQUARE FEET of gutter covered with precast porous concrete paving panels. Concrete installed around utility covers or other intrusions in the paved area, as shown in the corresponding details in the Contract Drawings and as directed by the Engineer, will not be measured toward this item.

**GI-PPCP.9 PRICE TO COVER**

The contract price bid for GI-PPCP — PRECAST POROUS CONCRETE PANEL must be a unit price bid per SQUARE FEET and must cover the cost of all labor, materials, plant, equipment, insurance, and all incidentals required to furnish and install all precast porous concrete panels including, but not limited to planning the work, horizontal and vertical layout, fine grading of subgrades, placing and screeding leveling course (base), installation of joint sealant, expansion joint material, tinting, when applicable and placing precast porous concrete paving panels as shown on the Contract Drawings and as specified herein, and as directed by the Engineer, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

***Payment will be made under:***

Item No.	Item	Pay Unit
GI-PPCP	PRECAST POROUS CONCRETE PANEL SYSTEM	S.F.

S - PAGES

**GENERAL AND SPECIAL PROVISIONS:**

- (A) GENERAL PROVISIONS
  - (B) HIGHWAY PROJECT SPECIFIC PROVISIONS
  - (C) SEWER & WATER MAIN PROJECT SPECIFIC PROVISIONS
  - (D) GREEN INFRASTRUCTURE PROVISIONS
- 

**NOTICE**

THE PAGES CONTAINED HEREIN (S-PAGES) ARE GENERAL AND SPECIAL PROVISIONS THAT WILL APPLY TO AND BECOME PART OF THE CONTRACT.

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**(C) SEWER & WATER MAIN PROJECT SPECIFIC PROVISIONS** S-29

(NO TEXT)

**(D) GREEN INFRASTRUCTURE PROVISIONS** S-29

(NO TEXT)

**(NO TEXT ON THIS PAGE)**

**(A) GENERAL PROVISIONS**

A. LINES AND GRADES. The Contractor must furnish lines and grades in accordance with Section 1.06.27 of the NYCDOT Standard Highway Specifications, except that survey controls established for this project may no longer exist and the Contractor will be required to re-establish the survey control information using official Borough Survey Control Monuments and Bench Marks, where they exist. The Contractor must check with Topographic Section of the Borough President's Office as to the reliability and accuracy of the data to be used for lines and grades.

B. SPECIFIC TRAFFIC STIPULATIONS. Under this contract, the Contractor must perform the work in strict accordance with the requirements of Section 6.70 in the Standard Highway Specifications, specific traffic stipulations as called for on the plans, Office of Construction Mitigation and Coordination (OCMC) Traffic Stipulations attached to the end of these Special Provisions, and the directions of the Engineer. In case of a conflict, the Engineer's decision will be final.

The Contractor must plan and schedule the work in order to accommodate all special events listed in the NYCDOT Special Events Annual Calendars. The calendars are available at the following link:

[https://nycdot.sharepoint.com/:f:/s/publicshare/Ei2XN4G99\\_JFkdrjD\\_cJ0QBtSPR2xhVrApcqAs1KSLpeA?e=j276PF](https://nycdot.sharepoint.com/:f:/s/publicshare/Ei2XN4G99_JFkdrjD_cJ0QBtSPR2xhVrApcqAs1KSLpeA?e=j276PF)

In addition, the cost of compliance with requirements of the OCMC Traffic Stipulations, unless otherwise provided for, will be deemed included in the prices bid for all scheduled items..

C. HOLIDAY CONSTRUCTION EMBARGO. A special Holiday Construction Embargo will be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below\*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below\* which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During "Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below\*\* between the hours of 6:00 AM and midnight unless the utility or Contractor files for an Emergency Authorization Number as required by Section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

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\* Please note that this embargo only applies to NYCDOT construction permits.

\*\* List of street and maps of the affected locations are available by borough on the Department of Transportation's website at: <http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml>

D. CONTRACT ITEMS THAT INCLUDE BACKFILL AS A PART OF THEIR WORK. The following will pertain to all contract items that have backfill as a part of their work: Backfilling will comply with Subsection 4.11.3 of the Standard Specifications and no additional payment will be made for any Highway or Street Lighting work item requiring Contractor to furnish additional fill material to meet these requirements when backfilling.

E. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES. Contractor will plan and/or stage his/her work schedule using all hours/days available. Contractor is advised that all applicable unit prices will include, for the purpose of this contract, all overtime costs, premium time costs, shift differentials required to complete construction within the specified "Time(s) of Completion" stipulated in this contract.

Contractor will be permitted to accelerate this project, to combine stages and/or work sequences. Any such changes will be shown in the construction schedule, to be furnished in accordance with the General Provisions of the Standard Specifications.

F. DISPOSAL OF EXCESS EXCAVATED MATERIAL. All excess excavated material, with the exception of contaminated material, will become the property of the Contractor and will be properly disposed of away from the site, at the Contractor's expense. Contaminated material will be disposed of separately in accordance with contract requirements.

G. NO EXTENSION OF TIME FOR WINTER SHUT-DOWN. Where the Contractor's approved work schedule for installing sidewalk, curb, roadway base and/or pavement falls within the winter period of December 1st through April 1st, the Contractor will NOT be granted an extension of time for completion of this contract due to the winter shut-down period, unless otherwise provided in Schedule A.

H. PRIVATE UTILITY HARDWARE ADJUSTMENTS. will be performed by the owning utility company or its agent, at its expense. The Contractor must notify the utility company 72 hours prior to start of work at each location where its hardware requires adjustment.

I. SURVEY MONUMENTS. When working in the vicinity of survey monument the Contractor will hand excavate per Item 8.02 AB-S, 8.02 A and 8.02 B (as applicable), at City Survey Monuments, for a distance of five (5) feet around each monument, as directed by the Engineer.

J. RESTORATION OF ADJACENT AREAS. The Contractor will be required to remove all form work. In planting strip areas, the Contractor will be required to restore areas damaged as a result of the Contractor's operations, to the satisfaction of the Engineer, with sod. The Contractor will also, as directed by the Engineer, make safe adjacent areas to the Contractor's work, such as: restoring missing or damaged pavement markings that were removed or damaged as a result of the Contractor's operations (as per requirements of Section 6.44 in the Standard Specifications); resetting granite blocks in tree pits; and, applying binder mixture (Item 4.02 CA or as applicable) where badly broken sidewalk or curb may create a dangerous condition just outside his area of operation, where and when directed by the Engineer.

All restoration work must be performed to the satisfaction of the Engineer.

K. FLAGGERS. The Contractor is notified that wherever the Item No. "6.52" and words "flagger", "flagperson" and "flagman" are used in the contract documents and drawings it will mean the Item No. "6.52 CG" and the words "Crossing Guard", respectively. The Contractor is advised that until the Comptroller of the City of New York sets a prevailing wage rate for crossing guards, there are no prevailing wage rates for crossing guards.



For projects that require compliance with the Davis-Bacon Act, wherever the Item No. "6.52" and words "flagger", "flagperson" and "flagman" are used in the contract documents and drawings it will mean the Item No. "6.52 FED" and the words "Uniformed Flagperson", respectively.

L. FUEL COST. The Contractor is notified that the fuel cost per gallon used in the formula under Sub-Article 26.2.8 of the Standard Construction Contract for Extra Work will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at <http://www.eia.gov/petroleum/gasdiesel/>. The USEIA-published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1<sup>st</sup>, April 1<sup>st</sup>, July 1<sup>st</sup> and September 1<sup>st</sup>) will be used in the reimbursement formula for all **Extra Work** invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.

M. NYCDPR CONSTRUCTION PERMITS AND OTHER REQUIREMENTS.

1. At least thirty (30) days prior to the upcoming start of construction at or near the New York City Department of Parks and Recreation (NYCDPR) land, the Contractor is required to issue a notice to NYCDPR about the start of construction activity. At least 30 days in advance of the Order to Work Date, the Contractor must notify the New York City Department of Parks and Recreation (NYCDPR) of the upcoming start of construction by emailing [interagency@parks.nyc.gov](mailto:interagency@parks.nyc.gov).

2. Parks Construction Permits are required for all work on Parkland. Construction Permits may also be required for work on sidewalks adjacent to Parks properties or other areas maintained by NYCDPR such as Greenstreets depending on the scope of work. It is the Contractor's responsibility to coordinate with Parks via email at [interagency@parks.nyc.gov](mailto:interagency@parks.nyc.gov) to establish whether Construction Permits are required for the contract scope of work.

3. The Contractor will not be permitted to store, stage, stockpile, barricade, lay down construction materials or equipment, or otherwise impede access to Parkland, Greenstreets, or sidewalks in the right-of-way fronting Park properties unless such permission is granted by NYCDPR via issuance of a Parks Construction Permit.

4. The Contractor must obtain the necessary Parks Construction Permit from NYCDPR prior to the start of work on Parkland or areas under Parks' jurisdiction. The Construction Permit application is found online at <https://www.nycgovparks.org/permits/construction>.

5. When no Construction Permit is required, the contractor must notify Parks at [interagency@parks.nyc.gov](mailto:interagency@parks.nyc.gov) at least one week in advance of any construction adjacent to Greenstreets or in the right-of-way fronting Parks properties to allow for coordination as needed.

6. The Contractor is responsible for the protection of any Greenstreets, sidewalks, and other landscape features under NYCDPR jurisdiction that are adjacent to or enclosed by the construction area, including hardscape, landscape, shrubs, and trees. Any areas and features disturbed or damaged during construction activity are the responsibility of the Contractor to restore and repair.

7. Many NYCDPR properties are indicated on the publicly accessible online mapping resource of the New York City Department of Information Technology and Telecommunications (DOITT) at <http://maps.nyc.gov/doitt/nycitymap/>. However, the map is not exhaustive, and Contractors should confirm Parks properties in the vicinity of their work with NYCDPR.

8. The Contractor must take necessary precautions to prevent interference with or damage to utilities or other facilities during construction. The cost of all work connected with

maintaining and protecting utilities affected by the work be borne by the Contractor and the cost will be deemed included in the price bid for the various items in the contract.

9. In the event the Contractor damages an existing utility or interrupts utility service, the Contractor will immediately notify its owner and the Engineer and must commence repair/replacement work as instructed by the Engineer.

10. In the event the Contractor causes an interruption in utility service, the Contractor will immediately arrange for service to be restored and may not cease the repair work until service is restored. The Contractor will not continue work until the service is restored, unless otherwise directed by the Engineer. All corrective utility work will be acceptable to the engineer and the subject utility owner.

11. If any utility service or connection of unknown ownership is encountered during construction which appears to enter or serve Parkland, Contractor must contact Parks at [interagency@parks.nyc.gov](mailto:interagency@parks.nyc.gov) to inquire if Parks is the owner of such utility.

N. START OF CONTRACT WORK. The Contractor is notified that a Notice To Proceed (NTP) date will be issued for work to commence within 21 to 30 Days of Contract Registration.

O. STANDARD WORKING HOURS: In absence of OCMC Traffic Stipulations, Section 1.06.23 (P) of NYC DOT STANDARD HIGHWAY SPECIFICATIONS regarding standard working hours is to be followed is to be followed. Work performed outside the standard working hours must be pre-approved by NYC DDC.

P. TREE BARRIERS. The Contractor will furnish, install, maintain and subsequently remove temporary Protective Tree Barriers. Protective Tree Barriers will be Type B, unless otherwise directed by the Engineer, and will be constructed and installed as shown on the Protective Tree Barrier sketch in Department Of Transportation, Standard Highway Details Of Construction, Drawing No. H-1046A, as directed by the Engineer, and in accordance with Department of Parks and Recreation requirements.

Price of the tree barriers must be included in the in the unit prices bid for all scheduled items.

Q. UTILITIES. All utility locations and invert elevations are not guaranteed, nor is there any guarantee that all existing utilities, whether functional or abandoned within the project area are shown.

R. HOUSE CONNECTIONS. All existing house connections will be maintained and supported during construction. The Contractor will replace any existing house connection damaged as a result of the Contractor's construction operations as ordered by the Engineer at no cost to the City.

S. STREET LIGHT AND TRAFFIC SIGNAL. The Contractor is responsible for any damage to the existing street lighting and traffic signal equipment, including underground conduits and the safety of both pedestrian and vehicular traffic for the duration of the contract.

Should any conduits, cables or foundations need repair due to the Contractor's negligent operations during construction, all work will be performed according to NYCDOT Bureau of Traffic's Standard Drawings and Specifications and City of New York DOT System Engineering Specifications (dated November 2013) at the sole expense of the Contractor.

It is the Contractor's responsibility to secure an approved electrical Contractor to perform all traffic signal work (if any). For list of approved electrical Contractors, contact Bjorn Seedan or James Celentano, New York City Department of Transportation at (212) 839-3790.

T. SAW CUT. The Contractor is advised that where the existing roadway pavement is designated to be replaced from curb to curb, then no full depth saw cutting of pavement for sewer and water main trenches will be required, except at the limits of full width pavement restoration. No separate or additional payment will be made for any saw cutting.

U. PRE-CONSTRUCTION STAGE. The Contractor is advised that the Base Contract Duration (consecutive calendar days "ccds") must also include pre-construction stage from the Notice To Proceed date. During this stage the Contractor is required to submit the necessary shop drawings, obtain all permits and submit the health and safety plan for review and approval. The Engineer's field office will also need to be established during this pre-construction stage period. Failure to comply with the pre-construction stage requirements may result in assessing liquidated damages to the Contractor for everyday beyond the pre-construction stage duration. The liquidated damage will be of equivalent value as identified in the Schedule A for work beyond the construction completion date.

V. EXISTING SEWERS, WATER AND APPURTENANCE. The Contractor is notified that at some locations there may exist sewers, manholes, water mains, etc., which are to remain undisturbed and are in close proximity to the line of the proposed work. The Contractor exercise extreme care, minimize the trench width of the proposed sewers and take all necessary precautions in placing sheeting and during excavation of the trenches to prevent any damage to the existing structures, pavement, curbs, and sidewalks that are to remain while working adjacent to them. The Contractor maybe restricted to use wood sheeting at certain critical locations as directed by the Engineer. Should any damage occur to any portion of the existing structures that are to remain due to the Contractor's operations, the Contractor will make all repairs to the existing structures to the satisfaction of and as directed by the Engineer. The cost of such repair will be borne by the Contractor, at no cost to the City. Additional cost to use wood sheeting specifically to ensure integrity of existing sewer structures will be deemed included in all bid items for work.

W. RECONNECTING EXISTING SEWERS TO NEW MANHOLES. If there are locations on the contract plans, where the Contractor is required to reconnect all existing sewers to the proposed manholes in this contract. The said manholes will be fabricated to provide openings for the existing sewers at the specified invert elevations as shown on the contract drawings. The cost of reconnecting existing sewer pipes to new manholes, including concrete collar with steel reinforcements and/or grouting around the existing sewer pipes at the openings and all work necessary to complete the pipe reconnection, to the satisfaction of the Resident Engineer will be deemed included in the prices bid for all items of work. No additional payment will be made.

***[ARTICLE "X" IS ONLY APPLICABLE IF ITEMS FOR VIBRATION MONITORING  
ITEM NO. 76.31 IS IN THE BID SCHEDULE]***

X. VIBRATION MONITORING. In case of structures requiring vibration monitoring, the Contractor, in addition to Continuous Real Time Monitoring for Vibrations as determined in the Construction Report must provide Continuous Real Time Monitoring for Vibrations of existing buildings/structures adjacent to or in the proximity of different types of construction activities being conducted including, but not limited to, installation of sheeting for construction of proposed water and sewer mains, installation of sheeting for excavation of jacking/receiving pits, direct jacking of sewers, piling work or as directed by the Engineer.

Y. CITY ASSETS. The Contractor is advised that any City owned light poles, traffic signals, street name signs, traffic signs and encumbrances including, but not limited to, underground conduit displaced as the result of the installation of the new sewers, water mains, catch basins, catch basin connections and appurtenances will be replaced in kind and as directed by the Engineer. The cost of such work will be deemed included in the prices bid for all items of work under this contract.

**[ ARTICLE "Z" IS ONLY APPLICABLE FOR WATERMAIN 24-INCHES AND HIGHER ]**

Z. "AS-BUILT" DRAWINGS FOR WATER MAINS AND APPURTENANCES 24-INCHES (600-MM.) AND LARGER: Upon the completion of the work for each Capital Project and as a condition precedent to obtaining the certificate for Substantial Completion for each Capital Project under Article 44 of the Contract, the Contractor will furnish "As-Built" drawings for water mains and appurtenances 24-inches and larger to the City. The Contractor will prepare and submit the "As-Built" record drawings to the Engineer for approval. Approved "As-Built" drawings will be delivered to the Department of Design and Construction, 30-30 Thomson Avenue, Long Island City, New York, 11101-3045. The following guideline is provided for the preparation of "As-Built" record drawings:

1. The Contractor will prepare the "As-Built" drawings on AutoCAD and will provide to the City two (2) sets of Mylar and AutoCAD files on a CD. The drawings on CD's and the plotted Mylar's will conform to the standard size of 22" x 36" (559-mm. x 914-mm.) using a 1"=30' (1:360) horizontal and 1"=10' (1:120) vertical scale. The Mylar will be 3-mil in thickness.

2. The "As-Built" drawings will include but not be limited to the following guidelines summarized below:

(a) Drawings will consist of the same legend and layout of title boxes shown on the contract drawings.

(b) Each plotted Mylar drawing will contain the signature and stamp of the Contractor's NYS Professional Engineer/Registered Architect.

(c) The drawings will include:

- street name and crossing street(s) or distance from;
- north arrow;
- property lines and widths;
- legal and existing street widths, street alignment and grades;
- "new" curb lines and widths;
- water main center line measured off the "new" curb line;
- horizontal stationing for all valves, hydrants, outlets, blow-offs, house service connections, etc., measured on a horizontal line as established by the Borough Office Bureau of Topographic;
- alignment and appurtenance location stationing, and deflection angles;
- cover and elevations (Datum used will be that of the Borough where work is located);
- location of pipe joints;
- profile of all piping;
- complete details of all outlet piping roundabouts;
- complete details of all blow-off connections to the sewer;
- complete details of all air cocks;
- location of taps and access manholes;
- location of all cathodic protection stations;

- Venturi sensing lines plans and profiles;
- all appropriate notes.

3. The cost of preparing and submitting "As-Built" approved drawings will be deemed included in the prices bid for all scheduled bid items in the contract. No separate or additional payment will be made for this work.

AA. NO ADDITIONAL PAYMENT. The Contractor is advised that any fences, guardrails, boulders, asphalt walkway of the park, fixtures, other encumbrances removed within project limits during construction will be replaced in kind to the satisfaction of the Engineer. The cost of such work will be deemed included in the prices bid for all contract items of work and no additional or separate payment will be made.

AB. SHEETING AND EXCAVATION AT TRANSIT FACILITIES. In case of transit facilities like MTA, LIRR, METRO NORTH etc., the Contractor will exercise extreme caution and take all necessary precautions in placing sheeting and excavation to prevent any damage to the existing underground or overhead structures and its appurtenances during construction work throughout the project area. The Contractor must take full responsibility to protect the said structures and its appurtenances and any damage caused by the Contractor's operations must be made good by the Contractor to the satisfaction of the Engineer at no additional cost to the City.

The Contractor must submit shop drawings to the Transit facilities showing all the details and methods of construction, such as, sheeting and bracing, including the Contractor's procedure and sequence of construction, supporting and/or protection of the existing structures and its appurtenances, with necessary design calculations for approval prior to starting of the construction. The design will be made by a New York State Licensed Professional Engineer skilled in this type of construction and as further evidenced by the imprint of Professional Engineer's seal and signature on all drawings. The cost of this work will be deemed included in the price bid for all items of work under this contract.

AC. ARCHAEOLOGICAL DISCOVERIES. The Contractor is notified that if requested by the Resident Engineer and the City, the Contractor will be required retain the services of an Archaeologist (the "City's Archaeologist") for this project.

The City's Archaeologist will be notified in advance and will be present on site during sub-surface excavations as deemed necessary. The City's Archaeologist will be authorized to halt construction at any time in order to record and/or recover any archaeological resources encountered during excavations, and to stabilize in place any human remains encountered.

For the purpose of evaluating and recording archaeological resources, the City's Archaeologist will be allowed to enter trenches provided all standard safety requirements are met. It is understood that some construction down time may be necessary.

In the event that human remains, and/or other significant archaeological deposits are encountered during construction or archaeological investigations, Landmarks Preservation Commission (LPC) will be notified as directed by the City's Archaeologist and the State Historic Preservation Office (SHPO) requires that the following protocol is implemented:

1. At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.

2. Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
3. The County coroner and local law enforcement as well as the SHPO and the involved agency will be notified immediately. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archeological. If the remains are archeological in nature, a bio-archaeologist will confirm the identification as human.
4. If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their protection or removal can be generated. The involved agency will consult SHPO and appropriate Native American groups to determine a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.
5. If human remains are determined to be Euro-American, African- American, etc., the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

Should extra work be ordered by the Resident Engineer as a result of any archaeological discoveries, it will be paid for from the Fixed Sum included in, and in accordance with Item HW-908 Allowance for Extra Work Due To Archaeological Discoveries.

AD. USE OF CITY WATER. Please refer to NYCDOT STANDARD HIGHWAY SPECIFICATIONS (May 16, 2022), Sub Section 1.06.23 (A), Rules, Laws, and Requirements, for use of City water.

AE. PUBLIC DISSEMINATION OF INFORMATION. The Contractor agrees to hold confidential, both during and after the completion or termination of this Contract, all of the reports, information, or data, furnished to, or prepared, assembled or used by, the Contractor under this Contract. The Contractor agrees to maintain the confidentiality of such reports, information, or data by using a reasonable degree of care, and using at least the same degree of care that the Contractor uses to preserve the confidentiality of its own confidential information. The Contractor agrees that such reports, information, or data will not be made available to any person or entity without the prior written approval of the Commissioner. The obligation under this Section to hold reports, information or data confidential will not apply where the Contractor is legally required to disclose such reports, information or data by virtue of a subpoena, court order or otherwise ("disclosure demand"), provided that the Contractor complies with the following: (1) the Contractor will provide advance notice to the Commissioner, in writing or by e-mail, that it received a disclosure demand for such reports, information or data and (2) if requested by the Commissioner, the Contractor will not disclose such reports, information or data until the City has exhausted its legal rights, if any, to prevent disclosure of all or a portion of such reports, information, or data. The previous sentence will not apply if the Contractor is prohibited by law from disclosing to the City the disclosure demand for such reports, information or data.

The Contractor will restrict access to confidential information to persons who have a legitimate work-related purpose to access such information. The Contractor agrees that it will

instruct its officers, employees, and agents to maintain the confidentiality of any and all information required to be kept confidential by this Contract.

The Contractor, and its officers, employees, and agents will notify the Commissioner, at any time either during or after completion or termination of this Contract, of any intended statement to the press or any intended issuing of any material for publication in any media of communication (print, news, television, radio, Internet, etc.) regarding the services provided or the data collected pursuant to this Contract at least twenty-four (24) hours prior to any statement to the press or at least five (5) business days prior to the submission of the material for publication, or such shorter periods as are reasonable under the circumstances. The Contractor may not issue any statement or submit any material for publication that includes confidential information as prohibited by this Section.

At the request of the Commissioner, the Contractor will return to the Commissioner any and all confidential information in the possession of the Contractor or its subContractors. If the Contractor or its subContractors are legally required to retain any confidential information, the Contractor will notify the Commissioner in writing and set forth the confidential information that it intends to retain and the reasons why it is legally required to retain such information. The Contractor will confer with the Commissioner, in good faith, regarding any issues that arise from the Contractor retaining such confidential information. If the Commissioner does not request such information, or the Law does not require otherwise, such information will be maintained in accordance with the requirements set forth in the Contract Documents.

AF. PRICES TO INCLUDE. No direct payment will be made for costs incurred in complying with the foregoing Special Provisions, unless otherwise provided. Said costs will be deemed to have been included in the prices bid for all the scheduled contract items.

## **(B)HIGHWAY PROJECT SPECIFIC PROVISIONS**

### 1- VALUE ENGINEERING CHANGE PROPOSAL (VECP)

- A. Purpose and scope: The purpose of a Value Engineering Change Proposal (VECP) is to encourage the use of the Contractor's ingenuity and experience in arriving at alternative construction designs, methods, and procedures that result in a lower direct cost to accomplish a contract requirement. It is the intent of this provision to share with the Contractor any substantial direct cost savings which may be generated as a result of a VECP offered by the Contractor and approved by the Engineer. A VECP is a Contractor-initiated change request. If approved, the changes and payments will be authorized through the change order process. Before a VECP can be implemented, it must pass through three approval processes: conceptual approval, formal approval, and change order approval. To expedite the review process, the Contractor has the option of jointly submitting the conceptual VECP and the formal VECP for simultaneous review. If the VECP receives formal approval, as part of the change order process the Contractor may request that the Engineer consider granting advanced authorization of extra work.

The VECP must produce direct cost savings to the city and the public without, in the sole judgment of the Engineer, impairing essential functions and characteristics of the facility including but not limited to service life, economy of operation, ease of maintenance, desired appearance, and safety. The Contractor, when developing a VECP, must address the designer's objectives, environmental permit requirements and regulations, commitments made to the public to mitigate the impact of construction, and other such concerns.

The "direct cost savings" is the difference of the "construction savings" generated by implementing the VECP minus reasonable "design costs" associated with the VECP. The "construction savings" is the difference between what it would cost to complete all the contract work without implementing the VECP and the cost to complete all the contract work if the VECP is implemented. This includes any changes to quantities or unit prices across the entire contract if affected by the VECP. If the estimated cost to complete all the contract work without implementing the VECP differs from the contract bid amount for the work, supporting documentation to explain the variance must be provided. Reimbursable "design costs" are specific to engineering changes (examples: design changes, plan sheet revisions, and quantity estimating). Expenditures toward proposal preparation (examples: scheduling, documentation, cost analysis, material research, etc.) are not reimbursable.

Indirect cost savings (time, user delay, railroad force account costs, inspection costs, etc.), although considered when reviewing the merits of the VECP, are not reimbursed. A VECP may alter the progress schedule and milestone dates, which in turn could affect time-related contract provisions.

Proposals that reduce the time to complete the contract, and only result in indirect cost savings, may be accepted based on the mutual benefit derived. These proposals will be evaluated in accordance with sub-provision F. Time Savings, below.



B. Submittal of Conceptual VECP: A conceptual proposal is required for all VECP. It must outline the general technical concepts associated with the VECP and the estimated direct cost savings which may result. Upon review by the Engineer, one of the following actions will be taken:

- Conceptual approval and a request for the Contractor to submit a formal VECP.
- Request for additional information.
- Rejection of the VECP.

The Contractor must submit an original and three copies of the conceptual VECP to the Engineer along with any additional information requested by the Engineer. The conceptual VECP must contain sufficient information for concept review and evaluation, including the following as a minimum:

1. Conceptual VECP Summary. A summary of the VECP identified as "Conceptual VECP" which includes:
  - a. Short title (description) of the VECP (10 or less words).
  - b. Contract information (Contract ID number, contract description, contractor).
  - c. Original total contract bid price.
  - d. Estimated contract cost. This may be different from the original total contract bid price due to addition or alteration of work (i.e., the estimated cost to complete the work if the VECP is not implemented). The Engineer must concur with the estimated contract cost.
  - e. Estimated contract cost if the VECP is implemented (excludes VECP design cost and any VECP construction savings reimbursement).
  - f. Estimated VECP construction savings (Item d. minus Item e.).
  - g. Estimated VECP design cost (Not all VECP will have design cost).
  - h. Estimated direct cost savings due to the VECP (Item f. minus Item g.).
  - i. Fifty percent of the estimated direct cost savings (This should equal the overall savings to the City).
  - j. Estimated total adjusted contract cost if VECP is implemented (includes VECP savings and design cost reimbursements).
  - k. The type of VECP (either "Cost Savings" or "Time Savings Only").
  - l. Date by which the authorization of extra work (change order) must be granted.

- m. Identification of any new or existing contract pay items requiring agreed prices.
  - n. Identification of any materials with long lead times (to order, fabricate, deliver, etc.) that may require purchase authorization from the Engineer prior to formal approval/disapproval of the VECP, or may delay the implementation of the VECP. Identify any date by which authorization to order these materials must be received without affecting the progress schedule.
  - o. A basic description of the VECP and associated benefits and impacts (progress schedule, environmental, maintenance & protection of traffic, quality, etc.).
2. Conceptual Plans. Conceptual plan drawings.
3. Design Criteria. If the VECP proposes design changes, supporting technical design criteria shall be provided.
4. Schedules.
- a. The most recently approved baseline progress schedule.
  - b. The most recently approved construction progress schedule update.
  - c. A draft, proposed, revised progress schedule illustrating the impacts of the VECP. The schedule must identify: (1) the time required to develop a formal VECP; (2) the time required to order, fabricate, and deliver materials with long lead times; (3) the time required to obtain any environmental permits or other required approvals; (4) any anticipated progress schedule changes (contract completion date, milestone dates, task durations, etc.); (5) the latest date by which authorization of the VECP extra work must be granted without affecting the schedule.
- The draft progress schedule must provide a sufficient level of detail upon which the reasonableness of the VECP can be determined.
- Should the Engineer find that insufficient time is available for review and processing, it may reject the VECP solely on such basis. If the Engineer fails to respond to the VECP by the date specified, the Contractor will consider the VECP rejected and will have no basis for a dispute against the City as a result thereof. The Engineer may accept a VECP that requires a contract time extension if sufficient cost savings are anticipated.
5. Estimate of costs: The conceptual VECP estimate of costs should include sufficient information to determine the reasonableness of the VECP. If the proposal requires the ordering of materials, the Contractor needs to provide documentation from the suppliers to justify the cost of the materials.
6. Previous Use or Testing. A description of any previous use or testing of the VECP on another City contract or elsewhere, the conditions and results therewith. The

Contractor must submit the technical aspects of the VECP in sufficient detail so the Engineer can determine the suitability of the VECP from an engineering perspective. If the technology is new, test information must be provided to the Engineer's satisfaction. If a similar VECP was previously submitted on another City contract, indicate the date, contract number, and the action taken by the City.

- C. Submittal of Formal VECP. Upon notification by the Engineer that the conceptual VECP is approved and a formal VECP is necessary, the Contractor will submit to the Engineer an original and three copies of the following materials and information for each formal VECP along with any additional information requested by the Engineer:
1. Formal VECP Summary. A summary of the VECP, identified as "Formal VECP", which follows the conceptual VECP summary format and information requirements (Information and estimates may have changed since the conceptual VECP).
  2. Complete Plans and Specifications. Complete plans and specifications, which meet City standards, showing the proposed changes relative to the original contract features and requirements. The City requires a Professional Engineer's stamp and signature on any significant engineering changes.
  3. Field Change Sheets. Field change sheets and/or shop drawings. If the VECP results in a field change, and those items affected require the submission of shop drawings, the shop drawings will not be accepted unless accompanied by corresponding field change sheets.
    1. Documents must be developed in compliance with City requirements. The City requires a Professional Engineer's stamp and signature on any significant engineering changes.
  4. Schedules. The same information requirements as for the conceptual VECP apply, except that a formal, proposed, revised progress schedule is required.
  5. Cost Analysis. A complete cost analysis indicating quantity changes, unit price changes, and new contract pay items. As a minimum it must include:
    - a. An itemized comparison of estimated costs to complete all the contract work with implementing the VECP and without implementing the VECP.
    - b. Proposed unit prices for any new contract pay items introduced by the VECP and appropriate documentation for review under the Agreed Price process.
    - c. Proposed unit prices for any existing contract pay items for which agreed prices are sought due to a significant change in character of work (quantity or complexity). Appropriate documentation for review under the Agreed Price process is required.
    - d. The cost of any items with long lead times (e.g., materials ordered) required after conceptual approval and before final approval shall be identified.

7. Differences. Full descriptions of the difference between the existing contract requirements and the proposed changes, and the comparative advantages and disadvantages of each, including considerations of service life, economy of operation, ease of maintenance, traffic flow, safety, desired appearance, progress schedule, and any increase/reduction of environmental impacts.
8. Technical Presentation. The Contractor may be required to conduct a technical presentation as part of the review process.
9. Cost Documentation. All formal VECP costs submitted must be supported by documentation as required by Article 26 of the Standard Construction Contract.

The Engineer will not formally approve any VECP until all required VECP documentation has been submitted and is acceptable to the Engineer.

A formal VECP may be submitted concurrently with the conceptual VECP, however, the Contractor assumes any costs associated with the formal VECP at its own risk. Reimbursable costs will be considered only if the conceptual VECP is approved. Clearly identify whether a VECP is being submitted for conceptual approval, formal approval, or both.

Once a formal VECP has been approved, the VECP will then be submitted as a change order and processed accordingly. The Contractor is responsible for submitting all appropriate information to the Engineer in a timely manner.

- D. Conditions. The Contractor shall not base any bid prices on the anticipated approval of a VECP and should recognize that any VECP may be rejected. The following terms and conditions apply to VECP:
1. A VECP will only be considered after the contract is awarded.
  2. A VECP applies only to the contract for which it was submitted. One VECP must not be submitted for multiple contracts. Approval or disapproval of a VECP on one contract does not guarantee approval or disapproval on another contract.
  3. The VECP becomes the property of the City and will contain no restrictions imposed by the Contractor on its use or disclosure. The City will have the right to use, duplicate, and disclose in whole or in part any data necessary for the utilization of the VECP. The City retains the right to utilize any accepted or rejected VECP or part thereof on any other project without any obligation to the Contractor.
  4. Approval of the conceptual VECP in no way obligates the Engineer to approve the formal VECP. The Contractor will have no claim against the City as a result of the rejection of any such conceptual or formal VECP except as otherwise provided in Sub-Provision E.4, below.
  5. When the Engineer is in the process of making design and specification revisions and a Contractor submits a VECP with similar revisions, the Engineer will reject the VECP and proceed without any obligation to the Contractor.

6. A VECP will be considered only if reasonable, cost-effective options are not provided in the contract documents.
7. The Engineer will be the sole judge as to whether a VECP qualifies for consideration and evaluation. It may reject any VECP that requires excessive time or costs for design review, evaluation, and/or investigations. The Engineer will be the sole judge in determining if the proposed VECP will result in a sufficient amount of direct or indirect cost savings to offset the City's effort to review the VECP.
8. A VECP must be consistent with DDC's design policies and basic design criteria, provide the same service life or more, facilitate economy of operations, ease of maintenance, and achieve the desired appearance and safety.
9. A VECP will not be allowed that changes the type and/or thickness of the pavement structure and material, or solely substitutes one material for another. Examples of materials that may fall into this inappropriate substitution situation are drainage pipes, coatings, pavement markings, etc. The simple elimination of work does not necessarily constitute a VECP, however, a VECP which introduces a simple material substitution, or elimination of work, may be considered if it is accompanied by a design change or change in the construction method. A simple material substitution which introduces a new material to the DDC may be also considered.
10. The VECP will not be experimental in nature but will have been proven to the Engineer's satisfaction under similar or acceptable conditions on another City contract or at another location acceptable to the Engineer.
11. If the Engineer requires any additional information to evaluate the VECP, this information shall be provided in a timely manner. Unless otherwise mutually agreed upon, failure to do so will result in the rejection of the VECP. An incomplete or a poor quality VECP which hinders the Engineer's review may also result in the rejection of the VECP.
12. The Contractor must encourage submissions of VECP from an approved subcontractor, provided that reimbursement is made by the City to the Contractor and that the terms of payment to the Subcontractor are satisfactorily negotiated and accepted before the VECP is submitted to the Engineer. Subcontractors may not submit a VECP except through the Contractor.
13. A VECP approved by the Engineer is considered to be a revision to the contract documents and progress schedule. Consequently, if unsatisfactory results are being achieved or adjustments are necessary during implementation of a VECP, the rejection of work, removal of work, addition of work, or revision of work must be evaluated in accordance with the Contract requirements.
14. All contract pay items and quantities referenced in the VECP construction savings analysis shall be Engineer-approved contract provisions. Any extra work, inclusion of an omission of work, or other field changes must be authorized prior to use in VECP savings calculations.

15. No work related to a VECP will be performed under allowance items. Agreed prices must be reached for any contract pay items related to the VECP before the VECP is approved. If the Contractor is deemed to have taken reasonable diligence in determining the work involved but if during the construction of VECP work a significant change in the character of work occurs, the Engineer may consider new agreed prices.
  16. The Contractor will receive written notification from the Engineer when the VECP is approved. Material orders placed prior to VECP approval must be submitted at the Contractor's risk.
  17. Once a VECP has been approved, the VECP will then be submitted as a change order and processed accordingly. The Contractor is responsible for submitting all appropriate information to the Engineer in a timely manner.
- E. Payment. If the VECP is accepted by the Engineer, the changes and payments will be authorized through a change order. Reimbursement to the Contractor will be made as follows:
1. A VECP introduces two individual payments, one for VECP construction savings, and one for VECP design cost. The contract pay item changes along with the VECP construction savings and design cost reimbursements to the Contractor must be submitted in one change order.
  2. The City will pay to the Contractor 50% of the VECP construction savings. The VECP construction savings is the difference between the actual contract costs with the VECP implemented and a detailed estimate of what it would have cost to complete the contract work without implementing the VECP, based on final construction. If final construction savings differs from the amount estimated in the formal VECP, an adjustment may be made and included in another change order. The VECP construction savings reimbursement to the Contractor will not be paid until the VECP work has been completed (progress payments on the completed VECP work are allowed). The Engineer may withhold all or a portion of the payment for the Contractor's share of the VECP construction savings until the final contract accounting. In the event that at final contract accountings the implementation of VECP actually results in no construction savings, then the Contractor will receive no VECP construction savings payment.  
  
The Engineer is the sole judge in deciding the construction savings due to the implementation of the VECP. The Engineer will withhold VECP construction savings reimbursement until the Contractor supplies all required VECP documents.
  3. If a design cost is submitted for a VECP, the City will pay to the Contractor a 50% share of the Contractor's reasonable cost for design incurred after conceptual VECP approval. If the design cost submitted for the Engineer's approval is deemed unreasonable, only 50% of the design cost deemed to be reasonable will be reimbursed. Not every VECP will have a design cost associated with it. The Engineer is the sole judge in determining the reasonableness of the design cost. Reimbursable design costs are for engineering changes. Preparation and submission of the proposal (e.g., savings analysis, progress scheduling, etc.) are not considered

design costs and are not reimbursable. Reimbursable VECP design may be performed by a consultant or directly by the Contractor. The Contractor must not be charged for, nor can the Contractor claim, any VECP design performed by the City.

The design cost must be submitted as a lump sum item with supporting documentation. The supporting documentation must include itemized direct salary costs (rates & hours), overhead (only for consultant design), and direct non-salary costs. Payment for direct salary costs and overhead will be limited to the current City reimbursement policies for Consultant Engineering agreements.

For consultant design, reasonable overhead on the direct technical salaries will be reimbursed. For Contractor design, overhead is not reimbursable for direct salary costs.

Overhead must not be charged for direct non-salary costs whether incurred by the Contractor or by a consultant. Payment for direct non-salary costs will be made at actual cost paid. Although for certain direct non-salary costs (lodging, meals, mileage) the rates must meet the requirements of Comptroller's Directive 6.

The subtotal of direct salary costs, overhead, and direct non-salary costs must be considered a "professional service fee" and reimbursed in accordance with §109-05B.3. Service Charges. A maximum 5% for the Contractor's contract supervision and overhead is allowed, in addition to any overhead submitted for consultant direct salary costs. All design costs are subject to audit.

Additional supporting documentation (receipts, time sheets, etc.) must be supplied in a timely manner if requested by the Engineer.

In the case of a formal VECP being jointly submitted with the conceptual VECP, the City will pay to the Contractor a 50% share of the Contractor's reasonable cost for design specific to the development of the formal VECP (nothing toward the conceptual VECP) if the conceptual VECP is approved.

4. In the event of the Engineer's conceptual approval of a direct cost savings VECP, and the Contractor is directed to proceed with the VECP implementation steps and final approval is not reached, regardless of whether due to the actions of the City or the Contractor, 50% of the total reasonable design costs will still be reimbursed to the Contractor. If "advance" written approval was given to proceed with the work, procure materials, and begin fabrication; and rejection occurs, the work and fabrication costs will be reimbursed in accordance with the Standard Construction Contract. Only those materials not incorporated and unique to the contract (i.e., not restockable) will be evaluated for payment.
5. There will be no reimbursement for any costs incurred for the conceptual VECP or prior preparations.
6. If more than one VECP is approved for a contract, construction savings and design costs must be tracked separately for each VECP.

7. When multiple submittals of information for a VECP are required to satisfy the information needs of the conceptual or formal VECP procedure, and contract timing will be negatively impacted before review and subsequent approval can be given by the Engineer, then the VECP may be rejected. In such cases, there will be no claim by the Contractor for design costs or loss of anticipated savings and/or profits.
8. VECP payments only involve direct savings or costs. Indirect savings or costs (time, user delay, contract delay, etc.) are not included in VECP payment calculations. The calculations of VECP payments are independent from the payments or penalties for contract time related issues.

If a VECP revises the progress schedule, the contract milestones upon which time related provisions are based may be affected. Time savings resulting from a VECP may be realized in a time related contract provision. Conversely, if a VECP negatively affects a progress schedule, time related contract provisions may be negatively affected.

- F. Time Savings. The Engineer will consider proposals that result in time savings and at the same time may increase the cost of the contract. The Engineer will be the sole judge as to whether the benefits of completing the contract or a phase before the scheduled completion date or milestone offsets any increase in cost. These submittals, while not constituting a Value Engineering Change Proposal, will be reviewed using the VECP approval process. In addition to information required in Sub-Provision B, "Submittal of Conceptual VECP" above and Sub-Provision C, "Submittal of Formal VECP" above, the Contractor must provide the Engineer the anticipated amount of time to be saved and sufficient information to enable the Engineer to calculate and evaluate the cost benefit of the savings in user delay. Time savings generated by the VECP may be claimed under an existing time related contract provision. If the time savings VECP increases the cost of the contract, the additional cost must not be subtracted from any time related contract provision payments.
- G. Significant Changes. Once a VECP is approved, any future significant change is no longer based on the original contract bid conditions (quantity, nature or kind of a material involved), but rather on the conditions as adjusted by the VECP (adjusted quantities, anticipated site conditions and materials, etc.).

All significant changes must be agreed upon prior to formal VECP approval. If after formal VECP approval, an unforeseen change in the VECP work causes a significant change in the character of work, quantities and prices may be adjusted and the VECP savings shall be adjusted accordingly.



## 2. OCMC TRAFFIC STIPULATIONS



Department of Transportation

Ydanis Rodriguez, Commissioner

### OCMC TRAFFIC STIPULATIONS

January 26, 2023

**OCMC FILE NO:** QEC 22-692

**CONTRACT NO:** HWQ274F2

**PROJECT:** RECONSTRUCTION OF STREETS IN ROSEDALE AREA – PHASE 2

**LOCATION(S):** VARIOUS LOCATIONS

PERMISSION IS HEREBY GRANTED TO THE **CITY OF NEW YORK DEPARTMENT OF DESIGN** AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION(S) FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE STIPULATIONS, AS NOTED BELOW:

#### A. SPECIAL STIPULATIONS

1. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO** OR ANY OTHER SPECIAL EVENT EMBARGOES SUCH AS PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
2. **BIKE LANES** – FOR ANY WORK IN OR AFFECTING A BIKE LANE, THE PERMITEE MUST COMPLY WITH THE **NEW GUIDELINES FOR THE MAINTENANCE & PROTECTION OF TRAFFIC PLAN FOR CYCLING**, WHICH ARE AVAILABLE AT:  
[HTTPS://WWW1.NYC.GOV/HTML/DOT/DOWNLOADS/PDF/BIKE-MPT-GUIDELINES.PDF](https://www1.nyc.gov/html/dot/downloads/pdf/bike-mpt-guidelines.pdf)
3. **BIKE SHARE STATIONS:** THE PERMITEE SHALL NOT REMOVE, RELOCATE, DAMAGE OR DISRUPT THE OPERATION OF EXISTING BIKE SHARE STATIONS WITHOUT FIRST CONTACTING NYC BIKE SHARE AT 855-245-3311 FOR THEIR REQUIREMENTS PRIOR TO COMMENCING WORK.
4. **BUS STOPS** – THE PERMITEE SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
5. **STREET LIGHTS / TRAFFIC SIGNALS:** THE PERMITEE SHALL NOT REMOVE OR RELOCATE EXISTING STREET LIGHTS OR TRAFFIC SIGNALS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT STREET LIGHTING / TRAFFIC SIGNALS UNIT.
6. **TRAFFIC CAMERAS, DETECTION/COMMUNICATION EQUIPMENT:** IF AT ANY TIME DURING THE APPROVED WORK, THE PERMITEE ENCOUNTERS TRAFFIC SURVEILLANCE CAMERAS, DETECTION EQUIPMENT OR ANY TYPE OF COMMUNICATION EQUIPMENT (WIRELESS OR HARD-WIRED) ON ANY NYC DOT FACILITY, THAT IS NOT INCLUDED ON THE DESIGN/BUILD DRAWINGS, THE PERMITEE SHALL IMMEDIATELY NOTIFY NYC DOT TRAFFIC MANAGEMENT BY PHONE AT 718-433-3390 OR 718-433-3340 AND VIA EMAIL AT [TMC@DOT.NYC.GOV](mailto:TMC@DOT.NYC.GOV) AND AWAIT DIRECTION PRIOR TO CONTINUING WORK.
7. **METERS** – THE PERMITEE SHALL NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718-894-8651.
8. **TEST PITS** – THE BELOW TRAFFIC STIPULATIONS DO NOT APPLY TO TEST PIT WORK RELATED TO THIS CONTRACT. WORK HOURS AND OTHER REQUIREMENTS FOR TEST PIT OPERATIONS MAY DIFFER FROM THE STIPULATIONS IDENTIFIED BELOW. THE PERMITEE SHALL BE REQUIRED TO OBTAIN SEPARATE PERMITS RELATED TO TEST PITS.
9. **TEMPORARY PARKING REGULATIONS/PAVEMENT MARKINGS** – THE PERMITEE IS REQUIRED TO INSTALL, MAINTAIN AND REMOVE ALL NECESSARY TEMPORARY PARKING AND REGULATORY SIGNS AND PAVEMENT MARKINGS, AND RESTORE THEIR ORIGINAL CONDITION PER NYC DOT STANDARDS, PRIOR TO EXPIRATION OF THEIR PERMITS. THE PERMITEE OR AGENCY PERFORMING PUBLIC OUTREACH SHALL POST AND MAINTAIN ADVISORY SIGNS A MINIMUM OF 48 HOURS PRIOR TO CHANGING EXISTING PARKING REGULATION SIGNS TO APPROVED TEMPORARY CONSTRUCTION PARKING REGULATION SIGNS. THE ADVISORY SIGNS SHOULD BE POSTED ON ALL POLES AND DRIVE RAILS ON THE SEGMENT AFFECTED, INDICATING THE DATE OF THE CHANGE, THE NEW REGULATIONS AND A TELEPHONE NUMBER TO OBTAIN MORE INFORMATION.
10. **ACCESS TO ABUTTING PROPERTIES** – THE PERMITEE SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
11. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE PERMITEE SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.
12. **NOTIFICATION** – THE PERMITEE MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYC EMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.

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PROJECT: RECONSTRUCTION OF STREETS IN ROSEDALE AREA – PHASE 2

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- 13. CONSTRUCTION INFORMATIONAL SIGNS** – THIS PROJECT REQUIRES A CONSTRUCTION PROJECT INFORMATIONAL SIGN (CPIS) IN ACCORDANCE WITH NYCDOT HIGHWAY RULE SECTION 2-02 (4) AND (5). CRITERIA AND A PROTOTYPE FOR THIS SIGN MAY BE FOUND ON THE NYCDOT WEBSITE AT:

[HTTP://WWW.NYC.GOV/HTML/DOT/DOWNLOADS/PDF/DOT\\_CPIS\\_DIRECTIONS.PDF](http://www.nyc.gov/html/dot/downloads/pdf/dot_cpis_directions.pdf)

**14. ENHANCED MITIGATIONS**

- o "NO STANDING ANYTIME-TEMPORARY CONSTRUCTION" SIGNS AND TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED AND MAINTAINED AS WARRANTED BY THE MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) REQUIRED TO FACILITATE TRAFFIC MOVEMENTS THROUGH THE WORK ZONE. ALL TEMPORARY SIGNS AND PAVEMENT MARKINGS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
- o COMMUNITY OUTREACH SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.

**B. MAINTENANCE AND PROTECTION OF TRAFFIC**

**HOOK CREEK BOULEVARD BETWEEN 149<sup>TH</sup> AVENUE AND 148<sup>TH</sup> DRIVE**

**HOOK CREEK BOULEVARD BETWEEN 148<sup>TH</sup> DRIVE AND HUNGRY HARBOR ROAD**

**HOOK CREEK BOULEVARD BETWEEN HUNGRY HARBOR ROAD AND 148<sup>TH</sup> ROAD**

**HOOK CREEK BOULEVARD BETWEEN 148<sup>TH</sup> ROAD AND 148<sup>TH</sup> AVENUE**

**HOOK CREEK BOULEVARD BETWEEN 148<sup>TH</sup> AVENUE AND FRANCIS LEWIS BOULEVARD**

**HOOK CREEK BOULEVARD BETWEEN 145<sup>TH</sup> AVENUE AND FRANKTON STREET**

**HOOK CREEK BOULEVARD BETWEEN FRANKTON STREET AND 257<sup>TH</sup> STREET**

- 
- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
  - The contractor shall maintain two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction for traffic.
  - The contractor shall occupy eight feet adjacent to the curb after working hours.
  - The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
  - The contractor shall maintain all crosswalks during and after working hours.
  - The contractor shall maintain access to driveways of all property owners on the affected street segment.

**HOOK CREEK BOULEVARD BETWEEN FRANCIS LEWIS BOULEVARD AND 147<sup>TH</sup> DRIVE**

**HOOK CREEK BOULEVARD BETWEEN 147<sup>TH</sup> DRIVE AND 145<sup>TH</sup> AVENUE**

- 
- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
  - The contractor shall maintain one 12-foot lane for local and emergency traffic.
  - The contractor shall occupy eight feet adjacent to the curb after working hours.
  - The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
  - The contractor shall maintain all crosswalks during and after working hours.
  - The contractor shall maintain access to driveways of all property owners on the affected street segment.

NYC Department of Transportation

Bureau of Permit Management and Construction Control

55 Water Street – Concourse Level  
New York, NY 10041

T: 212.839.9621 F: 718.391.3631

[www.nyc.gov/dot](http://www.nyc.gov/dot)

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**INTERSECTION OF HOOK CREEK BOULEVARD AND 147<sup>TH</sup> DRIVE****INTERSECTION OF HOOK CREEK BOULEVARD AND 145<sup>TH</sup> AVENUE**

- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday  
8:00 AM to 6:00 PM, Saturday
- The contractor shall maintain during working hours, on Hook Creek Boulevard, 147<sup>th</sup> Drive and 145<sup>th</sup> Avenue, one 12-foot lane for local and emergency traffic.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**INTERSECTION OF HOOK CREEK BOULEVARD AND 149<sup>TH</sup> AVENUE****INTERSECTION OF HOOK CREEK BOULEVARD AND 148<sup>TH</sup> DRIVE****INTERSECTION OF HOOK CREEK BOULEVARD AND HUNGRY HARBOR ROAD****INTERSECTION OF HOOK CREEK BOULEVARD AND 148<sup>TH</sup> ROAD****INTERSECTION OF HOOK CREEK BOULEVARD AND 148<sup>TH</sup> AVENUE****INTERSECTION OF HOOK CREEK BOULEVARD AND 257<sup>TH</sup> STREET**

- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday  
8:00 AM to 6:00 PM, Saturday
- The contractor shall maintain during working hours, on Hook Creek Boulevard, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on all cross streets maintain one 12-foot lane for local and emergency traffic.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**FRANCIS LEWIS BOULEVARD BETWEEN HOOK CREEK BOULEVARD AND 147<sup>TH</sup> DRIVE****FRANCIS LEWIS BOULEVARD BETWEEN 147<sup>TH</sup> DRIVE AND 147<sup>TH</sup> ROAD****FRANCIS LEWIS BOULEVARD BETWEEN 147<sup>TH</sup> ROAD AND 147<sup>TH</sup> AVENUE****FRANCIS LEWIS BOULEVARD BETWEEN 147<sup>TH</sup> AVENUE AND 145<sup>TH</sup> AVENUE****FRANCIS LEWIS BOULEVARD BETWEEN 145<sup>TH</sup> AVENUE AND 257<sup>TH</sup> STREET**

- Work hours shall be as follows: 9:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.
- The contractor must coordinate with MTA Bus prior to mobilization.

**NYC Department of Transportation****Bureau of Permit Management and Construction Control**

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 New York, NY 10041

T: 212.839.9621 F: 718.391.3631

[www.nyc.gov/dot](http://www.nyc.gov/dot)

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**INTERSECTION OF FRANCIS LEWIS BOULEVARD AND HOOK CREEK BOULEVARD**

- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday  
8:00 AM to 6:00 PM, Saturday
- The contractor shall maintain during working hours, on Hook Creek Boulevard and Francis Lewis Boulevard, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**INTERSECTION OF FRANCIS LEWIS BOULEVARD AND 147<sup>TH</sup> DRIVE****INTERSECTION OF FRANCIS LEWIS BOULEVARD AND 147<sup>TH</sup> ROAD****INTERSECTION OF FRANCIS LEWIS BOULEVARD AND 147<sup>TH</sup> AVENUE****INTERSECTION OF FRANCIS LEWIS BOULEVARD AND 145<sup>TH</sup> AVENUE****INTERSECTION OF FRANCIS LEWIS BOULEVARD AND 257<sup>TH</sup> STREET**

- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain during working hours, on Hook Creek Boulevard, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on all cross streets maintain one 12-foot lane for local and emergency traffic.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**FRANKTON STREET BETWEEN 145<sup>TH</sup> AVENUE AND HOOK CREEK BOULEVARD****FRANKTON STREET BETWEEN HOOK CREEK BOULEVARD AND NASSAU COUNTY BOUNDARY**

- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during and after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

NYC Department of Transportation

Bureau of Permit Management and Construction Control

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New York, NY 10041

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OCMC FILE NO: QEC 22-692

January 26, 2023

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**INTERSECTION OF FRANKTON STREET AND 145<sup>TH</sup> AVENUE****INTERSECTION OF FRANKTON STREET AND NASSAU COUNTY BOUNDARY**

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- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**INTERSECTION OF FRANKTON STREET AND HOOK CREEK BOULEVARD**

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- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain during working hours, on Hook Creek Boulevard, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on Frankton Street maintain one 12-foot lane for local and emergency traffic.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**145<sup>TH</sup> AVENUE BETWEEN FRANCIS LEWIS BOULEVARD AND FRANKTON STREET****145<sup>TH</sup> AVENUE BETWEEN FRANKTON STREET AND HOOK CREEK BOULEVARD****145<sup>TH</sup> AVENUE BETWEEN HOOK CREEK BOULEVARD AND NASSAU COUNTY BOUNDARY**

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- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall occupy eight feet adjacent to the curb after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

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**259<sup>TH</sup> STREET BETWEEN 149<sup>TH</sup> ROAD AND 149<sup>TH</sup> AVENUE****259<sup>TH</sup> STREET BETWEEN 149<sup>TH</sup> AVENUE AND 148<sup>TH</sup> DRIVE****259<sup>TH</sup> STREET BETWEEN 148<sup>TH</sup> DRIVE AND 148<sup>TH</sup> ROAD****259<sup>TH</sup> STREET BETWEEN 148<sup>TH</sup> ROAD AND 148<sup>TH</sup> AVENUE****259<sup>TH</sup> STREET BETWEEN 148<sup>TH</sup> AVENUE AND 147<sup>TH</sup> DRIVE****259<sup>TH</sup> STREET BETWEEN 147<sup>TH</sup> DRIVE AND 147<sup>TH</sup> ROAD****259<sup>TH</sup> STREET BETWEEN 147<sup>TH</sup> ROAD AND 147<sup>TH</sup> AVENUE****259<sup>TH</sup> STREET BETWEEN 149<sup>TH</sup> ROAD AND CRAFT AVENUE**

- 
- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
  - The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
  - The contractor shall occupy eight feet adjacent to the curb after working hours.
  - The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
  - The contractor shall maintain all crosswalks during and after working hours.
  - The contractor shall maintain access to driveways of all property owners on the affected street segment.

**INTERSECTION OF 259<sup>TH</sup> STREET AND 147<sup>TH</sup> ROAD****INTERSECTION OF 259<sup>TH</sup> STREET AND 147<sup>TH</sup> DRIVE****INTERSECTION OF 259<sup>TH</sup> STREET AND 148<sup>TH</sup> AVENUE****INTERSECTION OF 259<sup>TH</sup> STREET AND 148<sup>TH</sup> ROAD****INTERSECTION OF 259<sup>TH</sup> STREET AND 148<sup>TH</sup> DRIVE****INTERSECTION OF 259<sup>TH</sup> STREET AND 149<sup>TH</sup> AVENUE****INTERSECTION OF 258<sup>TH</sup> STREET AND 147<sup>TH</sup> ROAD****INTERSECTION OF 257<sup>TH</sup> STREET AND 147<sup>TH</sup> DRIVE****INTERSECTION OF MEMPHIS AVENUE AND 145<sup>TH</sup> AVENUE****INTERSECTION OF 145<sup>TH</sup> AVENUE AND NASSAU COUNTY BOUNDARY**

- 
- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
  - The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
  - The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
  - The contractor shall maintain all crosswalks during and after working hours.
  - The contractor shall maintain access to driveways of all property owners on the affected street segment.

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**INTERSECTION OF 259<sup>TH</sup> STREET AND CRAFT AVENUE**

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- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain during working hours, on Craft Avenue, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on 259<sup>th</sup> Street maintain one 12-foot lane for local and emergency traffic.
- The contractor must restore full width of the roadway after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks at all times.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**147<sup>TH</sup> AVENUE BETWEEN 258<sup>TH</sup> STREET AND 259<sup>TH</sup> STREET****147<sup>TH</sup> AVENUE BETWEEN 259<sup>TH</sup> STREET AND FRANCIS LEWIS BOULEVARD****149<sup>TH</sup> ROAD BETWEEN 259<sup>TH</sup> STREET AND 259<sup>TH</sup> STREET****149<sup>TH</sup> ROAD BETWEEN 259<sup>TH</sup> STREET AND 262<sup>ND</sup> STREET**

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- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.
- The contractor must coordinate with MTA Bus prior to mobilization.

**INTERSECTION OF 147<sup>TH</sup> AVENUE AND 258<sup>TH</sup> STREET****INTERSECTION OF 147<sup>TH</sup> AVENUE AND 259<sup>TH</sup> STREET**

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- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain on 147<sup>th</sup> Avenue, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on all cross streets maintain one 12-foot lane for local and emergency traffic.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.
- The contractor must coordinate with MTA Bus prior to mobilization.

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**INTERSECTION OF 149<sup>TH</sup> ROAD AND 259<sup>TH</sup> STREET****INTERSECTION OF 149<sup>TH</sup> ROAD AND 262<sup>ND</sup> STREET**

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- Work hours shall be as follows: 9:00 AM to 4:00 PM, Monday – Friday
- The contractor shall maintain on 149<sup>TH</sup> Road, two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction. And on all cross streets maintain one 12-foot lane for local and emergency traffic.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**147<sup>TH</sup> ROAD BETWEEN 258<sup>TH</sup> STREET AND 259<sup>TH</sup> STREET****147<sup>TH</sup> ROAD BETWEEN 259<sup>TH</sup> STREET AND FRANCIS LEWIS BOULEVARD**

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- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall occupy eight feet adjacent to the curb after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**147<sup>TH</sup> DRIVE BETWEEN 257<sup>TH</sup> STREET AND 259<sup>TH</sup> STREET****147<sup>TH</sup> DRIVE BETWEEN 259<sup>TH</sup> STREET AND FRANCIS LEWIS BOULEVARD****147<sup>TH</sup> DRIVE BETWEEN FRANCIS LEWIS BOULEVARD AND HOOK CREEK BOULEVARD**

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- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall occupy eight feet adjacent to the curb after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**148<sup>TH</sup> AVENUE BETWEEN 259<sup>TH</sup> STREET AND HOOK CREEK BOULEVARD**

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- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.
- The contractor must coordinate with MTA Bus prior to mobilization.

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**148<sup>TH</sup> ROAD BETWEEN 259<sup>TH</sup> STREET AND HOOK CREEK BOULEVARD**  
**148<sup>TH</sup> DRIVE BETWEEN 259<sup>TH</sup> STREET AND HOOK CREEK BOULEVARD**  
**262<sup>ND</sup> PLACE BETWEEN HUNGRY HARBOR ROAD AND HOOK CREEK BOULEVARD**

- Work hours shall be as follows: 7:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall occupy eight feet adjacent to the curb after working hours.
- The contractor shall maintain a minimum of a 5-foot clear sidewalk at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**HUNGRY HARBOR ROAD BETWEEN HOOK CREEK BOULEVARD AND 262<sup>ND</sup> PLACE**

- Work hours shall be as follows: 9:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain two 11-foot travel lanes for traffic, one 11-foot travel lane in each direction.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**INTERSECTION OF 262<sup>ND</sup> PLACE AND HUNGRY HARBOR ROAD**

- Work hours shall be as follows: 9:00 AM to 6:00 PM, Monday – Friday
- The contractor shall maintain one 12-foot lane for local and emergency traffic during working hours.
- The contractor shall restore all travel lanes after working hours.
- The contractor shall maintain a 5-foot clear sidewalk for pedestrians at all times.
- The contractor shall maintain all crosswalks during and after working hours.
- The contractor shall maintain access to driveways of all property owners on the affected street segment.

**C. GENERAL NOTES**

1. **THIS IS NOT A PERMIT.** THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.
2. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.
3. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE NYCDOT SPECIAL EVENTS UNIT AS IDENTIFIED BELOW:

**A. STREET FAIRS / FESTIVALS**

- ALL EXCAVATIONS MUST BE PLATED WITH SKID RESISTANT PLATES.
- PLATES MUST BE RECESSED AND FLUSH WITH PAVEMENT.
- ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
- ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.

**B. RUNNING / WALKING / BIKING EVENTS**

- ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
- ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.

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- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
  - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
- C. PARADES**
- ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
  - FORMATION AND DISPERSAL AREA PLATES MUST BE RECESSED AND FLUSH WITH PAVEMENT (PLATES MUST BE SKID RESISTANT).
  - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
  - THE CONTRACTOR IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
  - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
- D. MAYORAL EVENTS**
- ALL EXCAVATIONS MUST BE BACKFILLED AND PAVED OR PLATES MUST BE RECESSED AND PAVED OVER FLUSH WITH PAVEMENT.
  - ALL PAVEMENT DEFECTS MUST BE CORRECTED WITHIN OR ADJACENT TO THE WORK ZONE.
  - THE CONTRACTOR IS RESPONSIBLE FOR ANY DEFECTS WITHIN THE IMMEDIATE VICINITY IF NYCDOT STREET & ARTERIAL MAINTENANCE CANNOT MAKE REPAIRS DUE TO PROJECT INTERFERENCE (AS DETERMINED BY NYCDOT).
  - ALL EQUIPMENT, TRAILERS AND MATERIAL STORAGE MUST BE REMOVED.
4. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
  5. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
  6. THE PERMITEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, **WRITTEN** APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, **WRITTEN** APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.
  7. THE PERMITEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.
  8. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.
  9. FOR ANY CONSTRUCTION ACTIVITY RESULTING IN THE FULL CLOSURE OF A ROADWAY FOR MORE THAN 180 CONSECUTIVE CALENDAR DAYS, THE CONTRACTOR MUST PRODUCE AND SUBMIT A COMMUNITY REASSESSMENT, IMPACT AND AMELIORATION (CRIA) STATEMENT TO NYCDOT PLANNING AND OBTAIN THEIR APPROVAL BEFORE APPLYING FOR PERMITS, IN COMPLIANCE WITH THE PROVISIONS OF **LOCAL LAW 24 STREET CLOSURE LAW**.
  10. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION; AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.
  11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.
  12. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.

  
**GARY SMALLS**  
 DIRECTOR  
 OCMC-STREETS

  
**XIOMARA AGUILERA**  
 PROJECT MANAGER  
 OCMC -STREETS

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**(C) SEWER & WATER MAIN PROJECT SPECIFIC PROVISIONS**

(NO TEXT)

**(D) GREEN INFRASTRUCTURE PROVISIONS**

(NO TEXT)

**NOTICE**

The Standard Sewer And Water Main Specifications of the Department of Environmental Protection (dated August 8, 2022), Sewer Design Standards of the Department of Environmental Protection (dated (September 2007) Revised August 2018), Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), Specifications For Trunk Main Work of the Department of Environmental Protection (dated July 2014) and the Standard Highway Specifications of the Department of Transportation (dated May 16, 2022) of The City of New York, shall be included as part of the contract documents. These said specifications and standard drawings are hereby revised under the following section headings:

- A. NOTICE TO BIDDERS
- B. REVISIONS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS
- C. REVISIONS TO THE SPECIFICATIONS FOR TRUNK MAIN WORK

(NO TEXT ON THIS PAGE)

**A. NOTICE TO BIDDERS**

NO TEXT

## B. REVISIONS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS

- (1) **Refer** to **Subsection 10.15 - Notice To Utility Companies, Etc., To Remove Structures Occupying Place Of Sewers, Water Mains Or Appurtenances**, Page 19:  
**Add** the following to **Subsection 10.15**:

(1) CONSOLIDATED EDISON COMPANY OF NEW YORK (CON EDISON)

There are CON EDISON facilities in the area of construction. The Contractor must notify CON EDISON at least seventy-two (72) hours prior to the start of construction by contacting Mr. Noel Leon at (718) 802-3013.

(2) NATIONAL GRID

There are NATIONAL GRID facilities in the area of construction. The Contractor must notify NATIONAL GRID at least seventy-two (72) hours prior to the start of construction by contacting Mr. Neville Jacobs Jr. at (718) 963-5612.

(3) VERIZON

There are VERIZON facilities in the area of construction. The Contractor must notify VERIZON at least seventy-two (72) hours prior to the start of construction by contacting Mr. Aubrey Makhanlall at (718) 977-8165.

- (2) **Refer** to **Subsection 10.21 - Contractor To Notify City Departments**, Page 21:  
**Add** the following to **Subsection 10.21**:

(1) N.Y.C. D.E.P., BUREAU OF WATER AND SEWERS OPERATIONS

The Contractor will notify Ms. Sol Posada, P.E., Chief, Linear Capital Program Management Division at the Department of Environmental Protection, 59-17 Junction Blvd., 3rd floor low rise, Corona N.Y. 11368, at (718) 595-7434 at least thirty (30) days prior to the start of construction

(2) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor will notify Mr. Michael Lofesse/ Akmal Mikhail – Traffic Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (212) 839-3799/ (212) 839-3368, at least seventy-two (72) hours prior to the start of construction.

(3) N.Y.C. TRANSIT AUTHORITY

The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction, in order to make the necessary arrangements.

Arrangements shall be made through:

Ms. Sarah Wyss  
Acting Director, Operation Planning  
New York City Transit  
2 Broadway, 17<sup>th</sup> Floor, Room A17.82  
New York, N.Y. 10004  
Telephone No. (646) 252-5517  
sarah.wyss@nyct.com

(3) **Refer** to **Subsection 10.24 – Damaged Water Service Pipes To Be Repaired By A Licensed Plumber**, Page 22:

**Add** the following to **Subsection 10.24**:

If the damaged or cut water service pipe is lead, galvanized steel, or galvanized iron, the service pipe must not be partially replaced, but fully replaced from the main to the house control valve. If the service pipe was damaged, cut, or otherwise interrupted due to the Contractor's actions or means & methods (including selection of shoring systems), the water service pipe will be replaced at the Contractor's own cost.

(4) **Refer** to **Subsection 10.30 - Contractor To Provide For Traffic**, Page 24:

**Add** the following to **Subsection 10.30**:

(1) Traffic Stipulations:

The Contractor shall refer to Traffic Stipulations identified in the maintenance of traffic requirements under Highway Contract No. HWQ274F2

(5) **Refer** to **Subsection 40.02.15 - Disposal Of Water From Trenches**, Page 184:

**Add** the following to **Subsection 40.02.15**:

(A) The Department of Design and Construction has **not** filed application for Dewatering Permit with the New York State Department of Conservation (NYSDEC), under the Environmental Conservation Law (ECL), Title 15 of Article 15, for a Temporary Well Point System Permit. However, it is anticipated that the criteria for rate of pumping specified here before in this section will be exceeded in areas of construction; the Contractor shall be responsible for applying and obtaining the necessary dewatering permit prior to the dewatering of trenches within the scope of this project.

As part of the permit application the Contractor will be required to comply with all the requirements of **Section 40.14** of this section.

Copies of all materials submitted to NYSDEC shall be sent to the New York City Department of Design and Construction (NYCDDC), Infrastructure/Design.

The following minimum requirements set forth by the New York Department of Environmental Conservation shall be complied with prior to the start of work in areas of construction requiring dewatering permit:

- (1) An analysis must be made of water samples taken. The results are to be submitted to the Regional Permit Administrator. An analysis shall be made for BOD, salinity, oil, and grease. The samples shall be analyzed by a laboratory certified by the New York State Health Department and the results are to be submitted directed to the New York State Department of Environmental Conservation by the laboratory.
- (2) Prior to setting any wells, wellpoints or header pipes, the Contractor must submit to the NYSDEC a layout of the complete dewatering system including the location of the discharge point. When permitted by the NYSDEC, discharge of groundwater on the beach areas shall be done in such a manner as to eliminate any erosion or siltation and will require the installation of splash blocks and/or settling basins.

The Contractor is advised that all work required in obtaining a permit, must be submitted to, and approved by the NYSDEC prior to the commencement of any work in areas of construction requiring dewatering permit. No payment for any item of work will be made, and no shop drawing shall be



approved for the areas of construction until such time that a written approval is obtained from the NYSDEC.

(B) The Contractor is advised that all work shall be governed by the provisions and requirements of the obtained permit, and their said provisions and requirements shall be made a part of the contract and the Contractor will be responsible for strict adherence thereto.

The cost of all work required for applying, complying and obtaining required dewatering permits including the cost for any required updating of permits shall be deemed included in the prices bid for all item of this contract. No additional or separate payment will be made for any work required in order to comply with these requirements.

- (6) **Refer** to Page 215:  
**Add** the following new **Section 40.14**:

#### **SECTION 40.14 DEWATERING PERMITS**

##### **40.14.1 DESCRIPTION**

Under this contract, and at locations where groundwater will be present in the trenches and excavations, the Contractor is required to install, maintain and operate a temporary dewatering system of sufficient size and capacity to control ground and surface water flow into the excavation and to allow all work to be accomplished in the "dry condition".

The Contractor will be required to obtain the following permits in order to operate a temporary dewatering system.

- (A) A Dewatering/Discharge Permit from the New York City Department of Environmental Protection (NYCDEP);
- (B) A Long Island Well Permit from the New York State Department of Environmental Conservation (NYSDEC), under the Environmental Conservation Law (ECL), Title 15 of Article 15, implemented by 6NYCRR Part 601 - Water Supply and Part 602 - Long Island Well. This permit is required only in the Boroughs of Brooklyn and Queens to withdraw water using a well point or deep well system where the total capacity of such well or wells is in excess of 45-gallons per minute (or 64,800-gallons per day); and,
- (C) An Industrial State Pollutant Discharge Elimination System (SPDES) or a Non-Jurisdictional Determination Letter in compliance with Title 8 and 7 of Article 17 of the Environmental Conservation Law of New York State, respectively.

The Contractor is advised that the provisions and requirements of the aforementioned permits shall govern all work, and the said provisions and requirements are hereby made a part of the sewer contract and the Contractor will be responsible for strict adherence thereto.

No dewatering work shall commence until the above-mentioned Permits have been obtained for this project.

The Contractor is advised that in order to comply with all the permits requirements, the Contractor will be required to submit maps, test data, etc. prior to the start of work. In order to expedite the processing of the permit and its requirements, the Contractor will be required to obtain the services of an independent Environmental Scientist as herein described below in **Subsection 40.14.2** to perform this work and act as liaison with NYSDEC and NYCDEP.

**40.14.2 QUALIFICATIONS**

The Environmental Scientist utilized to perform the work required under this section must have adequate experience in work of this nature (obtaining Long Island Well Permit/Dewatering Permit) and must have previous experience in working with the NYSDEC and the NYCDEP, designing equivalent dewatering systems, and have successfully obtained the type of permits required under this contract. Prior to the start of work, the Contractor will be required to submit the name and resume of the Environmental Scientist for approval.

**40.14.3 NYSDEC DEWATERING PERMITS**

The dewatering system shall be designed by the Environmental Scientist using accepted and professional methods of design and engineering consistent with the best modern practices.

The material to be submitted shall include, but not be limited to the following:

- (1) Site Plan - Scaled, showing construction activity (e.g. excavation, pathway of the pipe, new outfalls, etc.) locations of well points, header pipes and pumps, and all staging and storage areas.

Also included herein shall be a layout of the complete dewatering system including the location of the discharge point. When permitted by the NYSDEC, discharge of groundwater on beach areas shall be done in such a manner as to prevent any erosion or siltation and will require the design and installation of splash blocks and/or settling basins.

- (2) Dewatering System Specifications:

- |                               |                             |
|-------------------------------|-----------------------------|
| (a) Number of Well Points     | (h) Total Volume Pumped     |
| (b) Diameter of Well Points   | (i) Number of Pumps         |
| (c) Spacing of Well Points    | (j) Capacity of Pumps       |
| (d) Length to Screen          | (k) Duration of Pumping     |
| (e) Depth to Bottom of Screen | (l) Initial and Average GPM |
| (f) Static Water Level        | (m) Estimated Daily Pumpage |
| (g) Drawdown Required         | (n) Flow Meter              |

- (3) Cross Section - Scaled, showing well points, riser, header, annular material (if used) and other equipment associated with each point. A typical construction style drawing may be utilized. Should the Contractor be permitted to use a deep well system, all information regarding it must be submitted.

- (4) Drawdown Contour Map - Based upon a review of the surrounding area affected by the dewatering and upon boring within the project area and characteristics of the soils, the depth and pumping rate of dewatering system and the duration of the pumping, the Environmental Scientist shall submit both a narrative and diagram showing the anticipated maximum cone of depression which shall be shown from both above and in cross section on scaled diagrams. Contour lines on diagrams shall be labeled to show depth from land surface.

- (5) Description of Site and Adjacent Areas - A short narrative shall be prepared describing the land use in the area paying attention to any potential sources of groundwater contamination that may migrate into the well's cone of depression, such as gas stations, chemical plants, wrecking yards, sanitary landfills, etc. Latest map of the area shall be included in the narrative.

- (6) Groundwater Analysis - The Environmental Scientist shall develop and submit a sampling and analysis program subject to NYSDEC Approval (a minimum of one groundwater sample from a site well shall be collected and analyzed). A laboratory certified by the New York State Health Department shall analyze the samples. The sampling and analysis program must include but is not limited to the following:

**NYSDEC REGION 2 - DEWATERING PROJECTS SAMPLING INFORMATION**

NO.	PARAMETERS	TYPE	EPA METHOD	DETECTION
1	pH	Grab	150.1	EPA min
2	Temperature	°F	After Pumping	EPA min
3	Fecal Coliform	Grab	5-Tubes/3-Dilutions	2-MPN/100-ml
4	Oil & Grease	Grab	413.1	EPA min
5	BOD5	Grab	405.1	EPA min
6	Total Suspended Solids	Grab	160.2	EPA min
7	Settleable Solids	Grab	160.5	EPA min
8	Chlorides	Grab	325.1-325.3	EPA min
9	Benzene	Grab	602	EPA min
10	Toluene	Grab	602	EPA min
11	Xylenes	Grab	602	EPA min
12	Ethylbenzene	Grab	602	EPA min
13	PCB's	Grab	608	(See Note 1)
14	Pesticides	Grab	608	EPA min
15	13 Priority Metals	Grab	200 series	EPA min
16	Acids Base/Neutrals	Grab	625-GC/MS	EPA min
17	Halogenated Volatiles	Grab	601-GC	EPA min
18	Nitrate/Nitrite	Grab	300 or 353.3	EPA min
19	Aromatic Volatiles	Grab	602-GC	EPA min
20	Cyanide (total or amenable)	Grab	335.1/335.2	EPA min

NOTE:

- (1) List each individual aroclor found and report the concentration of each aroclor tested. Use the N.Y.S. detection limit, which is 0.065-µg/l.

Small dewatering projects with a total estimated pumped volume up to 15-Million Gallons (MG) require sampling analysis for parameters No.'s 1 through 12.

Medium dewatering projects with a total estimated pumped volume between 15-MG and 60-MG require sampling analysis for parameters No.'s 1 through 14.

Large dewatering projects with a total estimated pumped volume greater than 60-MG require sampling analysis for parameters No.'s 1 through 20.

Samples are to be collected after development of the well by a licensed well driller.

A laboratory certified by the NYS Department of Health must conduct all testing.

Irrespective of the aforementioned sampling requirements based on total estimated pumped volumes, the Department may require sampling of additional parameters if the proposed dewatering site is suspected of being contaminated.

**40.14.4 SUBMISSION OF DEWATERING PLAN**

The Environmental Scientist will be required to submit two (2) copies of the Dewatering Plan (together with all reports, materials, designs, drawings, maps and plans) to the Infrastructure Engineering Support

Unit for review and approval. Once approved the Environmental Scientist shall submit in triplicate the Final Dewatering Plan to both the NYSDEC and the NYCDEP. The Dewatering Plan should be bound and bear the name of the Contractor, NYSDEC Application Number and the Signature of the preparer. All drawings and maps shall be on sheets 27-inches by 40-inches and to scale not less than 1"=30'.

**40.14.5 DAMAGES**

The Contractor shall be responsible for and shall repair at no cost to the City any damage caused by inadequate or improper design and operation of the dewatering system, and any mechanical or electrical failure of the dewatering system.

**40.14.6 SYSTEM REMOVAL**

The Contractor shall remove all dewatering equipment and temporary electrical service from the site. All wells shall be removed or cut off a minimum of three (3) feet below the final ground surface and capped. Holes left from pulling wells or wells that are capped shall be grouted in a manner approved by the Engineer.

**40.14.7 PAYMENTS**

No additional or separate payment will be made for any work described herein. The costs for all labor, materials, equipment, permit fees, samples, tests, reports, services and insurance required or necessary to perform all the work described herein shall be deemed included in the price bid for all items of work.

(7) **Refer to Subsection 71.41.4 - Specific Pavement Restoration Provisions, Page 529:**  
Add the following to **Subsection 71.41.4:**

(E) Specific Pavement Restoration Provisions:

- (1) Within the limits of the highway reconstruction the restoration shall be accomplished and paid for in accordance with Highway Construction Plans, Details, and Specifications for Highway Project ID HWQ274F2.
- (2) Payment for pavement restoration must be made under the following items:

**FOR COMPOSITE PAVEMENT:**

ITEM NO.	ITEM	PAYMENT DESCRIPTION
4.02 AG	Asphaltic Concrete Wearing Course, 3" Thick	(3" asphaltic concrete wearing course for trench restoration.)
4.04 B	Concrete Base For Pavement, Variable Thickness For Trench Restoration, (Class B-32)	6" Minimum (For concrete base course over trenches and cutbacks.)

**FOR FLEXIBLE PAVEMENT:**

ITEM NO.	ITEM	PAYMENT DESCRIPTION
4.02 AB-R	Asphaltic Concrete Wearing Course, 1 ½" Thick	(1 ½" asphaltic concrete wearing course for trench restoration.)
4.02 CB	Asphaltic Concrete Mixture	4 ½" Thick (For asphaltic concrete mixture course over trenches and cutbacks.)

**C. REVISIONS TO THE SPECIFICATIONS FOR TRUNK MAIN WORK**

- 1) **Refer to Part 1 – Furnishing And Delivering Steel Pipes And Appurtenances 30 Inches In Diameter And Larger, Section 11. Fabrication: Page 4;**  
**Add the following to Section 11:**

All steel water mains shall be spiral welded pipes, and all steel water main fittings shall be fabricated from qualified spiral welded pipe. Can type pipe is not acceptable.

- 2) **Refer to Part 1 – Furnishing And Delivering Steel Pipes And Appurtenances 30 Inches In Diameter And Larger, Section 13. Special Fittings, Page 5;**  
**Add the following to Section 13:**

The steel reducer shall have a length of seven (7) feet for every twelve (12) inches reduction in diameter.

- 3) **Refer to the Specifications for Trunk Main Work, Division 2, Article 69.A.**  
**Replace Article 69.A with the following:**

“Cement must meet the requirements of AWWA C205, or as otherwise specified by the Engineer.”

**END OF SECTION**

**This Section consists of Eight (8) pages.**

**EP7 (1.0) - PAGES**

**GAS COST SHARING (EP-7)  
STANDARD SPECIFICATIONS**

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**NOTICE**

THE PAGES CONTAINED IN THIS SECTION REPRESENT THE GAS COST SHARING WORK THAT SHALL APPLY TO AND BECOME A PART OF THE CONTRACT.

(NO TEXT ON THIS PAGE)

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**VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID ITEMS QUANTITIES**

## I - NOTICE TO ALL BIDDERS; GAS COST SHARING WORK

All prospective bidders are hereby advised that, pursuant to the "Gas Facility Cost Allocation Act", ("the Act"), the City of New York has entered into an agreement ("the Agreement") with the gas companies (Con Edison or National Grid (formerly KeySpan Energy Delivery)) operating in their respective areas of the City to "share" the cost of facility relocation and/or support and protection of facilities disturbed by proposed water and/or sewer and related City work specified in this contract. Therefore, bid items, specifications and estimated quantities for the incremental costs of support and protection of certain gas facilities have been included in this contract. The low bid for this contract shall be determined by examining each bid for all work to be performed under this contract including any work of support and protection of gas facilities to be performed. The Contractor shall not seek additional compensation from gas companies except as specifically set forth in its contract.

## II - GENERAL PROVISIONS; GAS COST SHARING WORK

### 1. General:

The Contractor shall perform City work with interferences from existing live and abandoned gas facilities. This shall be defined as utility work. Therefore, this contract includes bid items, specifications and estimated quantities designed to fully compensate him/her for the incremental costs of supporting, protecting, providing accommodations and, avoiding disturbing gas facilities located in the streets shown on the contract drawings. In the event that any other provisions of this contract related to gas facilities (or private utilities) conflict with these provisions, these provisions shall supersede and govern all work related to gas facilities owned by the companies operating in the project area. All utility work, as defined in these specifications, including changes and additions thereto shall be paid solely by the City except when specified otherwise in this contract. Contractor hereby agrees that the facility operator shall not be liable to pay him/her for any work performed including extra utility work. Contractor agrees that its bid prices include all compensation for loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, demobilization, remobilization, added cost or expense, lost of profit, other damages or impact costs that may be suffered by or because of utility work, or the presence of gas facilities in the proximity of City work and that it will not seek additional compensation for these items. All disputes shall be resolved as specified in the contract.

Pursuant to the Act, Agreement, and the New York City Administrative Code, the gas company(ies) has been directed by the Commissioner and is required to perform all maintenance, repairs, replacement, shifting, alteration, relocation, and/or removal work that are not part of this contract. By having bid on this contract, the Contractor understands and agrees that the Commissioner has preasserted any right the City has to require, including the issuance of any directives or so called "order outs" under the New York City Administrative Code, any or all gas companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove all gas facilities that are about to be disturbed by the City contract work. The issuance of additional such directives during the performance of the contract work, where necessary in the sole judgment of the Commissioner, shall be initiated by such Commissioner as set forth in the relevant sections of the Act and Agreement. Contractor further agrees to insert such requirements as set forth herein above into any contracts with its approved subcontractors so that its subcontractors also understand and agree to such contract requirements.

### 2. Gas Interferences And Accommodations:

During the performance of sewer and water main work funded by the New York City Department of Environmental Protection (NYCDEP), as instructed by the Engineer, the use of any applicable contract bid item is allowed in order to resolve and accommodate all gas facilities interferences with such City work, including the removal of contaminated soil in associated trench excavation. This is in addition to the specified EP-7 bid items in the contract. Payment for such accommodation shall be funded by EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" (F.S. Fixed Sum). The value of such accommodation shall be computed by multiplying the appropriate unit prices bid to the quantity of work performed, as determined by the Engineer, and applying the total amount thus to be paid

to EP-7 bid item “UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS”. When EP-7 bid item “UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS” does not exist, such additional accommodation work shall be at no cost to the City but shall be a matter of adjustment between gas facility operator and Contractor. Private facilities, other than gas, that become in interference due to gas interferences accommodations shall also be accommodated, if so directed by the Resident Engineer, at no additional cost to the City and, provided that its owner agrees to be responsible for all additional costs to Contractor, otherwise, such facility shall be ordered by the City to be maintained, shifted, relocated or replaced by its owner at his/her expenses.

## **2a. Water Main Accommodations:**

When water main construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the vertical or horizontal alignment of water mains including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and laying offset fittings and pipes, etc., necessary in order to complete water main installation and, avoid gas interferences in the project area, including street intersections. Typical work method accommodations shall include, but not be limited to, pier and plate, installation of filter fabric and select fill, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of water mains standards and specifications.

## **2b. Sewer Accommodations:**

When sewer construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the horizontal alignment of sewer facilities (if possible) including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and construction of additional manholes or modification of manholes/catch basins, extending chute connections, house connections, using alternate materials and methods, poured-in-place structures, etc., necessary in order to complete sewer installation and, avoid gas interferences in the project area, including street intersections. The term sewer facility shall include, but not be limited to, all sewer pipe and appurtenances, manholes, catch basins, catch basin chutes, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of sewer standards and specifications.

## **3. Quantity Overruns, EP-7 Funded Bid Items:**

No quantity overrun, in excess of one hundred twenty five (125) percent, shall be permitted for EP-7 funded bid items (gas) included in this contract, except when Resident Engineer determines that such overruns are caused by field modifications to planned City work, or approved construction methods, or contract scope changes. The Engineer will notify the gas facility operator in writing of overruns. The Contractor must invoice the gas facility operator for payment of all overruns, which will be paid by the gas facility operator at the contract bid price. Gas facility operator will be entitled to reimbursement by NYCDEP under established cost sharing procedures.

## **4. Changes And Extra Work:**

This section is not applicable to work defined under “Emergency Reconstruction Contracts” or so-called “Where and When Contracts” since these projects, by definition, inherently encounter unanticipated gas facilities and cannot be pre-engineered. In all other cases, any contract changes proposed for City work shall also cover and include all associated changes to support and protection of gas facilities affected by such changes to City work. In all other cases where the Contractor finds that City work cannot be performed as planned and specified and/or, as approved because of a need to support, protect and/or alleviate interferences from gas facilities that were not listed and/or shown, or incorrectly shown in contract plans and specifications, he shall immediately notify the Resident Engineer and the facility operators’ representative of his findings. Resident Engineer shall promptly examine such claims and determine whether or not such work is covered by contract bid items and /or specifications (contract bid items and specifications shall include city contract items as well as EP-7 items). The Resident Engineer shall also

examine the claim to determine if the application of EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" is appropriate to resolve the claim. If upon examination, the Engineer determines that such field conditions were unanticipated (not shown and/or listed, or incorrectly shown in contract documents) and are not covered by bid items and contract specifications, he shall then direct the Contractor and the affected facility operator to negotiate the cost of supporting and protecting, and/or alleviating the impact on City work caused by such unanticipated gas facilities with each other with the understanding that the performance of City work shall continue during negotiations. If a cost agreement is reached, the Contractor and facility operator shall adjust such costs between themselves at no additional costs to the City contract. If the Contractor and affected facility operator do not reach an agreement concerning the price to be paid for the extra work within five (5) business days of the Engineer's directive to engage into such negotiations and, after considering: public safety and inconvenience, requirements of laws and regulations applicable to private utilities, integrity of all utility systems, including but not limited to sewer and water, gas, electric, telephone and, cable TV facilities, sound engineering practices, cost (long and short term) to all affected parties, and potential City work delays, then the Resident Engineer, depending on nature and severity of interferences with City work, shall either, direct the facility operator to relocate or replace its facilities at its own discretion and cost, reimbursable by NYCDEP under established gas cost sharing procedures or, direct the Contractor to perform the utility work on actual time, material and equipment costs basis pursuant to relevant contract requirements and amendments. Contract bid prices for any applicable items of work involved shall be applied, or converted to an allowance for time and material charges. Changes shall be for affected portions of utility work and, shall be processed with EP-7 funds.

#### **5. Excavation:**

All excavators shall notify the NYC/LI One Call Center at 1-800-272-4480 at least two (2) working days, not including the day of the call, but not more than ten (10) working days in advance of the start of any excavation work. The gas company(ies) will mark out its facilities within the project limits and provide Construction Inspector(s) during all excavation work in close proximity (within twelve (12) inches) to gas facilities. The Contractor shall exercise extreme caution when excavating in the vicinity of any gas facilities. Hand excavation shall be performed within twelve (12) inches of gas facilities. The Contractor prior to excavating underneath these facilities shall adequately support all gas facilities. Standard support details for gas facilities have been included in the specifications. Any damage to gas facilities shall be reported immediately to the gas company(ies). The Contractor shall be responsible for all cost associated with repairs made necessary by damages caused by his operations.

#### **6. Backfilling And Street Restoration:**

Backfilling operations and street restorations shall be in accordance with contract requirements.

#### **7. Non-Responsive Bids:**

Every gas (EP-7) bid item has a suggested "Not less than" value per unit indicated on contract bid sheet. Bids resulting in cost of less than suggested for EP-7 items are hereby prohibited and if submitted shall be considered NON-RESPONSIVE.

#### **8. Minimum Clearances:**

Clearance requirements for City work shall govern and supersede any clearance requirement of gas facility operator. Therefore, a minimum of twelve (12) inches clearance between private utilities and City water mains, sewers or related structures to be installed in this contract shall be maintained. When this clearance is not attainable, the Resident Engineer may allow a minimum of four (4) inches clearance. With less than twelve (12) inches clearance a neoprene/polyethylene shield (to be provided by facility operator) shall be installed as part of all work item specifications. However, if Resident Engineer determines that City work cannot be performed within allowable clearance and no reasonable City accommodation (no-cost change to City work) is possible, the City shall direct the facility operator to remove, relocate, shift, or alter their facility(ies) pursuant to the New York City Administrative Code.

### **9. Work By Facility Operator:**

The facility operator may find it necessary to perform the following types of work during performance of City work: accommodating a contractor's request for gas facilities modifications (in order to facilitate City contractor's proposed construction method) or, remedial and emergency work on gas facilities proper with their own resources and materials if an approved method of construction for City work causes unanticipated disturbances to gas facilities or, replacing defective gas facilities when they are exposed by the Contractor and their actual conditions are observable by the facility operator. Also included in the above category of defective gas facilities are: the presence of environmental contaminants attributable to the gas facility in or around gas facilities. If such work is deemed required by the facility operator or if facility operator is directed by the City to address such deficiencies at any time during the course of construction, the Contractor shall modify the construction schedule at no cost to the City and allow the facility operator five (5) business days to perform such work without interferences. Additional costs to the facility operator (in cases of accommodations) or, Contractor (in cases of defective gas facilities) due to such gas work, if any, shall be the responsibility of the parties involved and not of the City. Such costs shall be a matter of adjustment between the Contractor and the facility operator.

### **10. Materials Furnished By Facility Operator:**

It shall be the Contractor's responsibility to inspect material to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional costs to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

### **11. Liability And Insurance:**

Notwithstanding the provisions of this contract, the existing division of liabilities to third parties shall remain the same as between the City and the company. Therefore, it is specifically agreed by the City, company and Contractor (by bidding on this contract) that for the purpose of any liabilities to third parties, that the City contractor performing work directly and physically relating to gas company facilities in this project, shall be deemed an agent of the company and not an agent of the City, the New York City Municipal Water Finance Authority, or the New York City Water Board. Contractor shall include the company as an additional insured on all insurance policies maintained to comply with the City's insurance requirements.

### **12. Width And Depth Of Excavation:**

Contractor shall not be authorized to deliberately change trench or excavation widths and/or depth specified without Engineer's approval. Enlargement of any side of excavation up to eighteen (18) inches beyond pay limits (or inside face of sheeting) requested by the Contractor for the installation of certain types of sheeting may be granted. However, such enlargements or those greater than allowable shall not be approved when, in the sole judgment of the City, field conditions allow the water mains and sewer work to be performed within the limits specified and, the sole purpose of such enlargement request is to impact adjacent utilities (public or private) whose support and protection are part of this contract. Any approval shall be given at no additional cost to the City contract, including EP-7 funding, and all costs associated with unauthorized enlargements shall be the sole responsibility of the Contractor.

### **13. Depth And Crossing Angles Of Gas Facilities:**

Where gas facilities are shown (or specified as) crossing proposed alignment of sewers, water mains, catch basins and chute connections or any other proposed excavations at specific angles (as measured off plans or sketches or specified in contract), it shall be understood that actual field measurements may deviate (plus or minus) forty-five (45) degrees from those shown or specified. The cover, or depth from street surface to top of facilities, shall be as shown or specified in contract documents, no deviation is to be assumed. Where gas facilities are not shown on contract documents, but their support and protection are otherwise included in this contract then, all references to facilities crossing at "various angles and depth" in the gas sections shall mean that such facilities are crossing sewer, water, catch basin and, catch basin chute, and other excavations at a ninety (90) degree angle to the proposed sheeting line or side of

excavation (for unsheeted trenches) with an allowable deviation of forty-five (45) degrees in any direction, except for catch basin chute excavation where the allowable deviation shall be sixty (60) degrees. Where the cover is not noted or specified, the bottom face of such facilities shall be assumed to be crossing catch basin chutes at a depth of three (3) foot eight (8) inches or less from the street surface. Paragraph No. 2 above shall apply in cases of distribution water main construction. Appropriate bid items and specifications are provided for cases where angle and depth are greater than stated above. This section also applies to work defined in "Emergency Reconstruction Contracts" or so-called "Where and When Contracts". These contracts are not pre-engineered and consequently have no drawings, sketches or determined locations and so, gas facilities encountered will be crossing existing and proposed sewer, water, catch basin/catch basin chutes and all appurtenances at various angles and depths.

#### **14. Maintenance Of Traffic For Gas Work:**

All work pertaining to gas bid items and specifications shall be performed within the contract maintenance of traffic plan as specified in the contract document. The bid price for the Maintenance and Protection of Traffic shall cover all work pertaining to gas items. The City shall make compensation for additional maintenance and protection of traffic items in connection with gas item of work only when such additional work is deemed reasonable and necessary by the Resident Engineer and is approved by him prior to its performance.

#### **15. Relocated Gas And Temporary Systems Installation:**

In cases where the Contractor is allowed to select the location for temporary construction such as, installation of dewatering headers, wells, well points, etc., he shall not disturb any gas facilities shown on sketches provided in this section. The only exception shall be, if the affected gas company agrees to such relocation and provided that the cost of such relocation is a matter of adjustment between the company and Contractor, and at no cost to the City.

#### **16. Role Of Company Inspector:**

In any case in which the City elects to perform some or all support and protection work with its own employees, personnel or contractors, the facility operator shall provide onsite inspectors to approve and certify such support and protection work (exclusive of City accommodations) performed by the City's own employees, personnel, and contractors. Facility operator's inspectors are not authorized to direct City contractor during the performance of contract work. They shall act through the City Resident Engineer and provide him/her required approvals and certifications, prior to preparing partial payments of EP-7 items, in a format and frequency to be prescribed by the appropriate City Head of Construction.

#### **17. Coordination With Gas Company:**

The Contractor shall be required to notify the gas company(ies), in writing, at least two (2) weeks prior to the start of final paving in order to allow companies to complete any unfinished gas work located within the area to be paved. Every effort shall be made to maintain gas service with minimum inconvenience to the public.

### **III - TECHNICAL SECTION**

#### **SECTION 6.01 - Trench Crossings; Support And Protection Of Gas Facilities And Services.**

##### **1. Description:**

Under this section, the Contractor shall provide all labor, materials, equipment, and incidentals required to support and/or protect the integrity of gas mains, services and appurtenances of any sizes, configurations, and operating pressures crossing trench excavations above subgrade for planned construction of sewers

and water mains facilities. A gas service shall be defined as a gas pipe of three (3) inches in diameter or less branching from the main to a customer pick up point or property valve box. A gas main may be any size pipe that is part of a distribution or transmission network other than services described above. Crossings shall be defined as gas facilities spanning the width of excavation (one side to the other side). These crossings may be at various angles and depth as shown on "Gas Cost Sharing Work Standard Sketches Nos. 1 and 1A", and as specified in "General Provisions; Gas Cost Sharing Work Paragraph No. 13" and, at the locations shown or listed in contract documents. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with contract specifications, plans, and at the directions of the Resident Engineer in consultation with the authorized representatives of the facility operator.

## 2. Method Of Construction:

- A. Protection: In general, the gas facilities shall be protected as required by New York State Industrial Code 753. In particular, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the gas facilities (marked out by facility operators) and to ascertain the clearances and cover of the facilities with respect to the proposed excavation. Upon exposing the affected facilities sufficiently, at the discretion of the Resident Engineer, to ascertain the foregoing, Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, outside a zone of protection whose limit shall be defined as a perimeter located twelve (12) inches from the outside face of each gas facility crossings (See "Gas Cost Sharing Work Standard Sketch No. 2"). If the facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained, and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07, and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".
- B. Support: Gas mains or services crossing excavations equal or less than four (4) feet wide are generally self supporting, unless field conditions as determined by the Resident Engineer require otherwise. The support requirements for gas mains and services crossing excavations greater than four (4) feet wide shall be as shown on the attached "Gas Cost Sharing Work Standard Sketch No. 1" and Contractor shall use sheeting methods that permit the maintenance of gas facilities in their existing locations and configurations. Alternate methods equivalent to those shown on the sketch or accommodations by the facility operator proposed by the Contractor in order to facilitate the execution of the specified work shall be allowable, provided that prior approval is obtained by the Contractor from the Engineer and the facility operator. The support and protection of gas facilities crossings shown on plans, drawings, listings or otherwise identified in this contract shall not be circumvented with the issuance of so called "order outs".

## 3. Method Of Measurement:

The Contractor shall be paid for supporting and/or protecting gas facilities crossing trench excavations under the appropriate bid items covered by this section. The Contractor shall be directly responsible to the facility operator for the total cost of using any alternate method requiring the use of resources owned by the facility operator. Regardless of the method used, the City shall pay the bid price for the appropriate support and/or protect item of work. The average rate charged by the facility operator for alternate support and protection work such as, disconnecting and reconnecting gas services is listed in attached "Schedule GCS-A".

## 4. Payment Restrictions:

These items shall not be paid for: gas services crossing unsheeted water main trench excavation; abandoned gas main/services identified by facility operator; gas mains/services crossing trench excavations for fire hydrant branch connections pipes, catch basins and/or chutes (sewer drain pipe), house sewer and/or water services; gas facilities encroaching any face of excavation for sewer and/or water construction, all of which are covered under other contract sections. Also this item shall not be paid for new gas mains and services crossing water trenches when trenching for such new facilities has been

performed by the Contractor in common with trench excavation for City work (overlapping trench limits). The cost of supporting and protecting such gas facilities crossings shall be deemed included in the cost of trench excavation for the new gas facilities. This payment restriction shall apply even if such common trench gas excavation is not part of the contract. The prices bid for items covered by this section represent full compensation to Contractor to completely perform the work described. No other bid items shall be combined with these items in order to pay for gas main and/or services crossing excavations specified herein.

5. Method Of Payment:

Each (Ea.) gas facility crossing trench excavation as described in these specifications shall be counted for payment.

6. Price To Cover:

The cost of timber/steel supports installed for gas facilities shall be included in the bid price. The bid price for each crossing shall also cover all additional supervision, labor, material (except those provided by the facility operator), equipment and insurance necessary to completely maintain the gas facilities without disruption of service to the customers and in accordance with contract plans, specifications and facility operator standards. The price shall also include: changes of method of operations; sheeting modifications where necessary to accommodate the gas facilities crossings; installation and removal of water pipe under gas facilities (so called "snaking"); extra care during excavation (including hand excavation under existing single and multiple gas facilities); extra backfilling and compaction around, over and under gas facilities; installation and removal of sheeting around gas facilities; associated maintenance and protection of traffic; barricades; and traffic plates that may be required to temporarily close and/or complete the work.

**SECTION 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences.**

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals for the extra excavation associated with the installation of catch basin sewer drain pipes (chute) under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents and also, for the support and protection of these facilities during associated excavation and backfill operations. The gas company operating in the area, (facility operator), owns these facilities.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation is required when catch basin sewer drain pipes are installed at an upstream invert depth lower than four (4) feet (up to a maximum of six (6) feet) from the proposed pavement grade because the bottom faces of interfering gas mains and appurtenances are located at a depth greater than three (3) foot eight (8) inches from proposed pavement surface (See "Gas Cost Sharing Work Standard Sketch No. 4").

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered starting from catch basin structure proper and that prevents the installation of the chute connection at an upstream cover less than or equal to three (3) feet or any other minimum cover required to avoid City facilities (e.g. water, sewer, etc.) as directed by the Resident Engineer.

4. Payment Restrictions:

This item shall not apply and related bid item shall not be paid in cases where:



- A. Upstream invert chute is more than six (6) feet deep because of gas facilities.
- B. Chute cannot be installed above existing gas facilities because of interferences with other private facilities that are not otherwise covered under this contract, regardless of upstream invert depth.

The above cases shall be at no cost to the City, but shall be a matter of adjustment between the Contractor and the facility operator(s).

5. Price To Cover:

The bid price shall cover the additional cost of all additional supervision, labor, materials, equipment and insurance, to complete the installation of catch basins and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities; backfilling and all other items necessary to perform all work incidental thereto including: installation and removal of drain pipe under gas facilities ("snaking"); widening of trenches to facilitate the above work; subsequent additional backfill and pavement restoration; modifying precast catch basin window to accommodate connection; changing sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work. The price shall not include removal of ledge rock and/or excavation of boulders in open cut.

**SECTION 6.02.1 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Upstream Inverts Greater Than Six (6) Feet.**

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance and incidentals for the extra excavation of catch basin chutes where the upstream invert is greater than six (6) feet under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents or as determined by field conditions and also, for the support and protection of these facilities during the associated excavation, sheeting and backfilling operations.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation and sheeting is required when the catch basin chute installed at an upstream invert depth lower than six (6) feet from the proposed pavement grade because the bottom faces of the interfering gas mains and appurtenances are located at a greater depth than three foot eight inches from the proposed pavement surface only.

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered during such excavation when initiated from catch basin structure and that prevents the installation of the chute at an upstream cover less than or equal to three (3) feet or any other cover required to avoid City facilities as directed by the Resident Engineer.

4. Payment Restriction:

This item shall not apply and related bid item shall not be paid in cases where:  
Upstream invert chute is less than or equal to six (6) feet deep because of gas facilities. Section 6.02 shall be paid.

## 5. Price To Cover:

The bid price shall cover the additional cost of all supervision, labor, materials, equipment and insurance to complete the installation of catch basin and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities incidental thereto; widening of trenches to facilitate the above work; subsequent additional backfilling and pavement restoration; modifying pre-cast basin window to accommodate connection; the installation of catch basin with deeper sumps as specified; additional sheeting and changes in sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work.

## **SECTION 6.03 - Removal Of Abandoned Gas Facilities. All Sizes.**

### 1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services, or appurtenances thereof, located within the street shown on the contract plans, owned by gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work.

### 2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any resulting from this choice shall be a matter of adjustment between the Contractor and facility operator only, and at no cost to the City.

### 3. Restrictions:

The facility operator shall be solely responsible for its contaminated gas facilities, surrounding contaminated soil and their disposal and abatement procedures, unless contract bid items are applicable and provided for such work. In such cases, the quantity removed shall be charged to EP-7 bid item "UTL- GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" at the City bid prices.

### 4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

### 5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment, and insurance necessary to complete this work in accordance with the contract plans and specifications, including

excavation by hand around and under other City and facility operator owned properties and, where necessary, support and protection of such properties. The price shall also cover breaking, cutting, and/or burning of abandoned gas pipes and their disposal from the site; sealing open ends remaining in the excavation with concrete or caps (caps to be provided by the facility operator) and backfilling of the area where the pipeline has been removed with clean backfill. The price shall also include any required dump charges. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and restoration associated with abandoned gas facilities removal, all of which are covered under Section 6.06.

### **SECTION 6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For National Grid Work Only)**

#### 1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services or appurtenances thereof, located within the street shown on the contract plans, owned by the gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap and so, may require special handling and disposal methods as specified in National Grid Standard Operating Procedure 12-2, Coal Tar Wrap Handling and 12NYCRR56.

#### 2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, the Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, the facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost to the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Wrap then the removal of said facilities shall be covered under separate item (See Section 6.03).

#### 3. Requirements:

The City Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or City structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractor's trench by authorized National Grid personnel who will remove the Coal Tar Wrap as per National Grid procedures. This work by National Grid personnel shall be performed in a timely fashion and shall not unduly impede the Contractor's progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. The Contractor at a site designated by the Contractor shall stockpile the removed pipe. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe

removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

#### 4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

#### 5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance and protection of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be provided by the facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor's excavation method, additional trucking and/or stockpiling costs.

### **SECTION 6.03.1a - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For Con Edison Work Only)**

#### 1. Description:

Under this section the Contractor shall provide all labor, material, equipment, insurance and, incidentals required to prepare abandoned gas mains, services and appurtenances thereof located within the street shown on contract plans, owned by the gas company operating in the project area (facility operator), for removal due to interference with proposed City work. These abandoned gas facilities were, at one time, used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural, manufactured or a combination of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distribution or furnishing of gas in enclosed containers. Such preparation for removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap which may contain asbestos or PCB's and so, may require special handling and disposal methods as specified in Con Edison - ASBESTOS MANAGEMENT MANUAL, CHAPTER 6 - ASBESTOS WORK PROCEDURES, SECTION 06.04 - COAL TAR WRAP REMOVAL. For under 25' (feet) in length and an approved NYC-DEP variance for over 25' (feet).

#### 2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas Facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities. However, the facility

operator may prefer to make this test during performance of City work in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Warp then the removal of said facilities shall be covered under separate item (See Section 6.03).

### 3. Requirements:

The Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or city structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractors trench by authorized Con Edison personnel who will remove the Coal Tar Wrap as per Con Edison and/or NYC-DEP approved procedures. This access shall conform to all applicable codes, rules & regulations. This work by Con Edison personnel shall be performed in a timely fashion and shall not unduly impede the Contractors progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. Contractor shall designate a specific site to stockpile those removed pipes. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

### 4. Method Of Measurement:

Abandoned gas facility removal shall be measured for payment per linear foot of pipe and appurtenances removed.

### 5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the plans and specifications, including, but not limited to, excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be supplied by facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor excavation method, additional trucking and/or stockpiling costs.

## **SECTION 6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors. (Street Repaving.)**

### 1. Description:

Under this section, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to final grade gas street surface hardware located within the contract area

boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in concurrence with authorized representative of the facility operator.

## 2. Materials:

The facility operator shall furnish and deliver all prefabricated hardware parts required. These include adaptors for the grade adjustment proper and new street hardware if existing ones are found to be defective, all in accordance with the facility operator standards and City rules and regulations. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

## 3. Method Of Measurement:

The Contractor shall be paid for each six (6) inch round box and/or nine (9) inch square box adjusted to grade regardless of adjustment height requirements.

## 4. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and, material (except those to be provided by the facility operator), required to adjust each box to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities to be salvaged and returned to the facility operator and, all material transportation from the Contractor's material storage yard to the work site. In addition the bid price shall include "chipping" around existing box using appropriate means and methods where grinding is required.

## **SECTION 6.05 - Adjust Hardware To Grade By Resetting. (Road Reconstruction.)**

### 1. Description:

Under this item, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to the proposed grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall consist of either building up or lowering or resetting the casting by removing the existing frame and cover building up or decreasing the existing installation, replacing the frame and/or cover if damaged or worn out, as determined by the Resident Engineer, with a new frame and/or cover furnished by the owner, and setting the frame and cover to new elevation. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer.

### 2. Materials:

The facility operator shall furnish and deliver all new hardware parts required. The Contractor shall furnish materials such as mortar, bricks and concrete in compliance with contract requirements. At locations where high-early strength concrete is required under this contract to be placed adjacent to gas facilities, then the requirement for concrete shall be high-early strength complying with the current New York State Department of Transportation, Standard Specifications for Class F concrete. Existing castings may be replaced as required and deemed necessary by the Engineer and by City rules and regulations. The

Contractor shall install the new castings of various sizes furnished by the facility operator. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site and, shall provide off-loading services to the facility operator. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. Such delays shall be a matter of adjustment between the Contractor and the facility operator. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him, immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

### 3. Methods Of Construction:

The Contractor shall remove and reinstall existing castings or install new castings to the proposed grade. Setting and resetting the castings shall be done with mortar and brick according to the standards of the facility operator. Work shall be performed in a workmanlike manner. Castings that are deemed unacceptable for resetting shall remain the property of the facility operator and he shall be responsible for their removal and proper disposal from site. No traffic shall be allowed on adjusted street hardware until permitted by the Engineer.

### 4. Method Of Measurement:

The Contractor shall be paid for each gas hardware adjusted to grade regardless of size or adjustment height requirements (up or down).

### 5. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and, material (except those to be provided by the facility operator), required to adjust each gas hardware to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities; building up the existing installations with bricks and mortar, or lowering the existing installation by removing bricks and mortar; replacing damaged frames and/or covers with new frames and/or covers furnished by the facility operator; setting the frames and covers to the new elevations; protect existing installations; repair minor structural damages to existing installations prior to resetting frames; unloading of furnished castings at the Contractor's yard and transporting castings from the Contractor's yard to the job site as required; completing the work in accordance with the contract plans, specifications and, at the directions of the Engineer. In addition the bid price shall include "chipping" around existing gas facilities using appropriate means and methods where grinding is required.

## **SECTION 6.06 - Special Care Excavation And Backfilling.**

### 1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to support and protect the integrity of live gas facilities including mains, services, related structures and appurtenances during excavations. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in consultation with authorized representatives of the facility operator.

### 2. Applicability Of Section:

This section shall apply to live gas facilities of various sizes located within two (2) feet of any face of unsheeted excavation, (unsheeted excavation refers to any excavation performed for city work and includes excavations performed that are to be subsequently sheeted using approved methods) and paralleling or,

encroaching any face of excavation. Also, for crossings greater than forty-five (45) degrees and/or located at a cover depth greater than five (5) feet from existing street surface. Parallel facilities are not exposed at any time during excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). Encroaching facilities are partially exposed inside the limit of excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). This section shall also apply to gas facilities crossing catch basins excavation, and catch basins sewer connections (chutes) trench excavation only when extra depth (covered in other section), is not required for chutes installations because of such utilities interferences (See "Gas Cost Sharing Work Standard Sketch No. 3"). This section shall also apply to gas services (if shown or otherwise listed in contract documents) crossing unsheeted excavations for water mains, gas facilities crossing fire hydrant branch connections, house sewer and/or water service connections excavations. This section shall also apply for so called "loss trench", as described further, and for additional excavation (pavement and/or soil), backfilling, compaction, roadway base and pavement restoration due to abandoned gas facilities, only if removed by Contractor. If operating status of gas facilities cannot be determined prior to excavation then such facilities shall be considered live and this section shall fully apply. The excavation around fully exposed live gas facilities along and within limits of excavation (not crossings) shall be covered by this section also (not shown on "Gas Cost Sharing Work Standard Sketch No. 5"), however the support requirement, if any is required, of such facilities is beyond the scope of these specifications and therefore shall be the responsibility of facility operator to determine and prescribe, at no cost to the City contract, but shall be a matter of adjustment between the Contractor and facility operator.

### 3. Payment Restriction:

No special care excavation shall be paid for abandoned gas facilities paralleling and/or encroaching excavation and therefore are not in direct interference with City work. Except as allowed in this section, the bid item specified under this section shall not be used in combination with items covered under other sections for work done due to a particular gas facility. This item shall not be paid for new gas facilities when trenching for such new facilities has been performed by the Contractor of record in common with trench excavation for City Work (overlapping trench limits). The cost of excavating with care as defined in this section shall be deemed included in the cost of trench excavation for the new gas facilities. This restriction shall apply even if such gas common trench excavation is not part of the contract. If facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07 and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".

### 4. Method Of Construction:

All excavation in the vicinity of gas facilities shall be as required by NYS Industrial Code 753. Where these facilities are paralleling and located two (2) feet or less from the limits of the proposed excavation, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) to ascertain the clearances of these facilities with respect to the proposed excavation. Once the location of these facilities with respect to the proposed excavation is verified to the satisfaction of the Resident Engineer, the Contractor shall then proceed with a combination of hand and machine excavation as required preserving the integrity of the facilities. The installation of timber supports or underpinning, when soil foundation cannot fully support partially exposed pipes, may be required to prevent pipe movement as directed by the Resident Engineer.

### 5. Method Of Payment:

The unit price for this work item shall be based on cubic yard (CY) of average excavation with care and, is to be considered as an incremental cost for performing City work with gas facilities interferences.

### 6. Method Of Measurement:

- A. For Paralleling Facilities: Volume calculated as: Depth as measured from existing street surface to the bottom of unsheeted trench excavation allowable by OSHA regulations, multiplied by, the width measured as one (1) foot from the face of excavation toward the center of excavation, multiplied by



the length of parallel facility, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5"). The gas facility is no longer considered to be in interference once sheeting has been installed, therefore no further compensation for paralleling facilities as described above will be made.

- B. For Encroaching Facilities: Volume calculated as: Depth of trench as allowable by OSHA, maximum up to five (5) feet multiplied by, the width of partially exposed pipe plus one (1) foot, multiplied by the length of facility encroachment, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5").
- C. Fully Exposed Gas Facilities: (Not shown on "Gas Cost Sharing Work Standard Sketch No. 5") along and inside trench and/or crossing trench at an angle greater than forty-five (45) degrees and/or a cover depth greater than five (5) feet from the existing street surface. The volume shall be measured as the depth of trench excavation multiplied by the distance measured along the sheeting line between two (2) points of intersections of the gas facilities and the sides of trench excavation, multiplied by the width of trench excavation.
- D. For Additional Excavation And Restoration Due To So Called "Loss Trench", When The Integrity Of Pavement And Soil Above And Around Existing Live Gas Facilities Cannot Be Maintained Due To Its Lack Of Cohesiveness: Volume shall be calculated as: Depth of unsheeted trench excavation multiplied by width measured as distance of facility from closest edge of unsheeted excavation plus, width of facility proper plus, one (1) foot or a maximum width of three (3) feet multiplied by length of facility fully exposed divided by, twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").
- E. For Facilities Crossing Excavation For Catch Basins, Or Chutes Installations (When NYCDEP Funded) Or Fire Hydrant Branch Connections, Or Unsheeted Water Main Trench, Or House Sewer And/Or Water Services: Volume calculated as: Depth as measured from existing street surface to the bottom of the trench excavation multiplied by, the width taken as the outside diameter of pipe or the width of structure plus one (1) foot on either side (two (2) feet), multiplied by, the length of exposed facility crossing the trench, divided by twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").

Overlapping volume dimensions measured as described above may occur when multiple facilities are paralleling excavations, encroaching excavations or crossing catch basins and catch basin chute installations. In such cases, all such facilities shall be counted as one limited by the extreme pipes, faces (See "Gas Cost Sharing Work Standard Sketch No. 2"). The volume shall then be calculated as described above.

#### 7. Price To Cover:

The bid price shall also cover all additional supervision, labor, material, equipment and insurance necessary to excavate while protecting and maintaining (excluding supports for fully exposed live gas) gas facilities without disruption of service to the public and in accordance with contract specifications. The price shall also include, changes of sheeting method and excavation width configuration where necessary to accommodate gas facilities in their existing locations; difficulties during the installation of catch basins, chute connections, hydrant branch, and house sewer and water connections under or over gas facilities; loss of productivity due to slower rate of excavation (special care) during excavation, including the use of such methods as: hand excavation around existing single and multiple facilities, extra excavation and backfilling due to lost trench because of existing and adjacent gas facilities, compaction, removal of sheeting from the facilities, extra roadway base restoration and temporary pavement, associated maintenance and protection of traffic, barricades, and traffic plates that may be required to temporarily close and/or complete the work.

**SECTION 6.06A - Special Care Excavation and Backfilling for Transmission Mains.  
(Transmission Main is described as any gas main with a MAOP greater than 124 psig)**

**1. Description:**

Under this section, the contractor shall provide all labor, materials (except for sand to be utilized for backfill of a one-foot envelope around the facility to be furnished by the facility operator), equipment, and incidentals required to support and protect the integrity of Gas Transmission Main during excavations. This facility is owned by the gas company operating in the area, hereafter referred to as facility operator. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in consultation with authorized representatives of the facility operator.

**2. Applicability of Section:**

This section shall apply to Transmission Main of various sizes located within any excavation sheeted or unsheeted (excavation refers to any excavation performed for city work and includes excavations performed that are to be subsequently unsheeted/sheeted using approved shoring methods and paralleling, encroaching, and crossing any excavation. Parallel facilities are not exposed at any time during excavation (within 2' of edge of excavation)). Encroaching facilities are partially/fully exposed inside the limit of excavation. This section shall also apply to gas facility crossing catch basins excavation and catch basins sewer connections (chutes), water mains, fire hydrant branch connections, sanitary sewer, storm sewer, combination sewer, house sewer and/or water service connections excavations. The excavation around fully exposed live gas facilities along and within limits of excavation shall be covered by this section also, however the support requirement, if any is required, of such facilities is beyond the scope of these specifications and therefore shall be the responsibility of facility operator to determine and prescribe, at no cost to the City contract, but shall be a matter of adjustment between the contractor and facility operator.

**3. Payment Restriction:**

The bid item specified under this section shall not be used in combination with items covered under other sections for work done due to a particular gas facility. This item shall not be paid for new gas facilities when trenching for such new facilities has been performed by the contractor of record in common with trench excavation for City Work (overlapping trench limits). The cost of excavating with care as defined in this section shall be deemed included in the cost of trench excavation for the new gas facilities. This restriction shall apply even if such gas common trench excavation is not part of the contract. If facilities are in direct interference with City work, meaning that "minimum clearances" described in the General Provisions for Gas Cost Sharing (Para. No.8) cannot be maintained, the excavation shall be abandoned and the contractor shall be compensated as per the provisions specified in Paragraphs Nos. 5 and 6 of this item (6.06A).

#### **4. Method of Construction:**

All excavations in the vicinity of gas facilities shall be as required by NYS Industrial Code 753. No saw cutting of pavement or masonry for gas mains having less than 2 feet of cover to break asphalt/concrete as determined by the facility operator. The contractor shall use power excavation for the removal of pavement or masonry but only to the depth of such pavement or masonry **(breaking of pavement or masonry shall be done by means of hand held pneumatic breaking equipment)**. Upon removal of pavement or masonry the contractor shall use hand excavation methods only **(pick and shovel; no power tools)** to ascertain the clearances of these facilities with respect to the proposed excavation. Once the location of these facilities with respect to the proposed excavation is verified to the satisfaction of the Resident Engineer and the facility operator the contractor shall then proceed with hand only within the zone of protection described as 2 feet from the face of the facility in all directions of the facility as required to preserve the integrity of the facility. Once outside of the zone of protection as described above the contractor may use a combination of hand and machine to complete the excavation.

#### **5. Method of Payment:**

The unit price for this work item shall be based on cubic yard (CY) of average excavation with special care and, is to be considered as an incremental cost for performing City work with gas facilities interferences.

#### **6. Method of Measurement:**

##### **A. For Paralleling Facilities:**

Volume calculated as: Depth as measured from existing street surface to the bottom of facility, multiplied by, the width measured as two (2) feet from the face of excavation toward the center of excavation, multiplied by the length of parallel facility, divided by twenty-seven (27) cubic feet per cubic yard Only hand excavation shall be utilized within the zone of protection identified as 2 feet from face of facility, beyond 2 feet from the face of facility the contractor can use a combination of hand and machine.

##### **B. For Encroaching Facilities:**

Volume calculated as: Depth as measured from existing street surface to the bottom of facility, multiplied by, the width measured as two (2) feet plus the exposed facility toward the center of excavation, multiplied by the length of the encroached facility, divided by twenty-seven (27) cubic feet per cubic yard. Only hand excavation shall be utilized within the zone of protection identified as 2 feet from face of facility, beyond 2 feet from the face of facility the contractor can use a combination of hand and machine.

##### **C. Fully Exposed Gas Facilities:**

Volume calculated as: Depth as measured from existing street surface to the bottom of facility, multiplied by, the width measured as two (2) feet from the face of the facility on either side plus

the facility, multiplied by the length of the facility, divided by 27 cubic feet per cubic yard. Only hand excavation shall be utilized within the zone of protection identified as 2 feet from face of facility in all directions, beyond 2 feet from the face of facility in all directions the contractor can use a combination of hand and machine.

**D. For Additional Excavation And Restoration Due To So Called “Loss Trench”, When The Integrity Of Pavement And Soil Above And Around Existing Live Gas Facilities Cannot Be maintained Due To Its Lack of Cohesiveness:**

Volume shall be calculated as: Depth of unsheeted trench excavation multiplied by width measured as distance of facility from closest edge of unsheeted excavation plus, width of facility proper plus, one (1) foot or a maximum width of three (3) feet multiplied by length of facility fully exposed divided by, twenty-seven (27) cubic feet per cubic yard (not shown on “Gas Cost Sharing Work Standard Sketch No. 5”).

**E. For Facilities Crossing Excavation For Catch Basins, Or Chutes Installations (When NYCDEP Funded) Or Fire Hydrant Branch Connections, Or Unsheeted Water Main Trench, Or House Sewer And/Or Water Services:**

Volume calculated as: Depth as defined above multiplied by, the width taken as the outside diameter of pipe or the width of structure plus one (1) foot on either side (two (2) feet), multiplied by, the length of exposed facility crossing the trench, divided by twenty-seven (27) cubic feet per cubic yard (not shown on “Gas Cost Sharing Work Standard Sketch No. 5”).

**7. Price to Cover:**

The bid price shall also cover all additional supervision, labor, material, equipment and insurance necessary to excavate while protecting and maintaining (excluding supports for fully exposed live gas) gas facilities without disruption of service to the public and in accordance with contract specifications. The price shall also include, changes of sheeting method and excavation width configuration where necessary to accommodate gas facilities in their existing locations; difficulties during the installation of catch basins, chute connections, hydrant branch, and house sewer, sanitary sewer, storm sewer, combination sewer and water connections under or over gas facilities; loss of productivity due to slower rate of excavation (special care) during excavation, compaction, removal of sheeting from the facilities, extra roadway base restoration and temporary pavement, associated maintenance of traffic, barricades, and traffic plates that may be required to temporarily close and/or complete the work. Breaking shall be done by means of hand held pneumatic breaking equipment. Inspection of exposed mains shall be performed by facility operator in a timely fashion and shall not unduly impede contractor’s progress or productivity.

## SECTION 6.07 - Test Pits For Gas Facilities.

### 1. Description:

Under this section, the Contractor shall furnish all labor, materials, insurance, equipment and appliances necessary to excavate, sheet and, maintain test pits at locations approved by the Resident Engineer in consultation with the facility operator. Test pits shall be dug in order to ascertain exact locations, cover and invert elevations, clearances, alignment and operating status (live or dead) of existing gas facilities. The Contractor shall inspect jointly with the Resident Engineer and facility operator, gas facilities and other structures uncovered, take all relevant measurements and elevations as directed by the Resident Engineer. Tests to determine operating status of gas facilities shall be performed by facility operator. The pits shall be covered with steel plates during daytime nonworking hours, and uncovered, as required, until the inspection work is completed. Testing of gas facilities may require a maximum of four (4) hours. Then, the pits shall be backfilled with clean fill, and resurfaced with temporary pavement. All traffic shall be maintained and all safety measures as stipulated shall be complied with.

### 2. Methods Of Construction:

A. Excavation: Existing pavement to be removed shall be neatly cut along lines of removal with a saw or other approved equipment which leaves a neat straight joint line along the juncture with subsequently replaced pavement. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. Use of hand operated pneumatic and electric jackhammers will be permitted only for breaking pavement and removal of masonry, concrete and boulders, or as otherwise directed by the Resident Engineer. The Contractor shall properly dispose of all materials excavated from test pits away from site. Test pits shall be excavated at locations shown on the contract drawings or as directed by the Resident Engineer. Additional test pits may be required and shall be excavated where required, as ordered by the Resident Engineer. All test pits shall be excavated to a depth and size necessary to locate the existing facilities. Sheeting shall be used when depth of excavation exceeds five (5) feet. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Codes requirements and as specified in contract, whichever is more stringent. Care shall be taken that no existing gas facilities or other structures are broken or damaged. All broken or damaged facilities shall be reported immediately to facility operator who shall decide whether such facilities shall be repaired or replaced by company forces or by City contractor and in conformance with "General Provisions; Gas Cost Sharing Work Paragraph No. 9". Contractor shall excavate all material encountered, including large masses of concrete, cemented masonry and boulders, as directed by the Resident Engineer. Any type of excavation protection used, shall satisfy the following:

- (a) Industrial Code Rule 753.
- (b) Prevent injury to workers and the public, and avoid damage to existing water, sewer, and gas pipes or other structures, and to pavements and their foundations, through caving or sliding of the banks of the excavation.

Should it become necessary, as determined by the Resident Engineer, to enlarge any test pit in any dimension after sheeting has been placed, the Contractor shall remove portions of the sheeting, as necessary, enlarge the test pits as directed, and replace the sheeting without additional compensation for this work other than for the additional volume of material excavated.

B. Maintenance Of Test Pits: Excavated test pits shall be maintained free of debris and kept dry by the Contractor in order to permit the inspection and measurements and to determine the locations of facilities. In order to accomplish this, Contractor shall, upon completion of excavation and placement of sheeting (if depth greater than five (5) feet), furnish and install adequate steel plates and posting over the excavated pits and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during nonworking hours. The Contractor shall then, at no additional cost, relocate such barricades, barrels, cones and other warning devices and remove steel plates, as and when directed by the Resident Engineer to facilitate the inspection of

exposed facilities. When work is being performed and the pits are not covered with steel plates, the Contractor shall provide complete and safe access to the test pits as may be required, and he shall provide construction barricades and maintain traffic at all times as shown or as directed by the Resident Engineer. Upon completion of test pit inspection by the Resident Engineer, the pit shall be backfilled by the Contractor as specified in contract, except that backfill material shall conform to contract specifications for such purpose.

- C. Pavement And Sidewalk Restoration: After backfilling is completed, the Contractor shall construct a temporary pavement consisting of a minimum of four (4) inches thick asphaltic concrete mixture in roadway areas or a two (2) inches thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent pavement and sidewalk replacement is constructed as specified in contract.

### 3. Measurements:

The quantity to be measured for payment shall be the number of cubic yards of material removed from within the limits of the pit dimensions as directed by the Resident Engineer. The volume occupied by existing pipes or other structures remaining within the maximum payment lines will not be deducted from the total volume measured except, where the cross sectional area of these facilities exceeds four (4) square feet. As determined by the Resident Engineer, the quantity measured for payment may be proportionate to a fair and reasonable estimate of gas responsibility in the total volume excavated.

### 4. Price To Cover:

The contract price bid per cubic yard for test pits shall cover all additional costs of labor, material, insurance, equipment, appliances and incidentals required to excavate test pits, including removal and disposal of excavated materials, sheeting, steel plating, backfill, compaction and temporary pavement and sidewalk restoration all in accordance with the specifications and as directed by the Resident Engineer. The price shall also include the cost of providing safe access to the excavation by facility operator for the performance of certain test to determine operating status of gas facilities prior to City work. The price shall also include support and protection of all gas facilities crossing excavation, paralleling and/or encroaching any face of excavation.

## **SECTION 6.08 - "NO TEXT"**

## **SECTION 6.09 - Trench Excavation and Backfill for New Gas Mains and Services (For National Grid Work Only)**

### 1. Description:

Under this section, the contractor shall furnish all labor, materials, equipment, insurance, permits and incidentals required to break/remove roadway and sidewalk pavement, excavate, backfill and restore gas trenches. The trench to be excavated shall be determined by the size of the gas facility to be installed. The work shall be performed in accordance with applicable specifications, and/or at the direction of the Resident Engineer in consultation with the facility operator.

### 2. Materials:

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer.

### 3. Method of Construction:

Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include

but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. Prior to starting the trenching operation, the contractor shall excavate the appropriate gas main tie-in pits at the extremities of the gas main sections to be replaced. Test pits shall be excavated to determine exact location of all tie-in pits and at appropriate intervals along proposed trench excavation to verify lane and clearances as shown on the contract plans. The tie-in pits shall be adequately protected by the contractor using wood fencing or steel traffic plates until such time when the facility operator has completed the tie-in work. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant, and as directed by the facility operator. The trench shall be adjusted so as to provide for a nominal cover on the new gas facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator in consultation with the Resident Engineer. The width of the trench shall be as directed by the facility operator in consultation of the Resident Engineer. The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of clean sand and in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new gas facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new gas facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator in consultation with the Resident Engineer. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new gas facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator in consultation with the Resident Engineer. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator in consultation with the Resident Engineer. Care shall be taken that no existing gas facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new gas facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator in consultation with the Resident Engineer, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. National Grid forces will perform all live gas main connections, dead gas main cut-outs, and/or service work associated with disconnecting and reconnecting from old to new gas main. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator in consultation with the Resident Engineer to facilitate the installation of the new gas facilities. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator in consultation with the Resident Engineer. The contractor has the responsibility to maintain and set to grade all National Grid hardware during backfill and pavement restoration. Upon completion of installation of the new gas facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract. Permanent pavement restoration shall be as required by the appropriate contract specifications and as

directed by the Resident Engineer.

#### 4. Method of Measurement:

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated, including roadway pavement, base and/or sidewalk concrete removed within the limits of the trench as directed by the Resident Engineer in consultation with the facility operator. The volume occupied by existing pipes or other structures will be deducted from the total volume measured as shown on contract drawing(s) Title: EP-7 SECT. 6.09 GAS SPECIALTY CONTRACTOR WORK, or as encountered based on existing field conditions.

#### 5. Price to Cover:

The unit price bid per cubic yard for excavation shall include the cost of all supervision, labor, material, equipment, insurance and incidentals necessary to complete excavation trenches, including backfill, compaction testing and restoration of trenches and tie-ins pits as specified or shown on the contract, plans. The bid price shall also include the cost of coordinating the sewer and water main work to be performed by the contractor with the gas installation work to be performed by others. The price shall also include, associated maintenance of traffic, and traffic plates and openings and closings of plates as may be required in order to provide access to the facility operator during the new gas facility installation, and installing, removing and maintaining tight sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand, furnish, place and compact, in compliance with DOT requirements, clean sand backfill following installation of the gas facility. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be deemed included in this item, as required and as directed by the Resident Engineer.

### **SECTION 6.09a Trench Excavation and Backfill for New Gas Mains and Services (For Con Edison Work Only)**

#### 1. Description:

Under this section, the contractor shall furnish all labor, materials, equipment, insurance, permits and incidentals required to break/remove roadway and sidewalk pavement, excavate, backfill and restore gas trenches. The trench to be excavated shall be determined by the size of the gas facility to be installed. The work shall be performed in accordance with applicable specifications, and/or at the direction of the Resident Engineer in consultation with the facility operator.

#### 2. Materials:

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer. Clean sand backfill material shall be used and shall conform to Con Edison specification EO-1181-rev.6, General Specification for Backfilling of Trench and Small Openings.

#### 3. Method of Construction:

Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. Prior to starting the trenching operation, the contractor shall excavate the appropriate gas main tie-in pits at the extremities of the gas main sections to be replaced. Test pits shall be excavated to determine exact location of all tie-in pits and at appropriate intervals along proposed trench excavation to verify lane and clearances as shown on the contract plans. The tie-in pits shall be adequately protected by the contractor using wood fencing or steel traffic plates until such time when the facility operator has completed the tie-in work. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant, and as directed by the facility operator. The trench shall be adjusted so as to provide for a nominal



cover on the new gas facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator in consultation with the Resident Engineer. The width of the trench shall be as directed by the facility operator in consultation of the Resident Engineer. The width and depth of the trench shall conform to Con Edison Gas Operations drawing 309495 rev. 4, Trench Excavation for Gas Mains Up to 350 PSIG, or as directed by the facility operator in consultation of the Resident Engineer. The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of clean sand and in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new gas facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new gas facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator in consultation with the Resident Engineer. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new gas facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator in consultation with the Resident Engineer. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator in consultation with the Resident Engineer. Care shall be taken that no existing gas facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new gas facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator in consultation with the Resident Engineer, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. Con Edison forces will perform all live gas main connections, dead gas main cut-outs, and/or service work associated with disconnecting and reconnecting from old to new gas main. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator in consultation with the Resident Engineer to facilitate the installation of the new gas facilities. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator in consultation with the Resident Engineer. The contractor has the responsibility to maintain and set to grade all Con Edison hardware during backfill and pavement restoration. Upon completion of installation of the new gas facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract. Permanent pavement restoration shall be as required by the appropriate contract specifications and as directed by the Resident Engineer.

#### 4. Method of Measurement:

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated, including roadway pavement, base and/or sidewalk concrete removed within the limits of the trench as directed by the Resident Engineer in consultation with the facility operator. The volume occupied

by existing pipes or other structures will be deducted from the total volume measured as shown on contract drawing(s) Title: EP-7 SECT. 6.09 GAS SPECIALTY CONTRACTOR WORK, or as encountered based on existing field conditions.

5. Price to Cover:

The unit price bid per cubic yard for excavation shall include the cost of all supervision, labor, material, equipment, insurance and incidentals necessary to complete excavation trenches, including backfill, compaction testing and restoration of trenches and tie-ins pits as specified or shown on the contract, plans. The bid price shall also include the cost of coordinating the sewer and water main work to be performed by the contractor with the gas installation work to be performed by others. The price shall also include, associated maintenance of traffic, and traffic plates and openings and closings of plates as may be required in order to provide access to the facility operator during the new gas facility installation, and installing, removing and maintaining tight sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand, furnish, place and compact, in compliance with DOT requirements, clean sand backfill following installation of the gas facility. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be deemed included in this item, as required and as directed by the Resident Engineer.

**GAS COST SHARING STANDARD SPECIFICATIONS**  
**SCHEDULE GCS-A**

**Average rate charged by utility companies to Disconnect and Reconnect Gas Services:**

1. National Grid - \$586.90 per Service/and Visit
2. Con Edison - \$524.00 per Service/and Visit

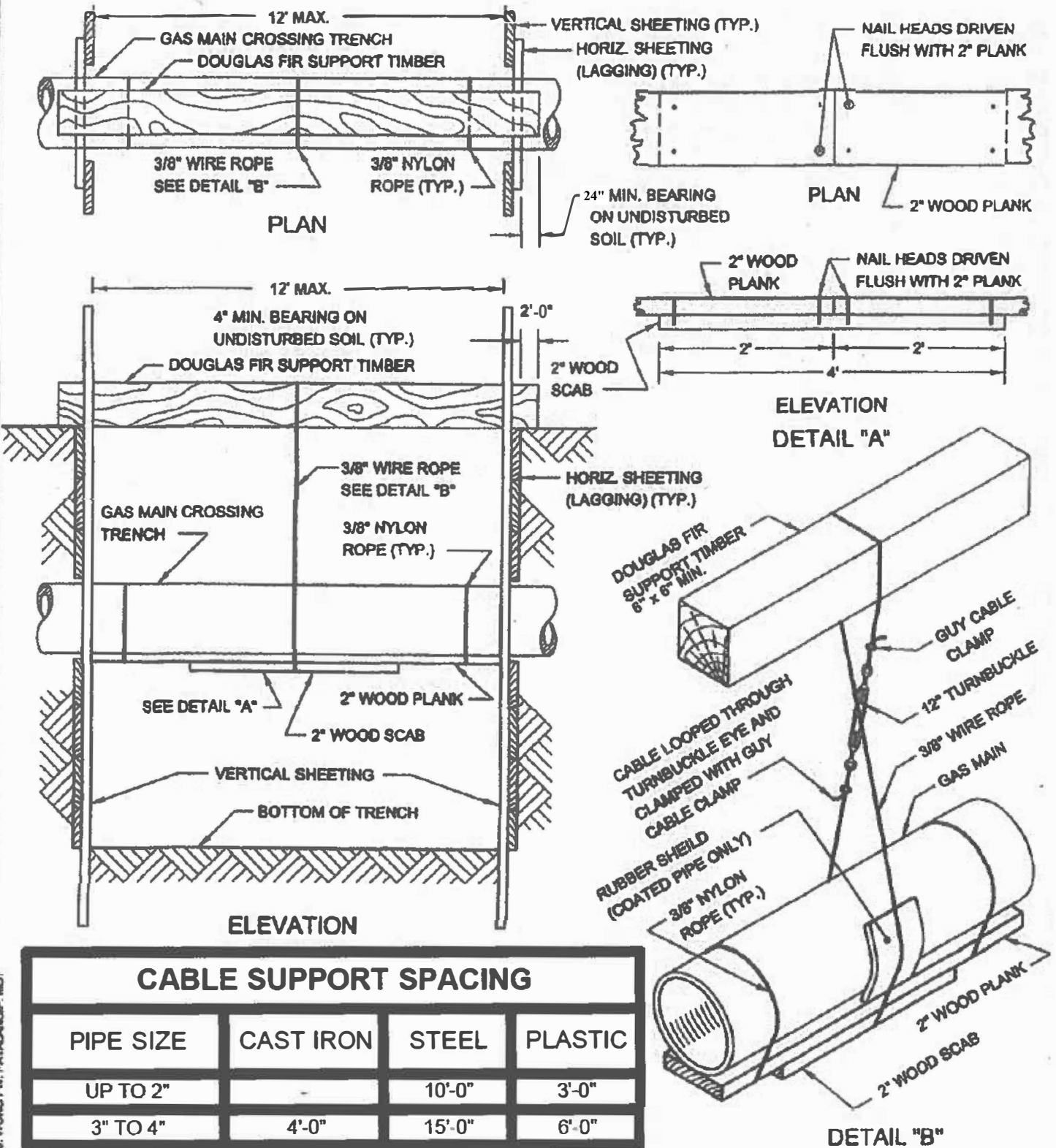
## **IV - STANDARD SKETCHES; GAS COST SHARING WORK**

Hereinafter attached are the following Standard Sketches for Gas Cost Sharing Work:

- Sketch No. 1 - Support Requirements For Gas Mains And Services Crossing Excavation Greater Than 4' - 0" Wide At Any Angle
- Sketch No. 1A - Support Requirements For Gas Mains Over 16" Diameter Up To And Including 48" Diameter Crossing Excavation At Any Angle
- Sketch No. 2 - Typical Methods Of Measurement For Gas Crossings
- Sketch No. 3 - Utility Crossings During Catch Basin Chute Connection Pipe Installation
- Sketch No. 4 - Utility Crossings During Catch Basin Chute Connection Pipe Installation (Extra Depth)
- Sketch No. 5 - Gas Main Encroachment On And/Or Parallel To Excavation Of Unsheeted Trench

# GAS COST SHARING WORK (SKETCH NO. 1)

## SUPPORT REQUIREMENTS FOR GAS MAINS SUSPENDED IN EXCAVATIONS UP TO 12'-0" WIDE AT ANY ANGLE



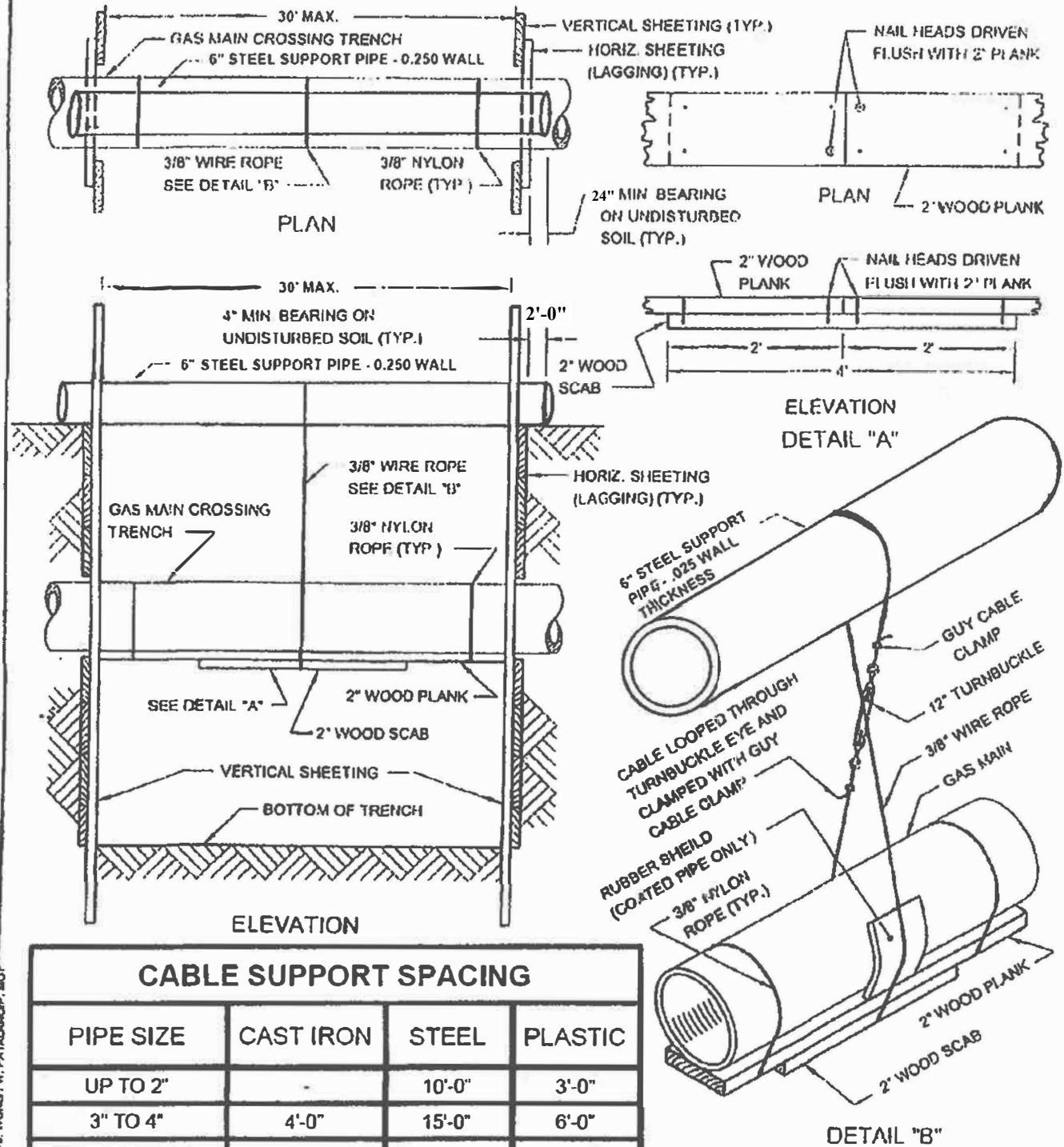
### CABLE SUPPORT SPACING

PIPE SIZE	CAST IRON	STEEL	PLASTIC
UP TO 2"	-	10'-0"	3'-0"
3" TO 4"	4'-0"	15'-0"	6'-0"
6" TO 10"	4'-0"	15'-0"	6'-0"
12" OR LARGER	6'-0"	15'-0"	6'-0"

NOTE: SUPPORTS FOR GAS TRANSMISSION FACILITIES SHALL BE REVIEWED WITH GAS ENGINEERING PRIOR TO INSTALLATION.

REVISED DEC. 2019 - J.Y.P.  
 REVISIONS FOR 2008 - J. ALLEN  
 REVISIONS FOR 1988 - J. WOODSTOCK, PATRICKSON, MSY

### GAS COST SHARING WORK (SKETCH NO. 1A) SUPPORT REQUIREMENTS FOR GAS MAINS SUSPENDED IN EXCAVATIONS BETWEEN 12'-0" AND 30'-0" WIDE AT ANY ANGLE



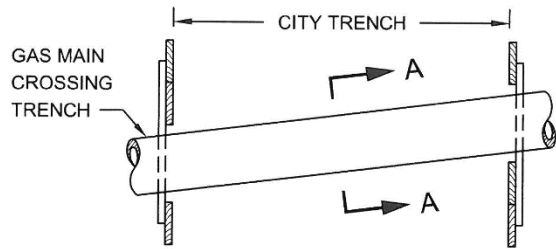
CABLE SUPPORT SPACING			
PIPE SIZE	CAST IRON	STEEL	PLASTIC
UP TO 2"	-	10'-0"	3'-0"
3" TO 4"	4'-0"	15'-0"	6'-0"
6" TO 10"	4'-0"	15'-0"	6'-0"
12" OR LARGER	6'-0"	15'-0"	6'-0"

NOTE: SUPPORTS FOR GAS TRANSMISSION FACILITIES SHALL BE REVIEWED WITH GAS ENGINEERING PRIOR TO INSTALLATION.

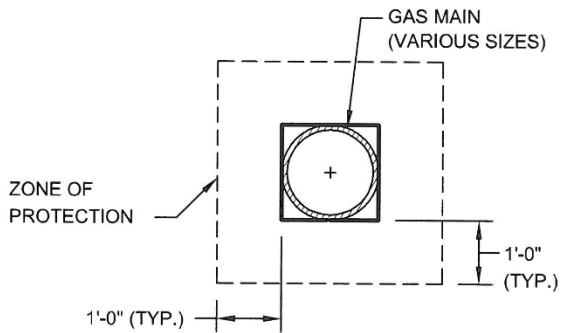
REVISION OCT. 2002 - J. ANDERSON  
 REVISED JUNE 1988 - J. WOLFE/W. PATRICKSON, MOY

## GAS COST SHARING WORK (SKETCH NO. 2)

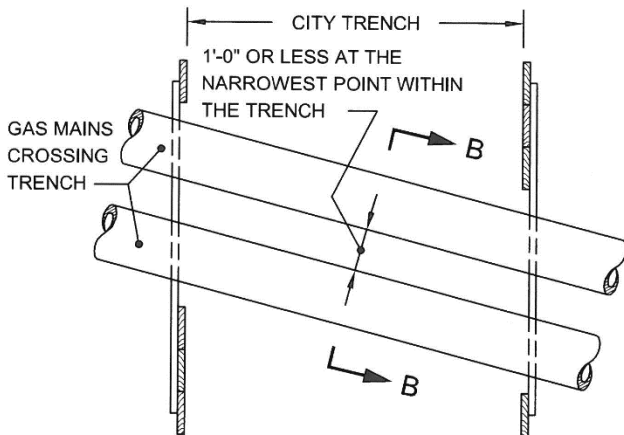
### TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



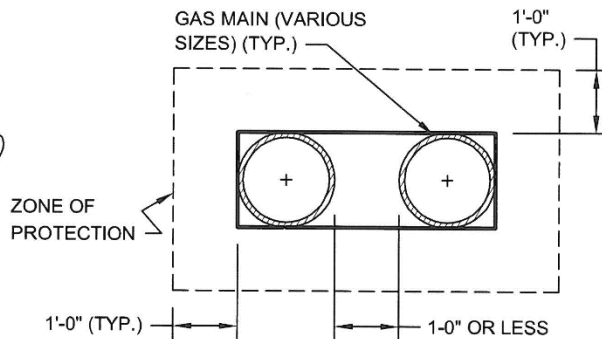
**SINGLE FACILITY CROSSING**



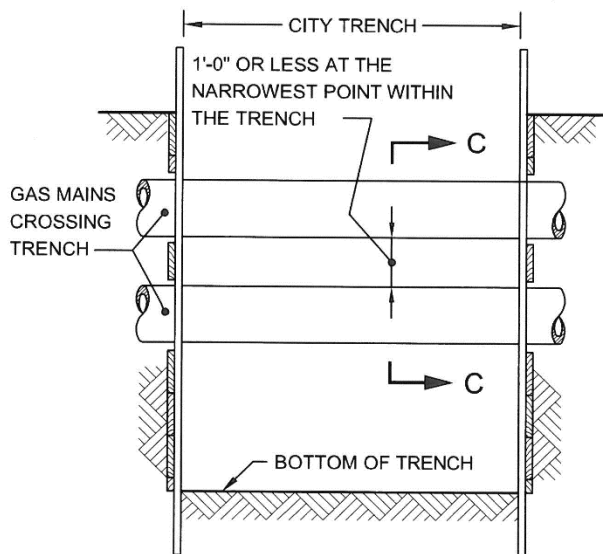
**SECTION A-A**



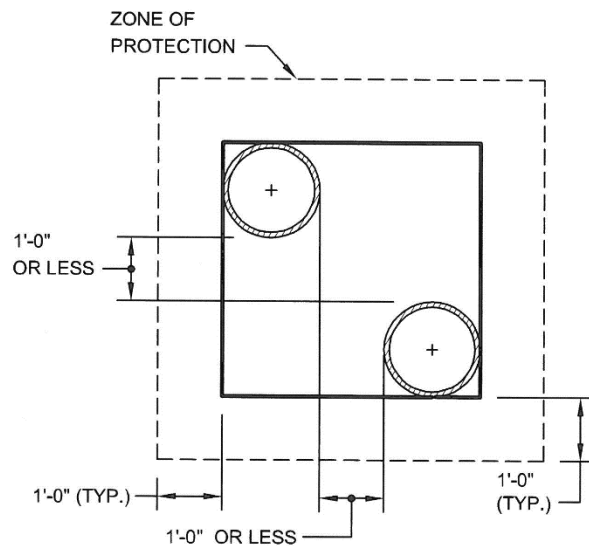
**MULTIPLE FACILITIES  
(GAS MAINS AT SAME ELEVATION)**



**SECTION B-B**



**MULTIPLE FACILITIES  
(ONE CROSSING AT DIFFERENT ELEVATIONS)**

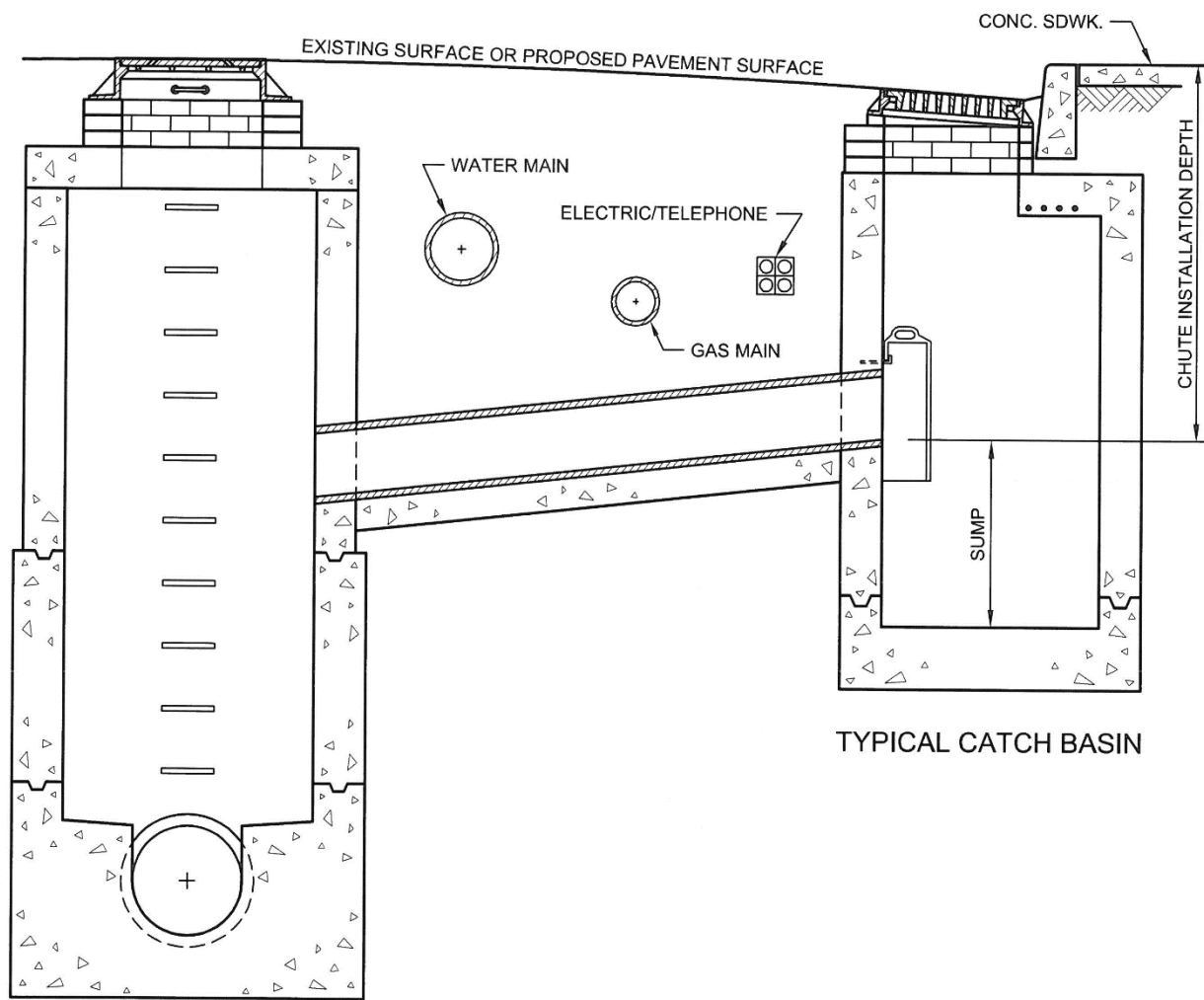


**SECTION C-C**

**NOTE:**

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

### GAS COST SHARING WORK (SKETCH NO. 3) UTILITY CROSSINGS DURING CATCH BASIN CHUTE CONNECTION PIPE INSTALLATION



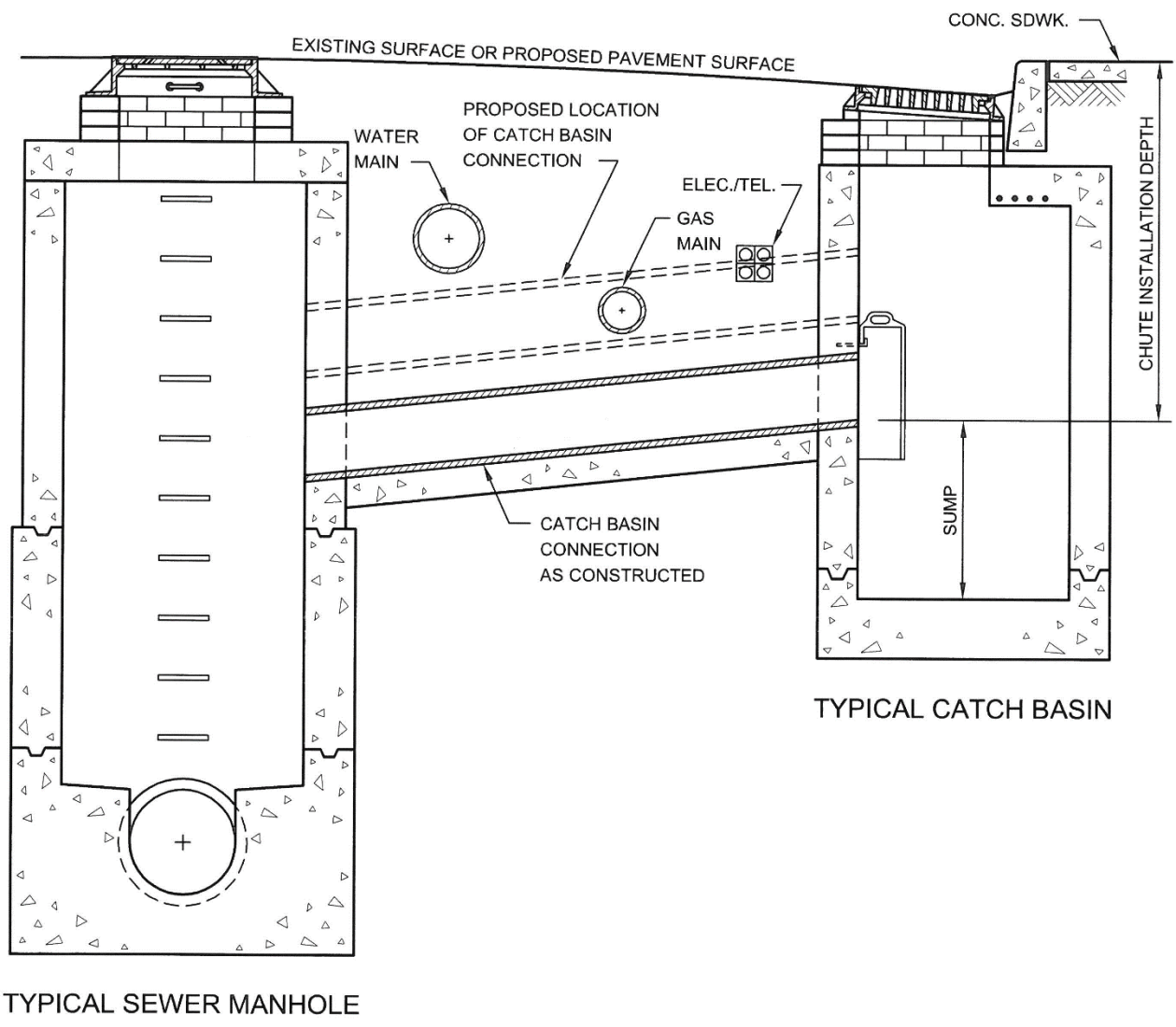
TYPICAL SEWER MANHOLE

TYPICAL CATCH BASIN

REVISED OCT. 2004 - L. ADRIEN  
REVISED OCT. 1988 - J. WONG/W. PATALANO/P. MOY

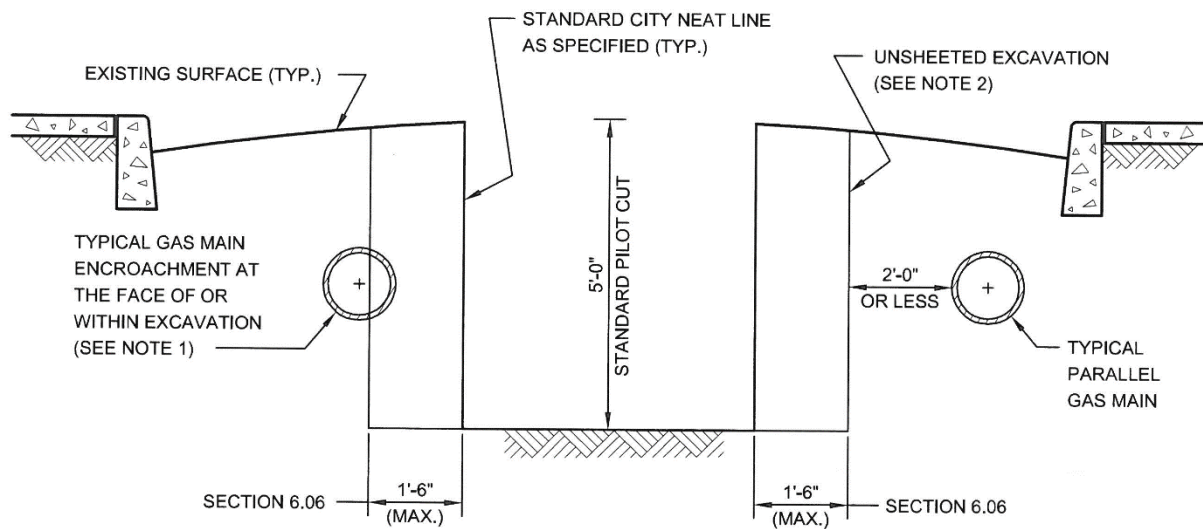


### GAS COST SHARING WORK (SKETCH NO. 4) UTILITY CROSSINGS DURING CATCH BASIN CHUTE CONNECTION PIPE INSTALLATION (EXTRA DEPTH)



REVISED OCT. 2004 - J. ADRIEN  
REVISED OCT. 1998 - J. WONGW. PATALANO/P. MOY

**GAS COST SHARING WORK (SKETCH NO. 5)**  
**GAS MAIN ENCROACHMENT ON AND/OR PARALLEL**  
**TO EXCAVATION OF UNSHEETED TRENCH**



**NOTES:**

- (1) GAS MAIN LOCATED AS SHOWN MAY HAVE TO BE REMOVED BY THE FACILITY OPERATOR PRIOR TO THE START OF CITY EXCAVATION, OTHERWISE, THE CONTRACTOR WILL BE PAID UNDER SECTION 6.06 FOR THE SAID WORK. IF GAS MAIN IS ABANDONED THEN SECTION 6.03 SHALL APPLY.
- (2) EIGHTEEN (18) INCHES FROM STANDARD NEAT LINE IS THE MAXIMUM ALLOWABLE WIDTH OF AREA THAT MAY BE DISTURBED OR EXCAVATED DURING INSTALLATION OF CERTAIN TYPES OF SHEETING SYSTEMS THAT MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF THE DEPARTMENT OF DESIGN AND CONSTRUCTION OF THE CITY OF NEW YORK.

REVISED OCT. 2004 - L. ADRIEN  
 REVISED OCT. 1988 - J. WONGGW. PATALANG/P. MOY

**V - PRELIMINARY GAS WORK TO BE PERFORMED BY  
FACILITY OPERATOR.**

APPLICABLE TO ALL GAS DRAWINGS:

- ALL RELOCATION WORK SHOWN IN THIS SECTION IS TO BE PERFORMED BY FACILITY OPERATOR.
- ALL SUPPORT AND PROTECTION WORK TO BE PERFORMED BY CITY CONTRACTOR
- IF ADDITIONAL INFORMATION IS NEEDED REGARDING THE FACILITY OPERATOR'S RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

Neville Jacobs Jr.  
NationalGrid Energy Delivery  
287 Maspeth Avenue  
Brooklyn, NY 11211  
718-963-5612  
Neville.Jacobs@nationalgrid.com

(NO TEXT IN THIS AREA, TURN PAGE)

SHEET	ITEM#	ON STREET	ACTIVITY	SIZE IN INCH	PRESSURE	MATERIAL	LENGTH IN FT	REIM / NON-REIM
1	1	147TH AVE	INST	8	6WC	PE	369	REIM
1	2	147TH AVE	RET	6	6WC	PE	31	REIM
1	3	147TH AVE	RET	6	6WC	ST	273	REIM
2	4	FRANCIS LEWIS BLVD AND 147TH AVE.	INST	8	6WC	PE	363	REIM
2	5	FRANCIS LEWIS BLVD AND 147TH AVE.	INST	12	6WC	ST	663	REIM
2	6	FRANCIS LEWIS BLVD AND 147TH AVE.	RET	6	6WC	PE	65	REIM
2	7	FRANCIS LEWIS BLVD AND 147TH AVE.	RET	6	6WC	ST	187	REIM
2	8	FRANCIS LEWIS BLVD AND 147TH AVE.	RET	12	6WC	CI	507	REIM
3	9	HOOK CREEK BLVD. & FRANKTON ST	INST	8	6WC	PE	625	REIM
3	10	HOOK CREEK BLVD. & FRANKTON ST	RET	6	6WC	ST	420	REIM
4	11	HOOK CREEK BLVD. & 145TH AVE	INST	8	6WC	PE	856	REIM
4	14	HOOK CREEK BLVD. & 145TH AVE	RET	4	6WC	ST	212	REIM
4	13	HOOK CREEK BLVD. & 145TH AVE	RET	6	6WC	PE	220	REIM
4	12	HOOK CREEK BLVD. & 145TH AVE	RET	6	6WC	ST	208	REIM
5	16	FRANCIS LEWIS BLVD AND 147TH RD.	INST	8	6WC	PE	1084	REIM
5	15	FRANCIS LEWIS BLVD AND 147TH RD.	RET	6	6WC	CI	390	REIM
5	17	FRANCIS LEWIS BLVD AND 147TH RD.	RET	6	6WC	ST	208	REIM
5	18	FRANCIS LEWIS BLVD AND 147TH RD.	RET	12	6WC	CI	20	REIM
6	19	147TH RD AND 259TH ST	INST	8	6WC	PE	1090	REIM
6	20	147TH RD AND 259TH ST	RET	6	6WC	ST	820	REIM
7	80	HOOK CREEK BLVD. 147TH RD.	INST	8	6WC	PE	38	REIM
7	21	HOOK CREEK BLVD. 147TH RD.	INST	12	6WC	ST	419	REIM
7	81	HOOK CREEK BLVD. 147TH RD.	RET	4	6WC	ST	60	REIM
7	22	HOOK CREEK BLVD. 147TH RD.	RET	12	6WC	CI	290	REIM
8	23	259TH ST. AND 147TH DR.	INST	8	6WC	PE	755	REIM
8	24	259TH ST. AND 147TH DR.	RET	6	6WC	ST	841	REIM
9	25	147TH DR.	INST	8	6WC	PE	625	REIM

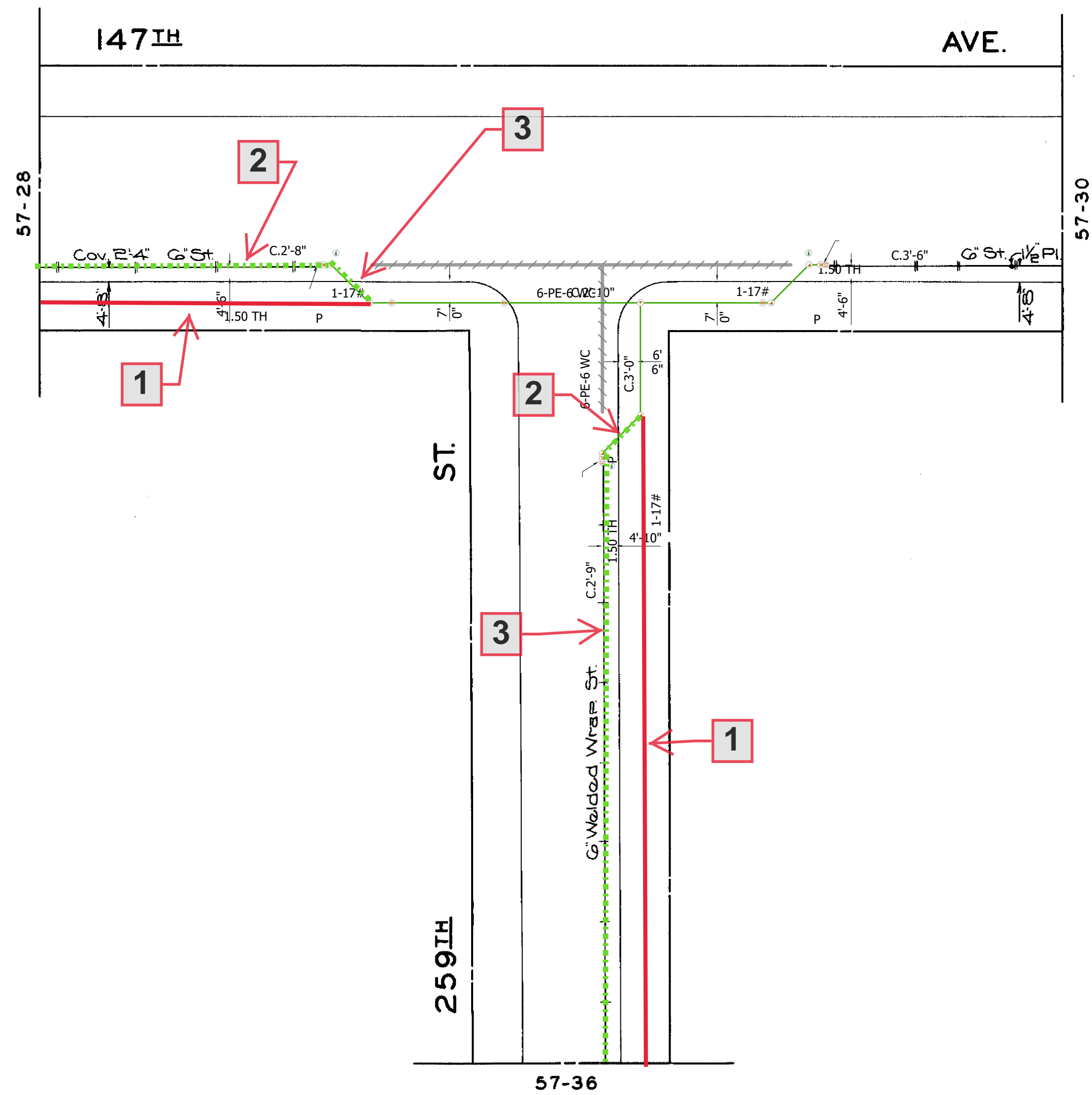
NOTE: GAS INSTALLATION AND RETIREMENT SUBJECT TO CHANGE BY FACILITY OPERATOR

9	26	147TH DR.	RET	6	6WC	ST	500	REIM
10	28	HOOK CREEK BLVD. & 147TH DR.	INST	8	6WC	PE	129	REIM
10	29	FRANCIS LEWIS BLVD. & 147TH DR.	INST	8	6WC	PE	563	REIM
10	30	HOOK CREEK BLVD. & 147TH DR.	INST	12	6WC	ST	245	REIM
10	27	FRANCIS LEWIS BLVD. & 147TH DR.	RET	6	6WC	CI	228	REIM
10	31	FRANCIS LEWIS BLVD. & 147TH DR.	RET	6	6WC	ST	175	REIM
10	32	HOOK CREEK BLVD. & 147TH DR.	RET	12	6WC	CI	195	REIM
11	35	148TH AVE	INST	8	6WC	PE	516	REIM
11	33	148TH AVE	RET	6	6WC	CI	240	REIM
11	34	148TH AVE	RET	6	6WC	PE	45	REIM
11	84	148TH AVE	RET	6	6WC	ST	75	REIM
12	37	148TH AVE	INST	8	6WC	PE	521	REIM
12	36	148TH AVE	RET	6	6WC	CI	75	REIM
12	38	148TH AVE	RET	6	6WC	ST	342	REIM
13	40	HOOK CREEK BLVD & FRANCIS LEWIS BLVD	INST	8	6WC	PE	445	REIM
13	41	HOOK CREEK BLVD & FRANCIS LEWIS BLVD	INST	12	6WC	ST	351	REIM
13	39	HOOK CREEK BLVD & FRANCIS LEWIS BLVD	RET	6	6WC	CI	206	REIM
13	42	HOOK CREEK BLVD & FRANCIS LEWIS BLVD	RET	6	6WC	ST	213	REIM
13	43	HOOK CREEK BLVD & FRANCIS LEWIS BLVD	RET	12	6WC	CI	281	REIM
14	46	148TH RD AND 259TH ST	INST	8	6WC	PE	571	REIM
14	44	148TH RD AND 259TH ST	RET	6	6WC	CI	298	REIM
14	45	148TH RD AND 259TH ST	RET	6	6WC	PE	45	REIM
14	47	148TH RD AND 259TH ST	RET	6	6WC	ST	85	REIM
15	50	148TH RD	INST	8	6WC	PE	525	REIM
15	48	148TH RD	RET	6	6WC	CI	327	REIM
15	49	148TH RD	RET	6	6WC	PE	93	REIM
16	52	148TH DR AND HOOK CREEK BLVD	INST	8	6WC	PE	288	REIM
16	51	148TH DR AND HOOK CREEK BLVD	RET	6	6WC	ST	282	REIM
17	54	148TH DR AND 259TH ST	INST	8	6WC	PE	185	REIM
17	53	148TH DR AND 259TH ST	RET	6	6WC	ST	171	REIM
18	57	148TH RD AND HOOK CREEK BLVD	INST	8	6WC	PE	279	REIM
18	58	HUNGRY HARBOR RD AND HOOK CREEK BLVD	INST	8	6WC	PE	125	REIM

NOTE: GAS INSTALLATION AND RETIREMENT SUBJECT TO CHANGE BY FACILITY OPERATOR

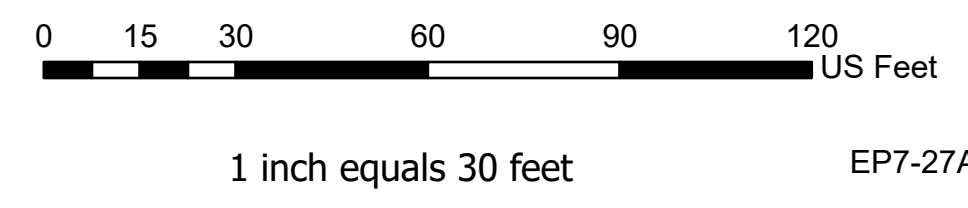
18	59	148TH RD AND HOOK CREEK BLVD	INST	12	6WC	ST	188	REIM
18	55	HUNGRY HARBOR RD AND HOOK CREEK BLVD	RET	6	6WC	CI	90	REIM
18	56	148TH RD AND HOOK CREEK BLVD	RET	6	6WC	ST	180	REIM
18	60	148TH RD AND HOOK CREEK BLVD	RET	12	6WC	CI	105	REIM
19	63	HUNGRY HARBOR RD AND 262ND PL	INST	8	6WC	PE	450	REIM
19	61	HUNGRY HARBOR RD AND 262ND PL	RET	6	6WC	CI	85	REIM
19	62	HUNGRY HARBOR RD AND 262ND PL	RET	6	6WC	ST	253	REIM
20	64	FRANCIS LEWIS BLVD AND 257 ST	INST	12	6WC	ST	266	REIM
20	85	FRANCIS LEWIS BLVD AND 257 ST	RET	6	6WC	PE	75	REIM
20	65	FRANCIS LEWIS BLVD AND 257 ST	RET	12	6WC	CI	133	REIM
21	67	FRANCIS LEWIS BLVD AND 145 AVE	INST	12	6WC	ST	663	REIM
21	66	FRANCIS LEWIS BLVD AND 145 AVE	RET	6	6WC	CI	128	REIM
21	68	FRANCIS LEWIS BLVD AND 145 AVE	RET	12	6WC	CI	242	REIM
22	70	147TH DR AND 257TH ST	INST	8	6WC	PE	113	REIM
22	69	147TH DR AND 257TH ST	RET	6	6WC	ST	92	REIM
23	72	259TH ST AND 149TH AVE	INST	8	6WC	PE	210	REIM
23	71	259TH ST AND 149TH AVE	RET	6	6WC	ST	174	REIM
24	75	259TH ST AND 149TH RD	INST	8	6WC	PE	564	REIM
24	73	259TH ST AND 149TH RD	RET	6	6WC	PE	150	REIM
24	74	259TH ST AND 149TH RD	RET	6	6WC	ST	203	REIM
25	77	HOOK CREEK BLVD AND 149TH AVE	INST	8	6WC	PE	263	REIM
25	76	HOOK CREEK BLVD AND 149TH AVE	RET	6	6WC	ST	112	REIM
26	79	259TH ST AND CRAFT AVE	INST	8	6WC	PE	419	REIM
26	78	259TH ST AND CRAFT AVE	RET	6	6WC	ST	200	REIM
27	82	HOOK CREEK BLVD AND 147TH AVE	INST	8	6WC	PE	582	REIM
27	86	HOOK CREEK BLVD AND 147TH AVE	RET	4	6WC	PE	90	REIM
27	83	HOOK CREEK BLVD AND 147TH AVE	RET	4	6WC	ST	385	REIM

NOTE: GAS INSTALLATION AND RETIREMENT SUBJECT TO CHANGE BY FACILITY OPERATOR



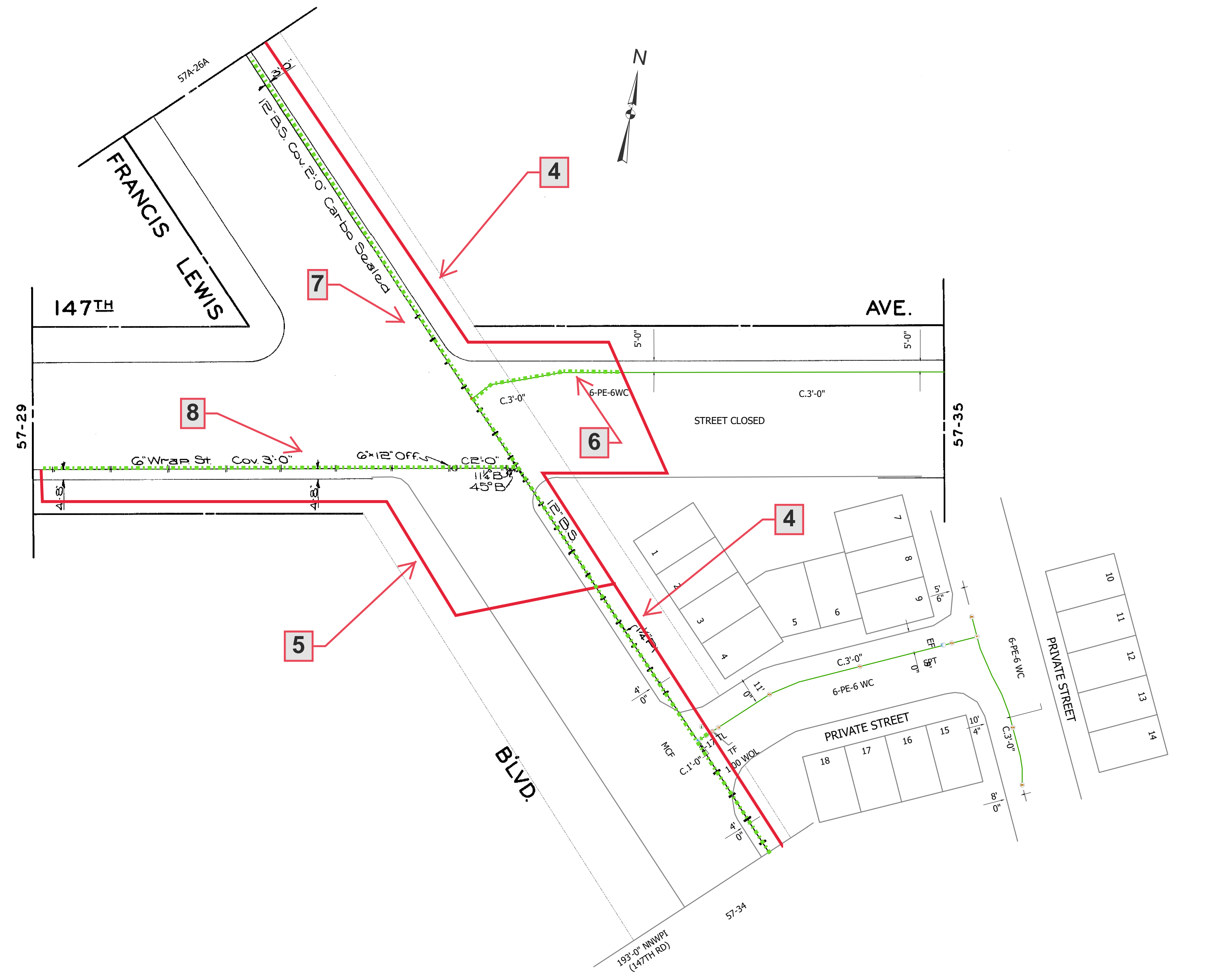
57-29

HWQ274F2  
SHEET 1 OF 27  
ID 57 - 29

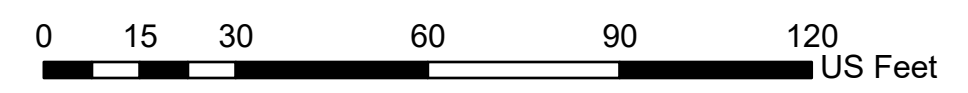


NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status





HWQ274F2  
 SHEET 2 OF 27  
 ID 57 - 30



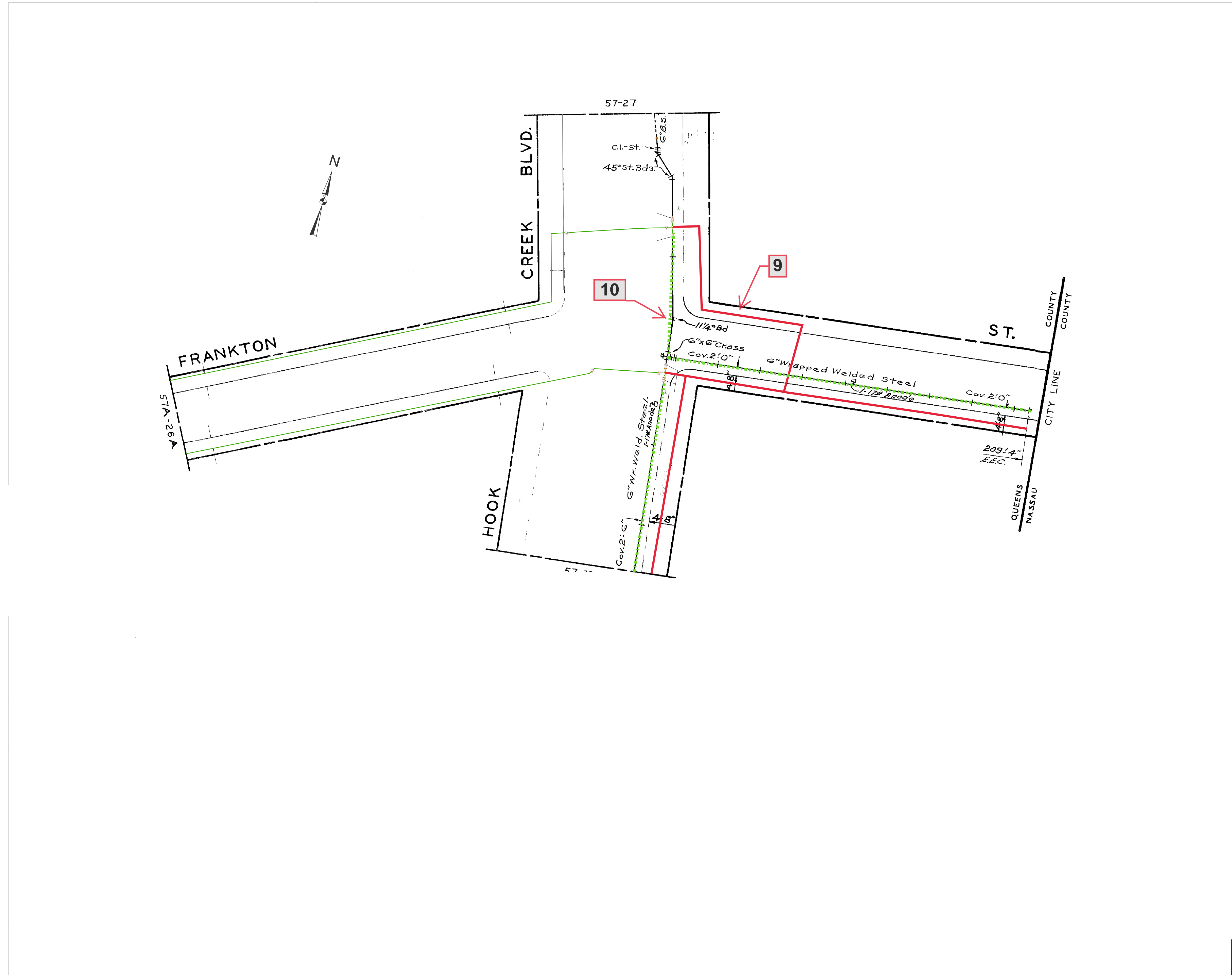
1 inch equals 30 feet EP7-27A5

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

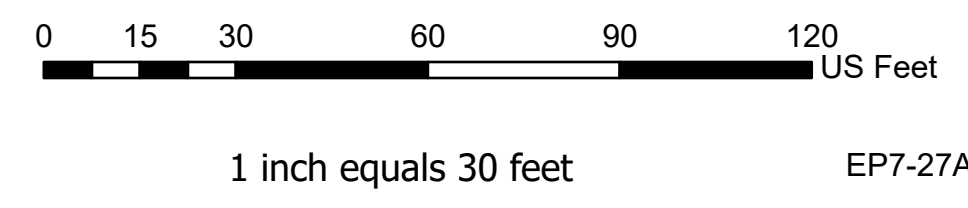


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 ID-57-30

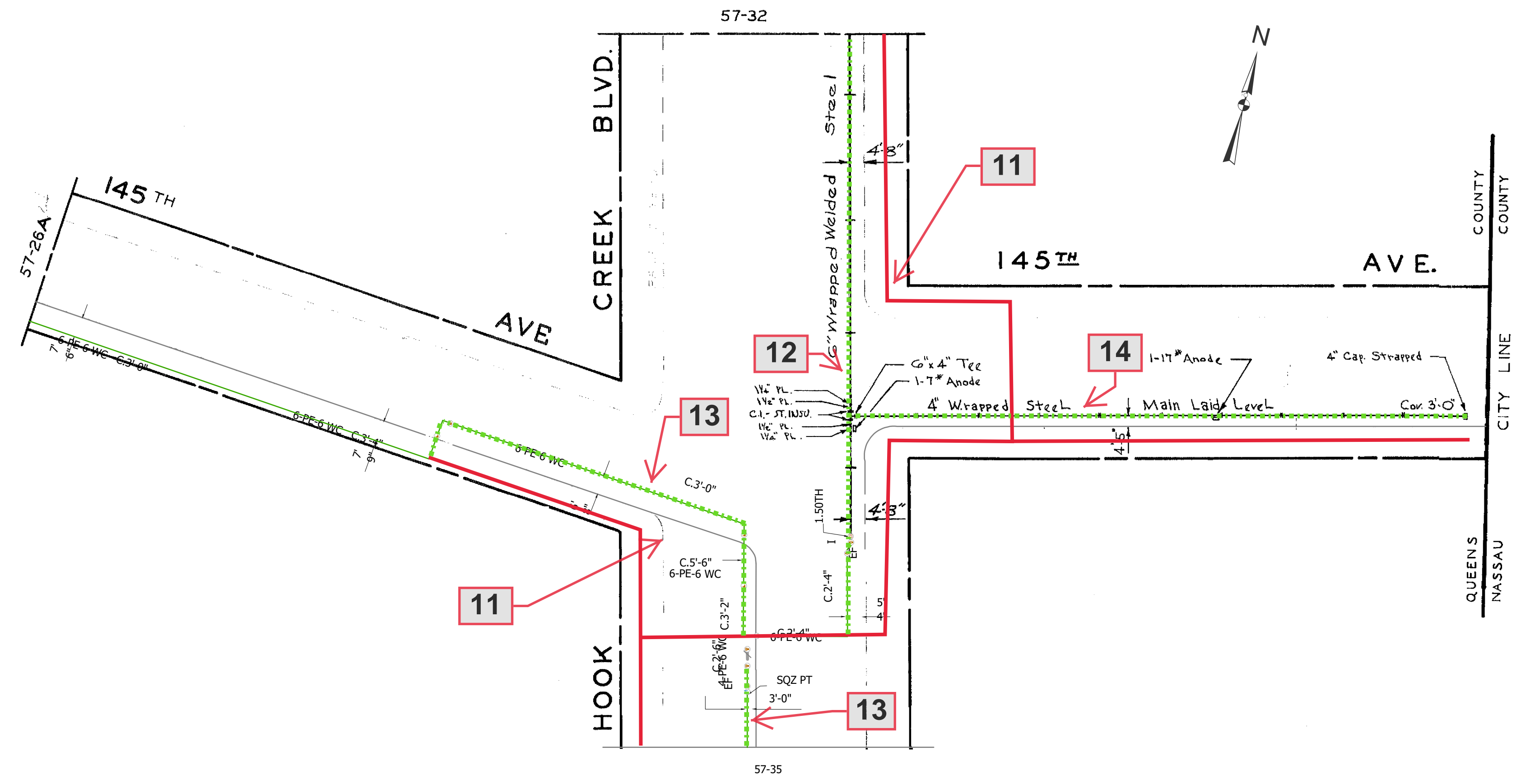




HWQ274F2  
 SHEET 3 OF 27  
 ID 57 - 32

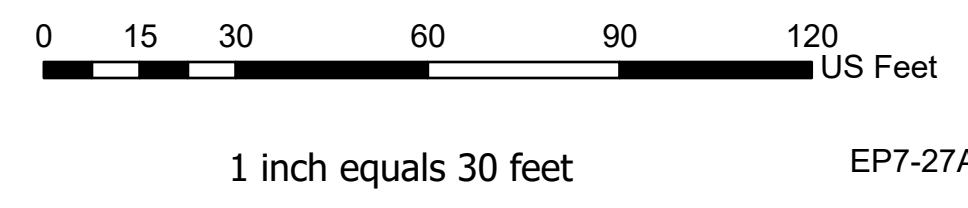


NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status



57-33

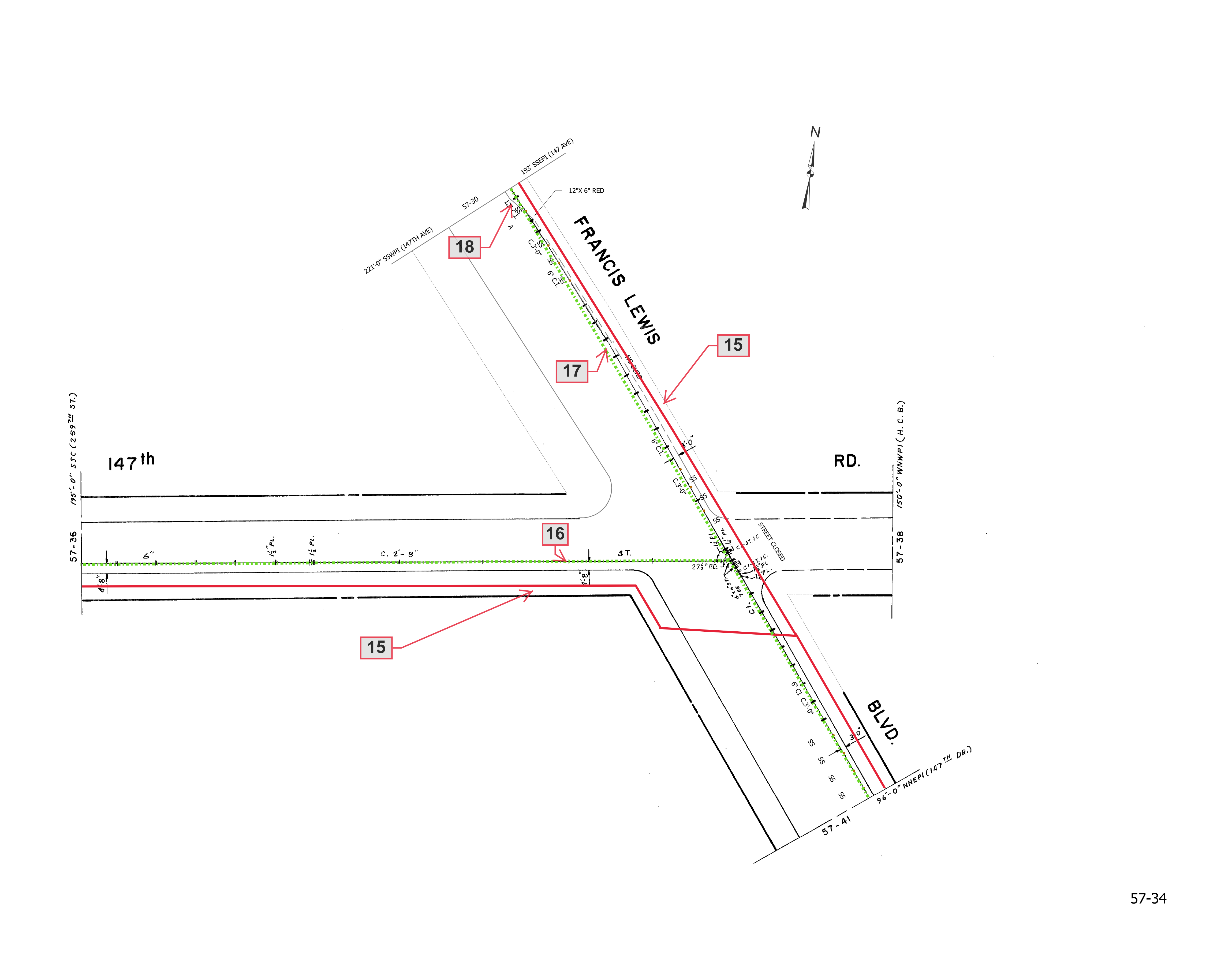
HWQ274F2  
SHEET 4 OF 27  
ID 57 - 33



NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

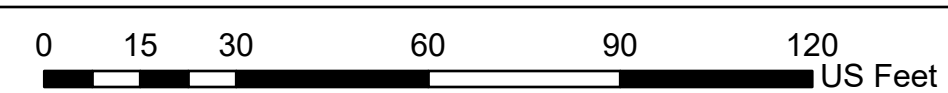


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ID-57-33



57-34

HWQ274F2  
SHEET 5 OF 27  
ID 57 - 34



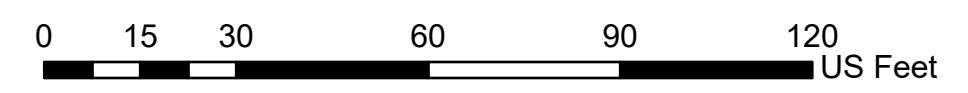
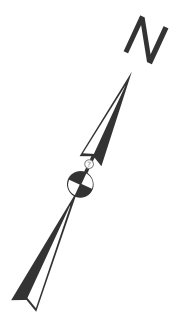
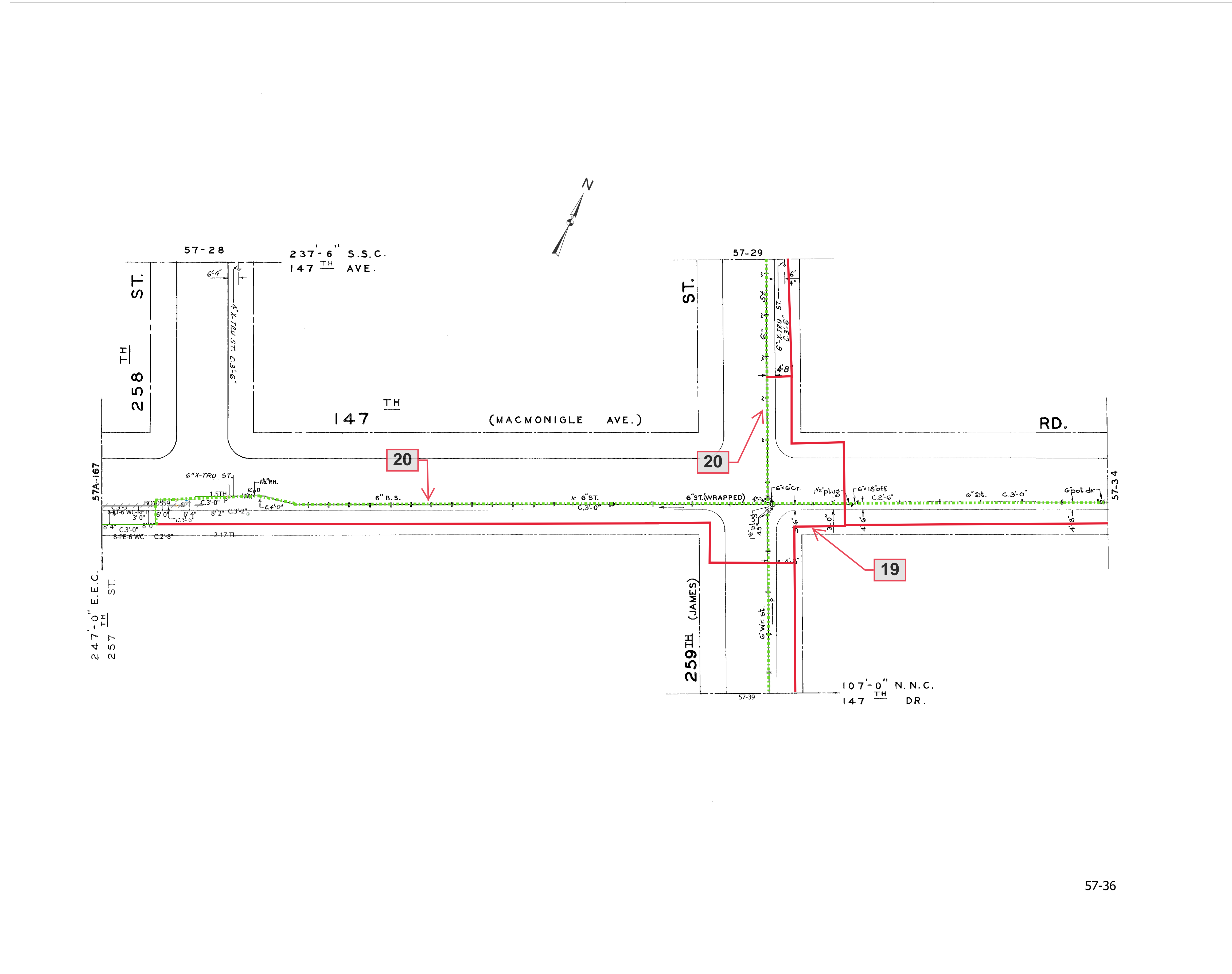
1 inch equals 30 feet

EP7-27A8

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

ID-57-34  
ID-57-34

**nationalgrid**



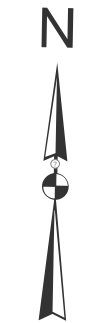
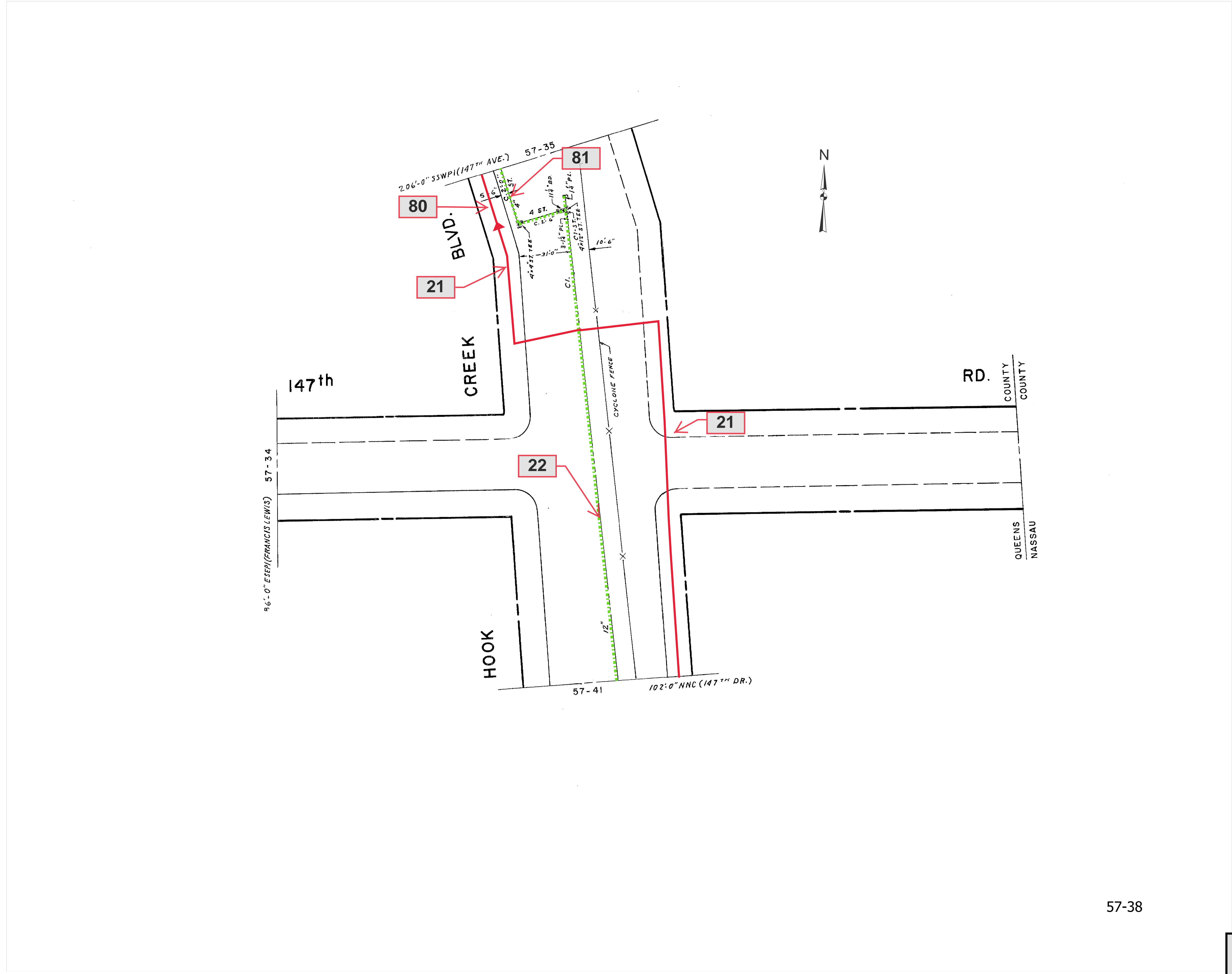
1 inch equals 30 feet EP7-27A9

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

HWQ274F2  
SHEET 6 OF 27  
ID 57 - 36

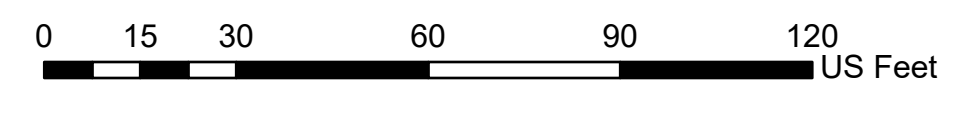
ID-57-36  
ID-57-36





57-38

HWQ274F2  
SHEET 7 OF 27  
ID 57 - 38

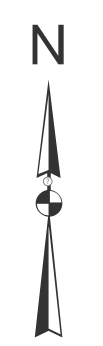
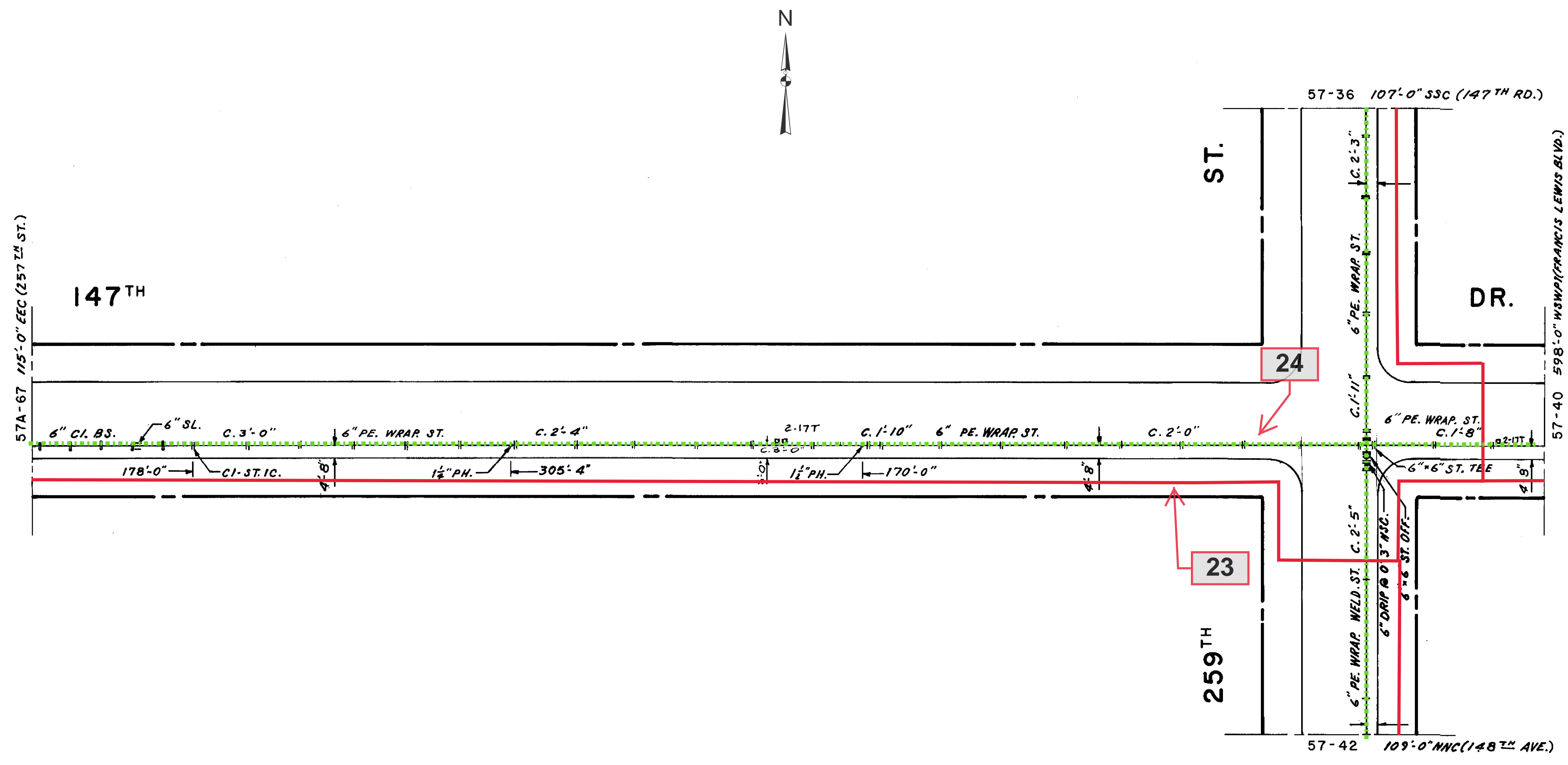


1 inch equals 30 feet EP7-27A10

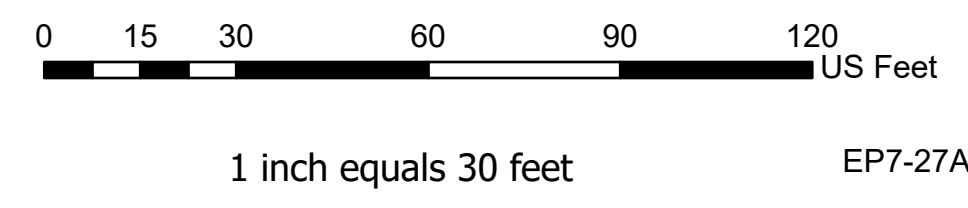
NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

ID-57-38  
ID-57-38





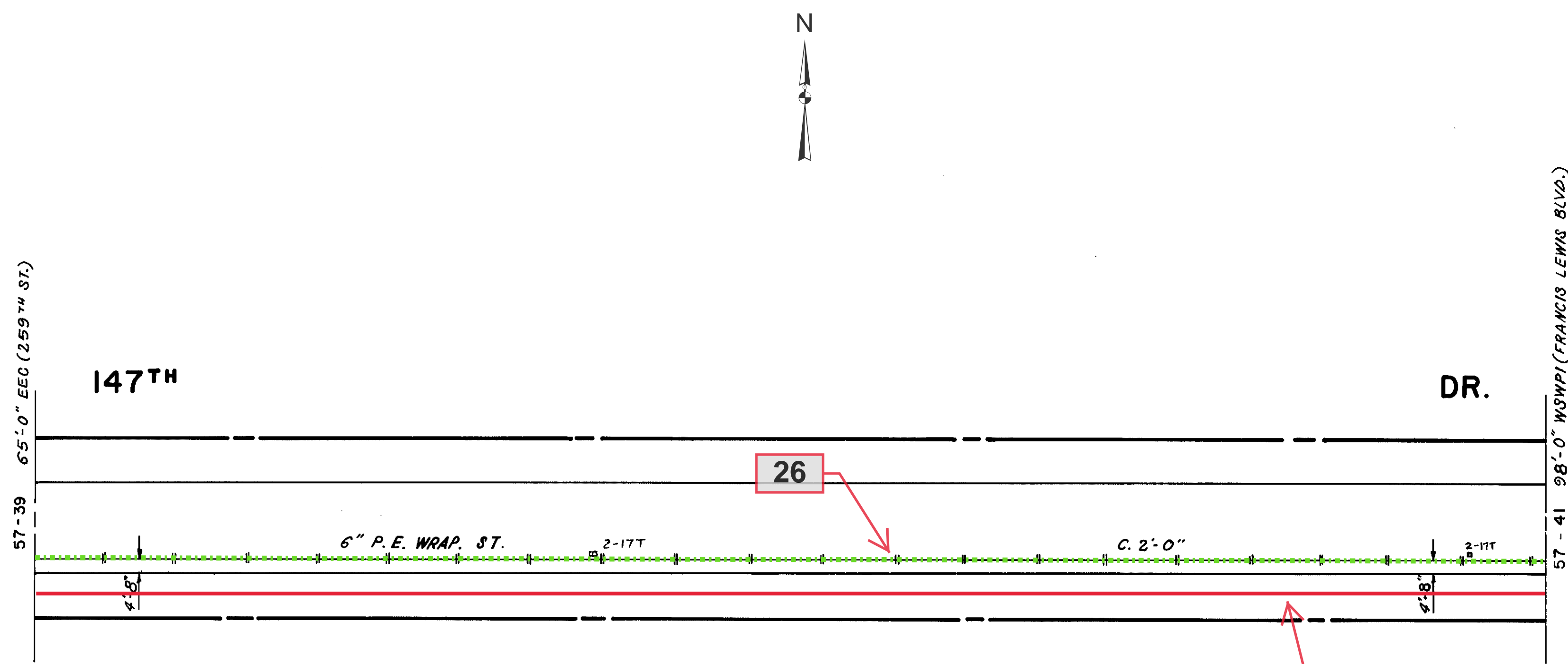
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 SHEET 8 OF 27  
 ID 57 - 39



NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

ID-57-39  
 ID-57-39



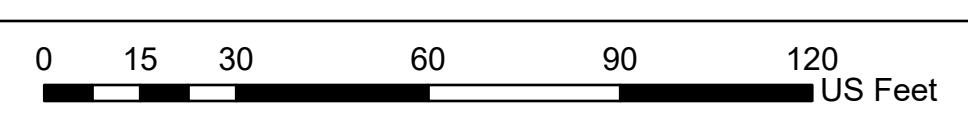


26

25

57-40

HWQ274F2  
SHEET 9 OF 27  
ID 57 - 40

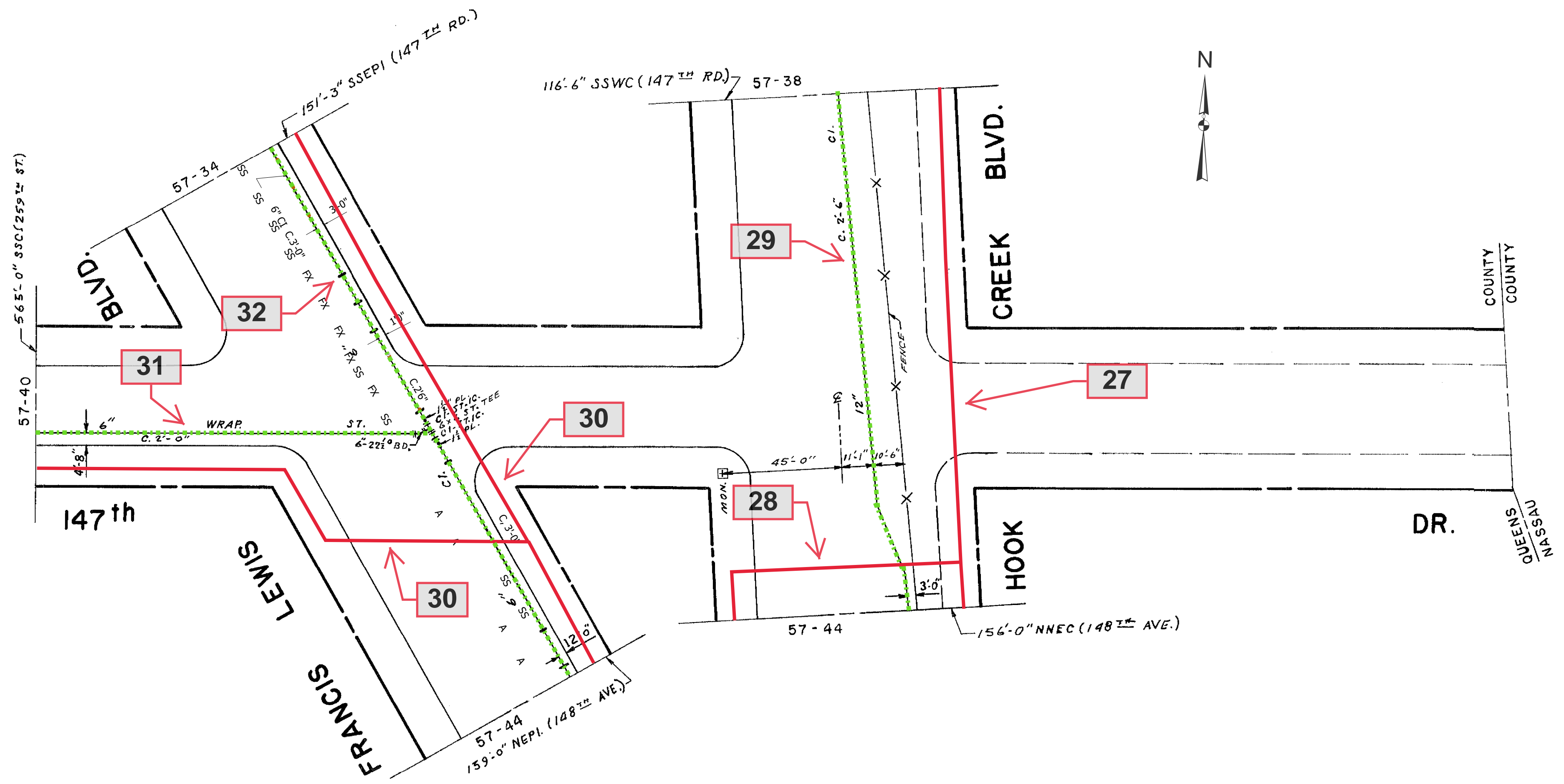


NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

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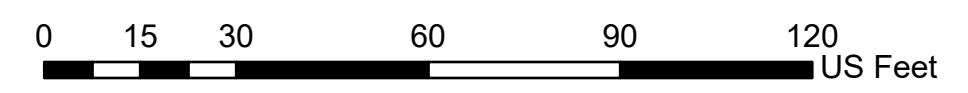
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57-41

HWQ274F2  
SHEET 10 OF 27  
ID 57 - 41



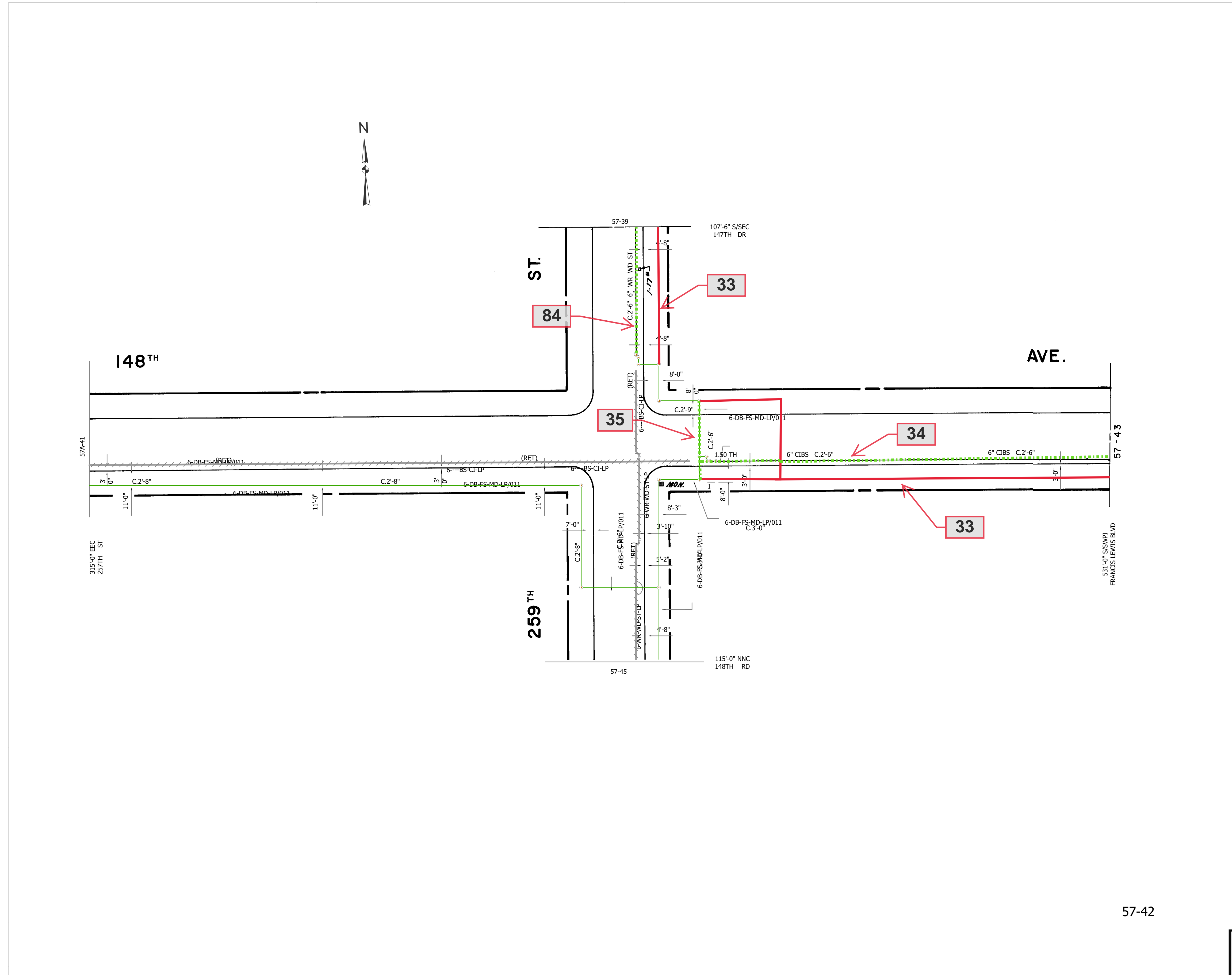
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NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

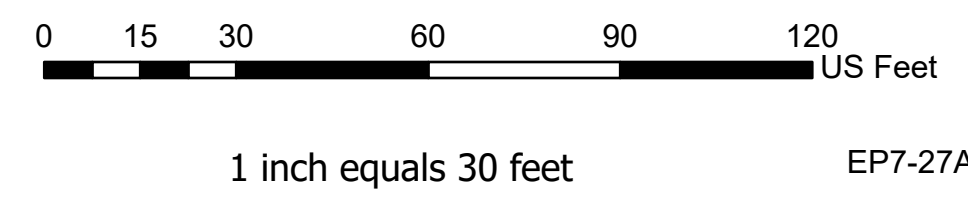


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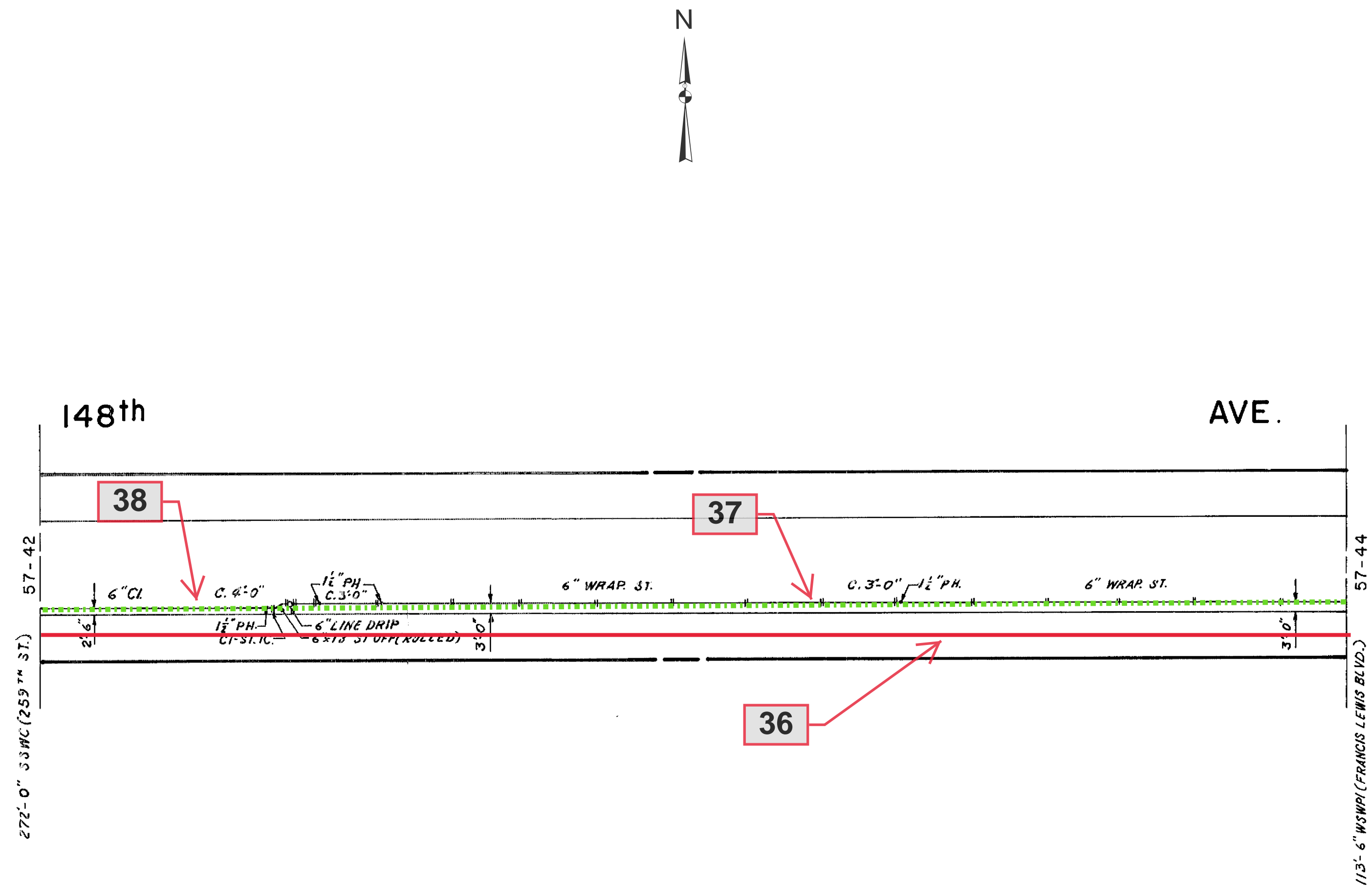


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ID 57 - 42



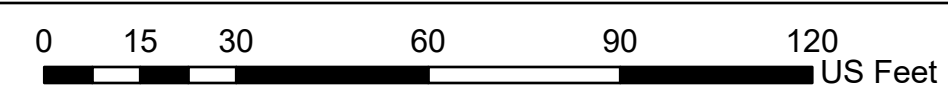
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57-43

HWQ274F2  
SHEET 12 OF 27  
ID 57 - 43



1 inch equals 30 feet

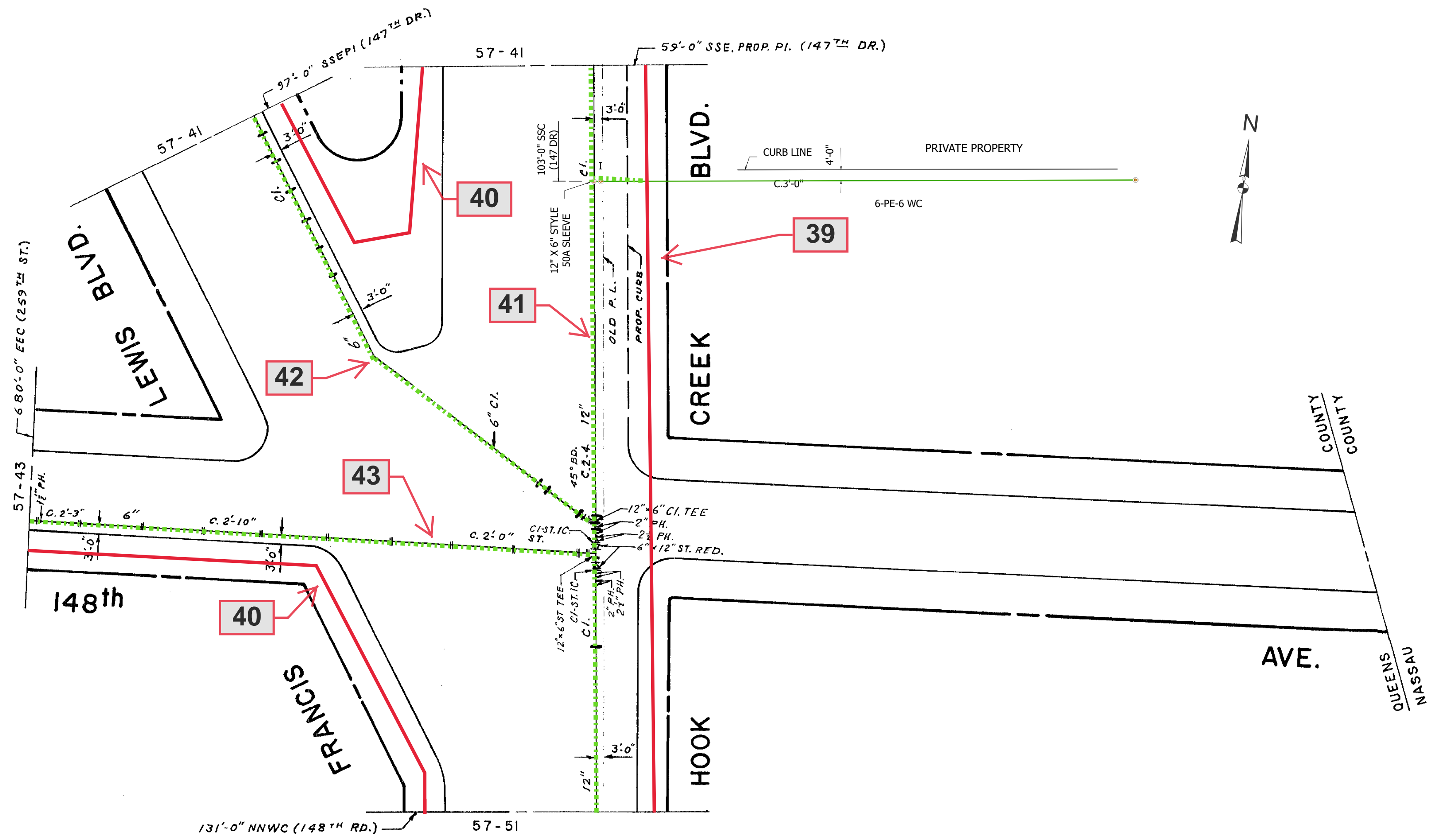
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NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

**nationalgrid**

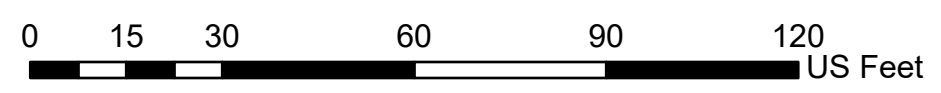
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57-44

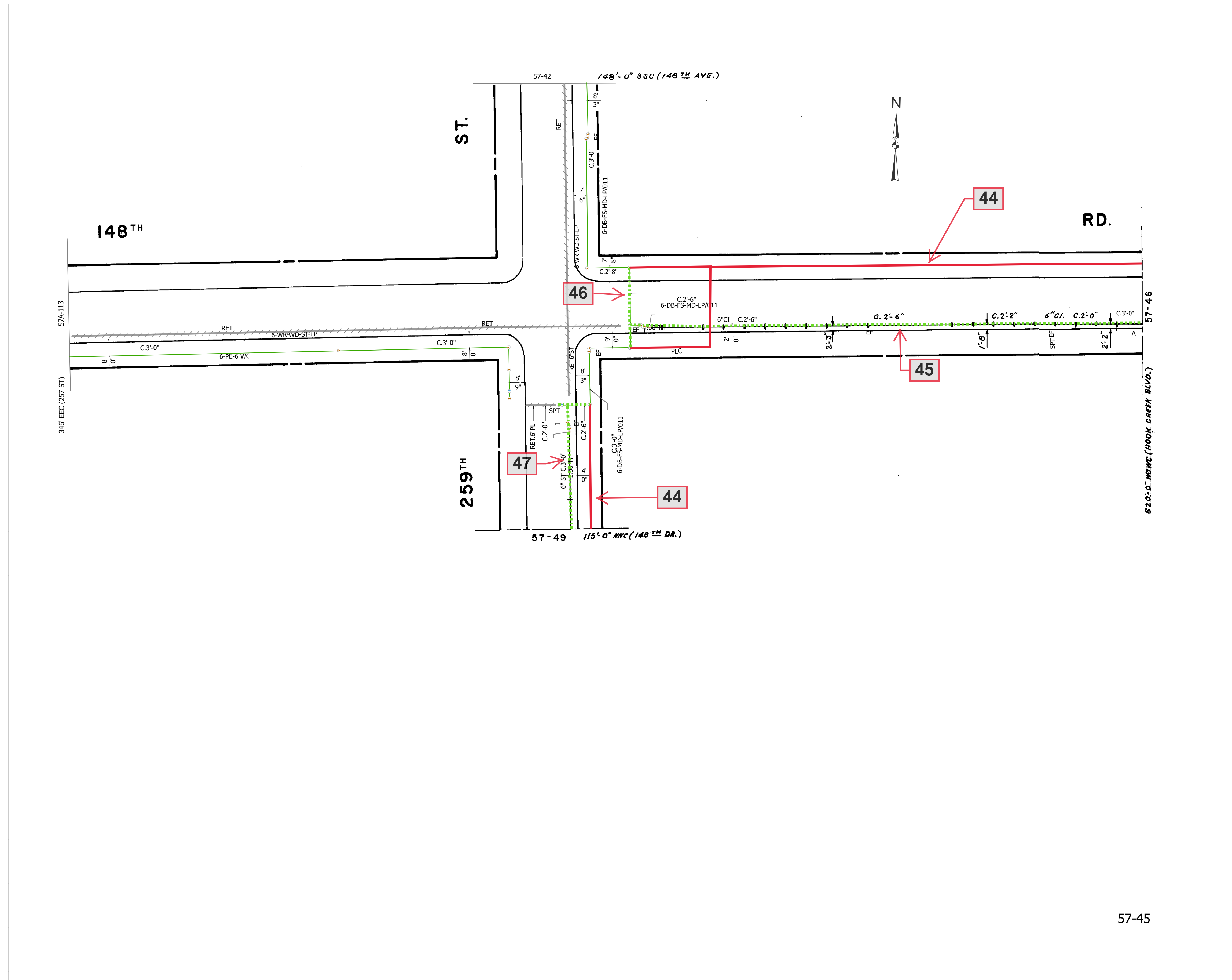
HWQ274F2  
SHEET 13 OF 27  
ID 57 - 44



1 inch equals 30 feet EP7-27A16

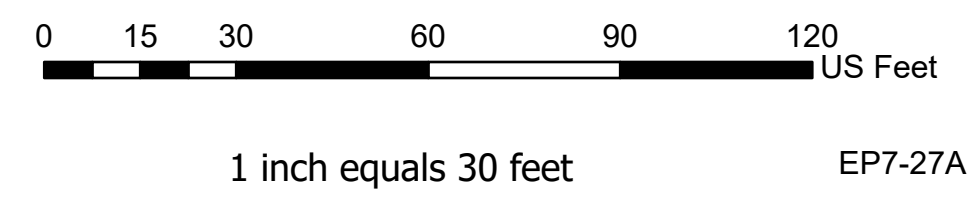
NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status





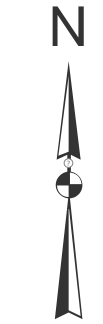
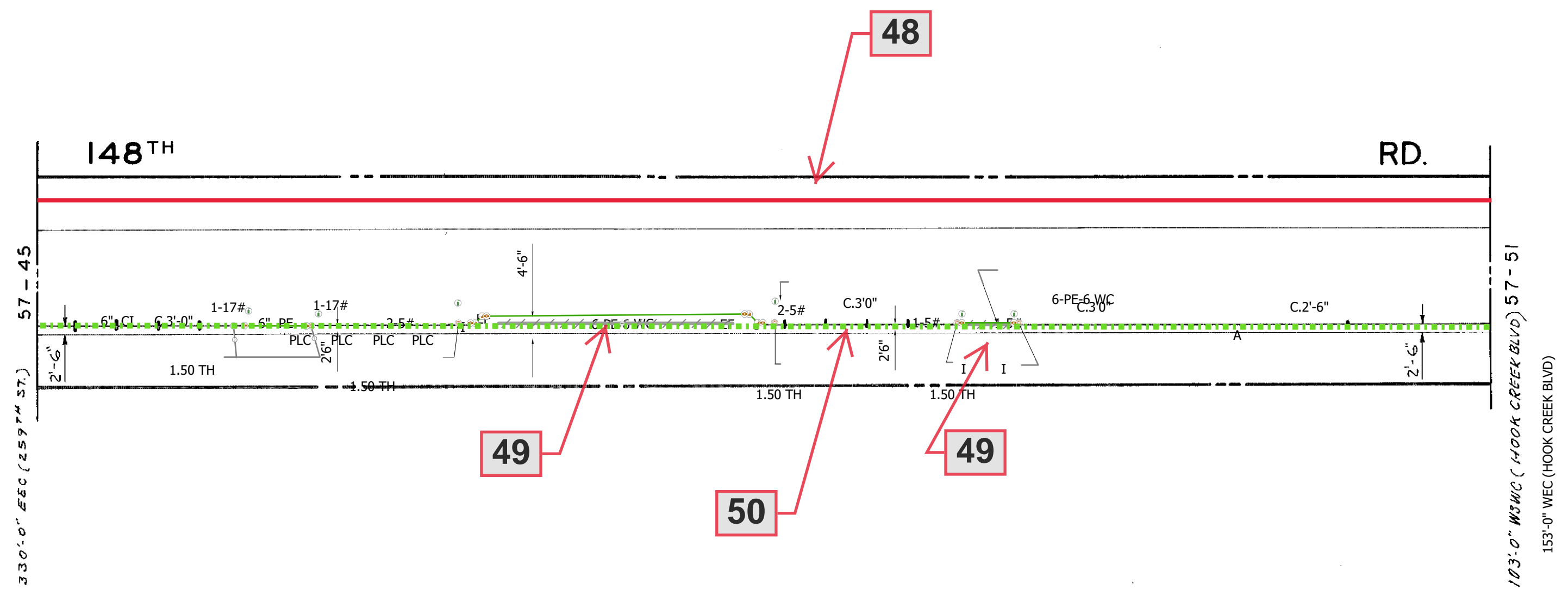
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HWQ274F2  
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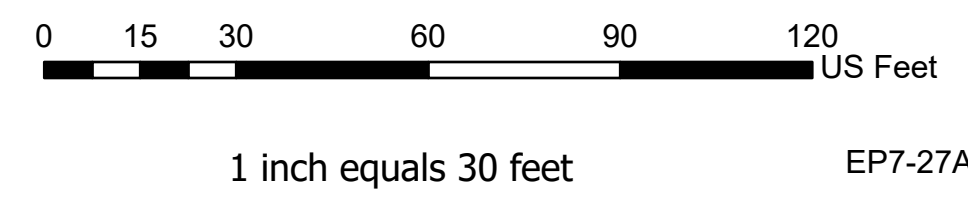
NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status





57-46

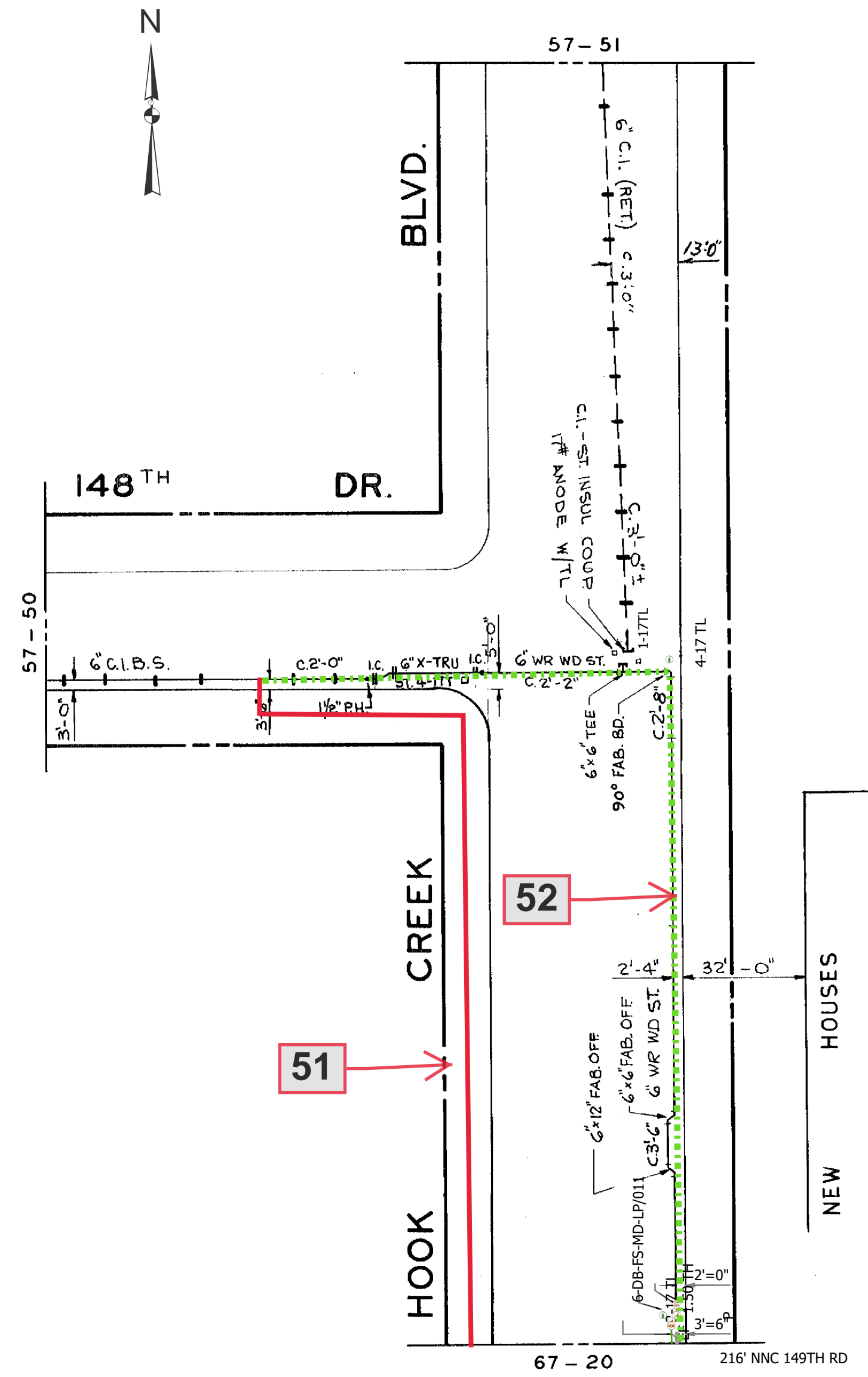
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ID 57 - 46



NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

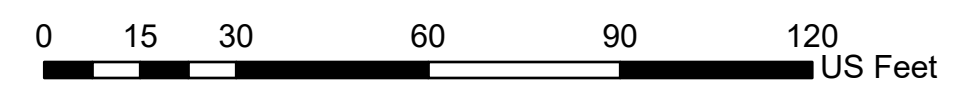
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57-47

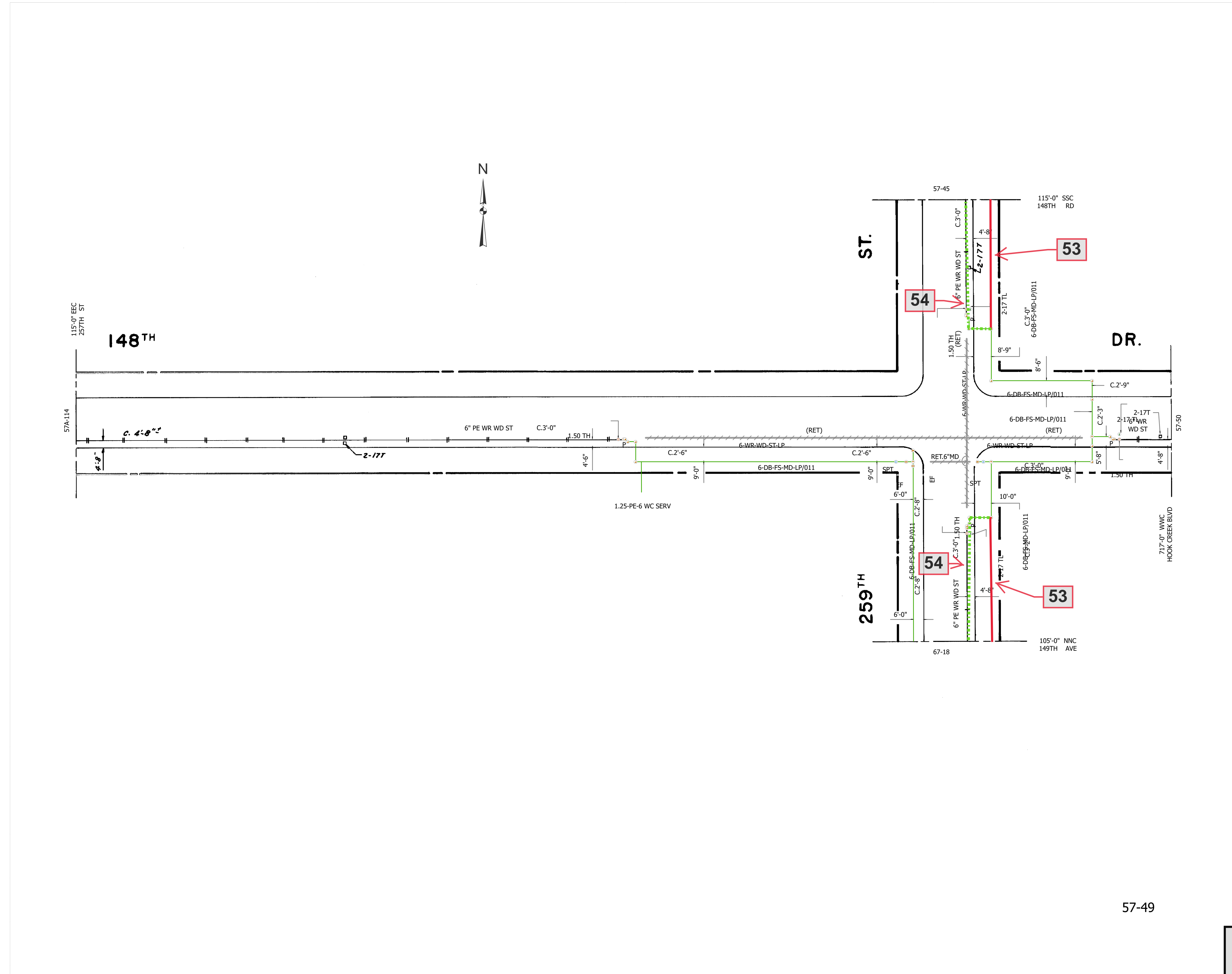
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ID 57 - 47



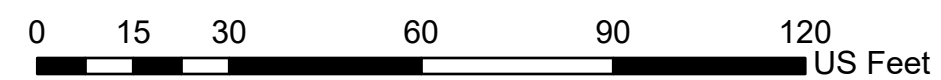
1 inch equals 30 feet EP7-27A19

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status





HWQ274F2  
 SHEET 17 OF 27  
 ID 57 - 49

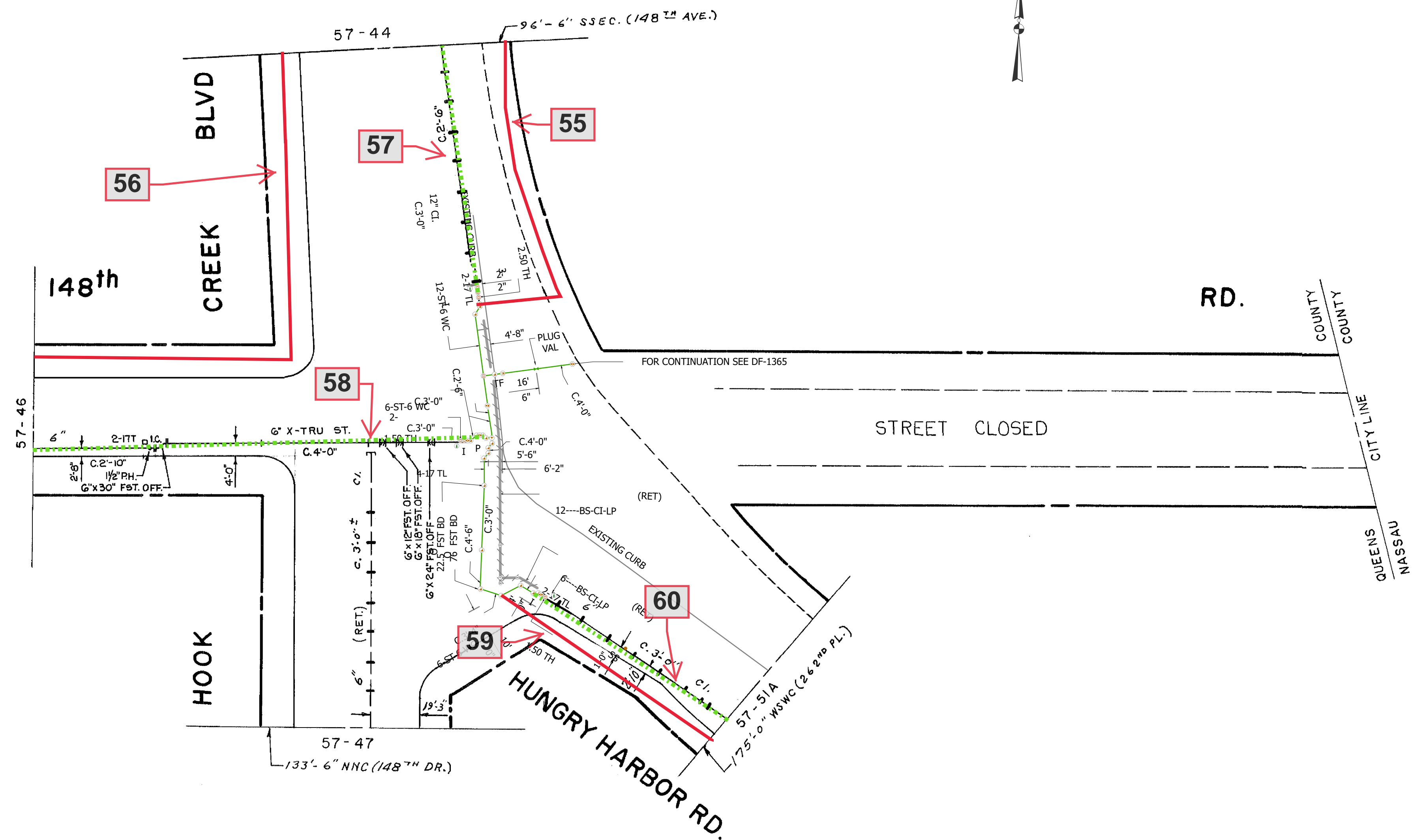


1 inch equals 30 feet

EP7-27A20

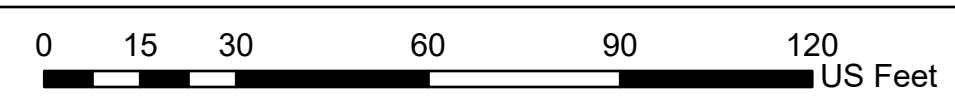
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57-51

HWQ274F2  
SHEET 18 OF 27  
ID 57 - 51



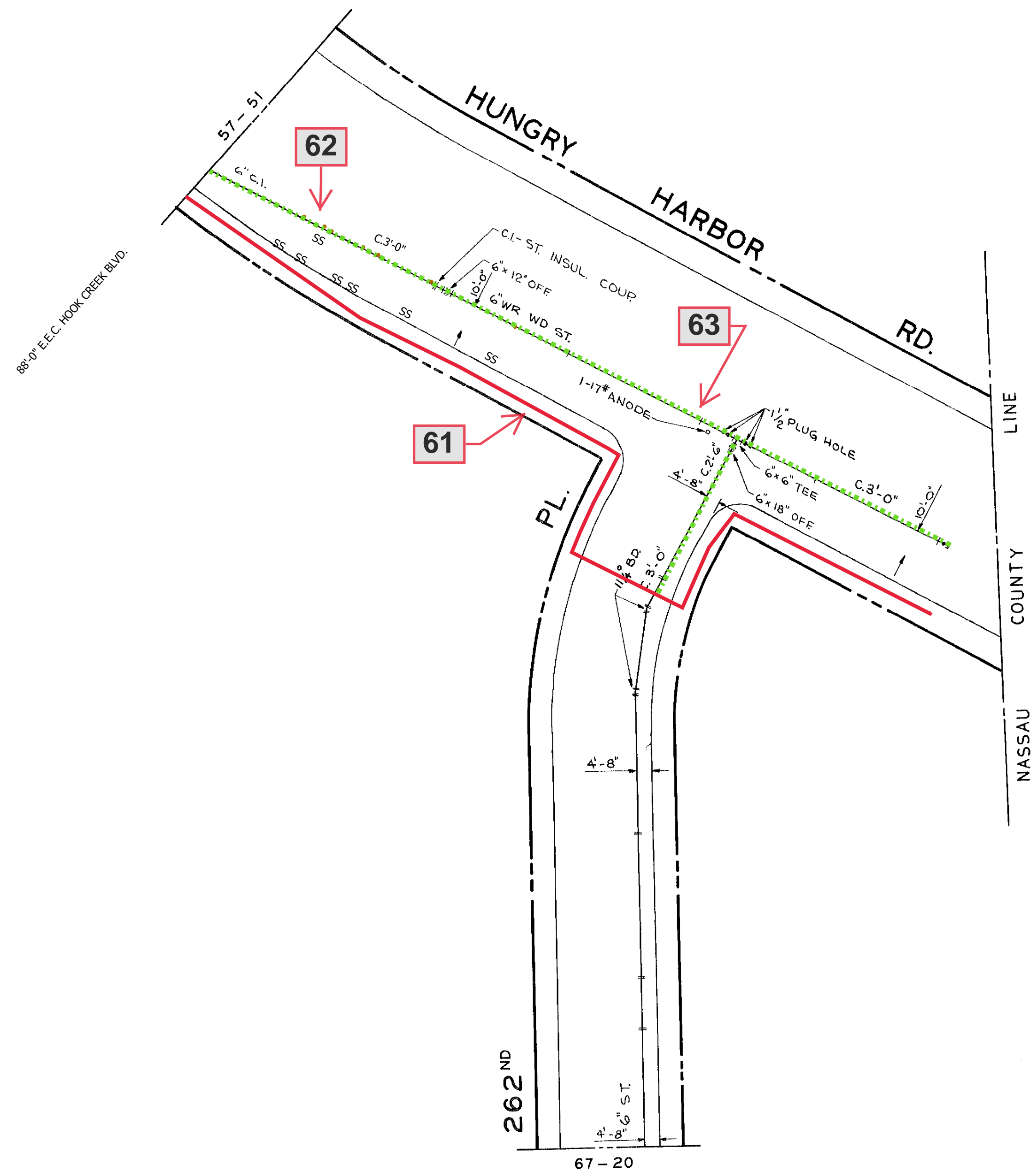
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NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status



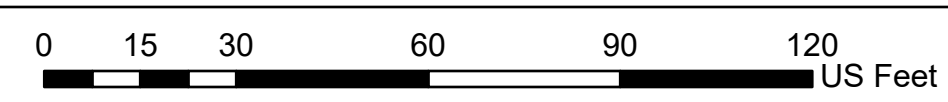
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57-51A

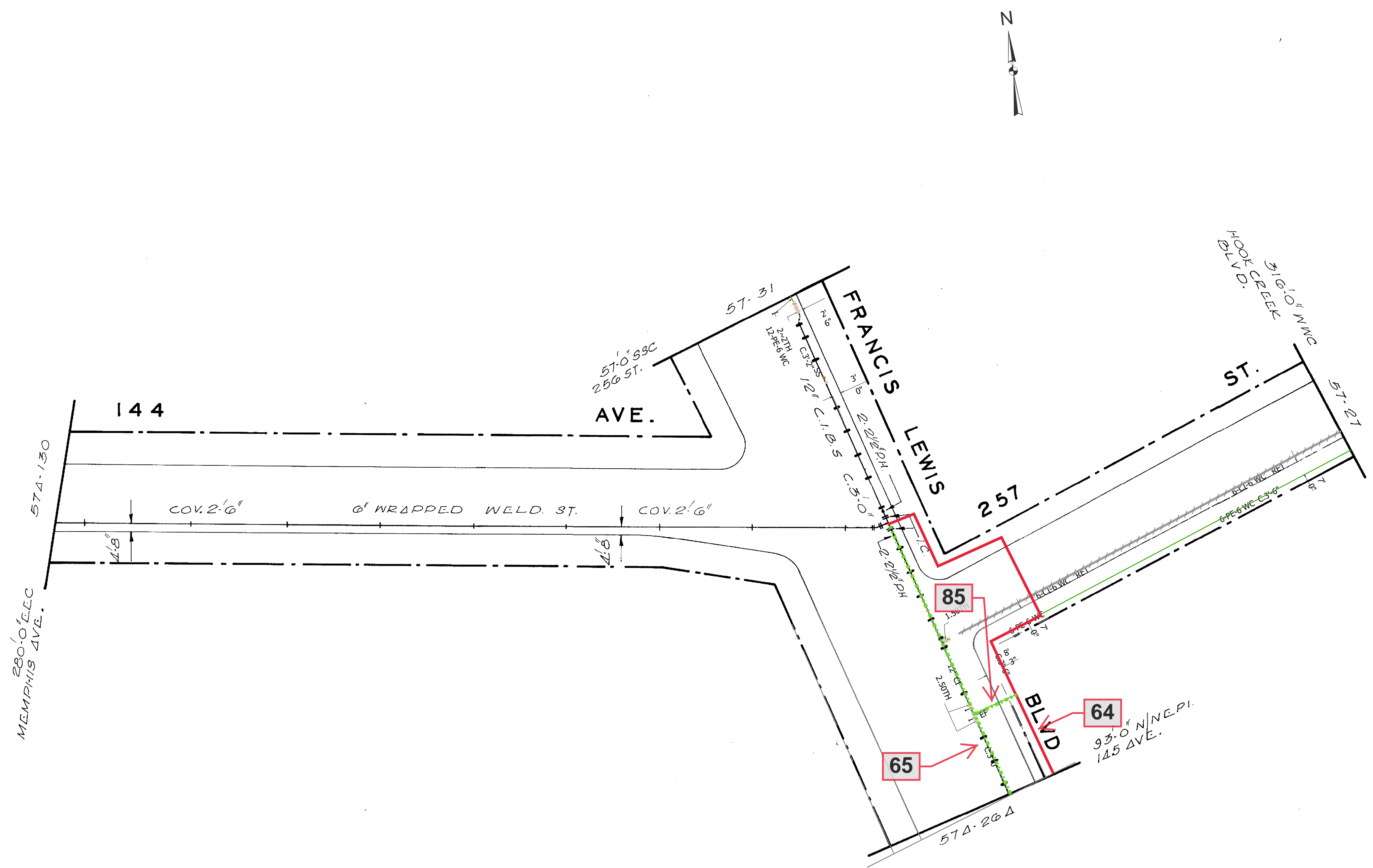
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ID 57 - 51A



1 inch equals 30 feet

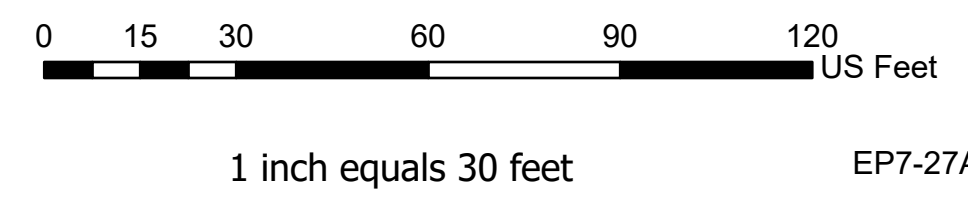
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NOTE: The location of surface and underground objects shown are not warranted to be correct.  
Refer to the world map for the most current SOP status



57-52

HWQ274F2  
 SHEET 20 OF 27  
 ID 57 - 52

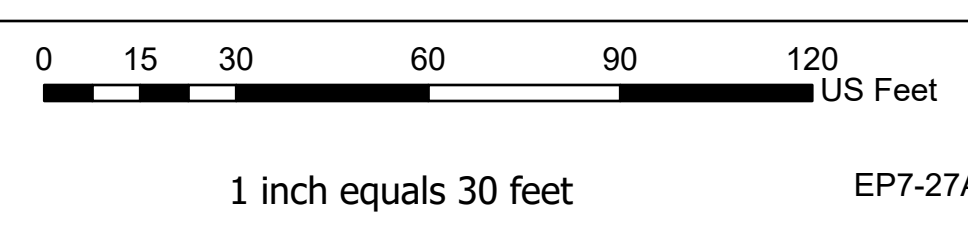


NOTE: The location of surface and underground objects shown are not warranted to be correct.  
 Refer to the world map for the most current SOP status



57A-26A

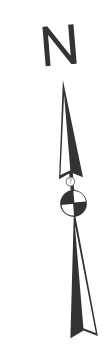
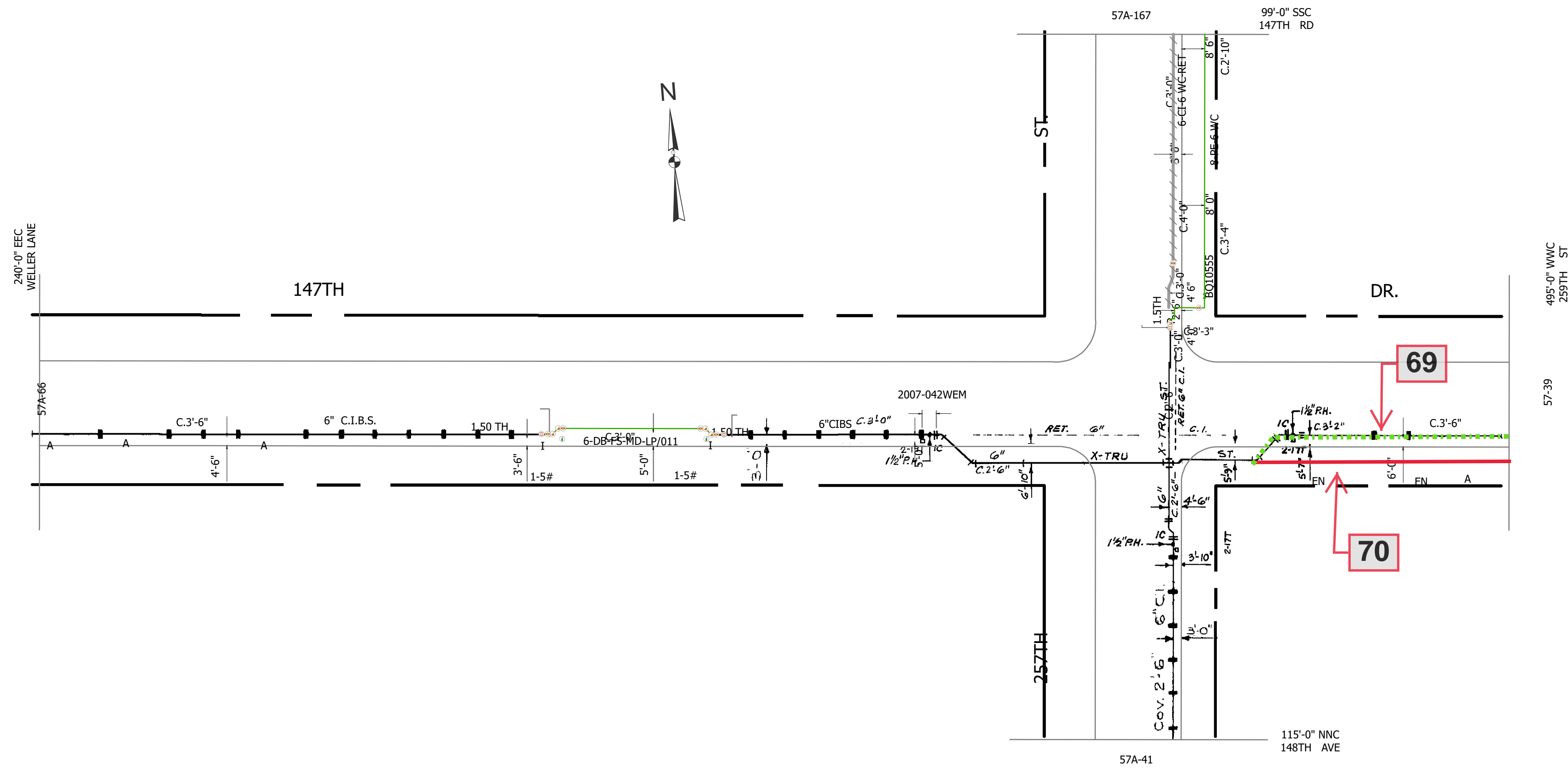
HWQ274F2  
SHEET 21 OF 27  
ID 57A - 26A



NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

ID-57A-26A  
ID-57A-26A



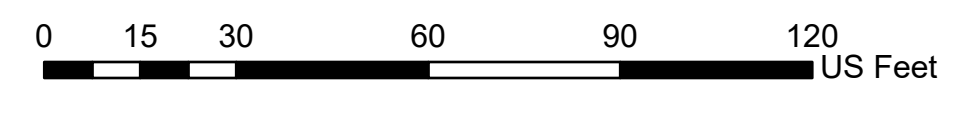


69

70

57A-67

**HWQ274F2**  
**SHEET 22 OF 27**  
**ID 57A - 67**

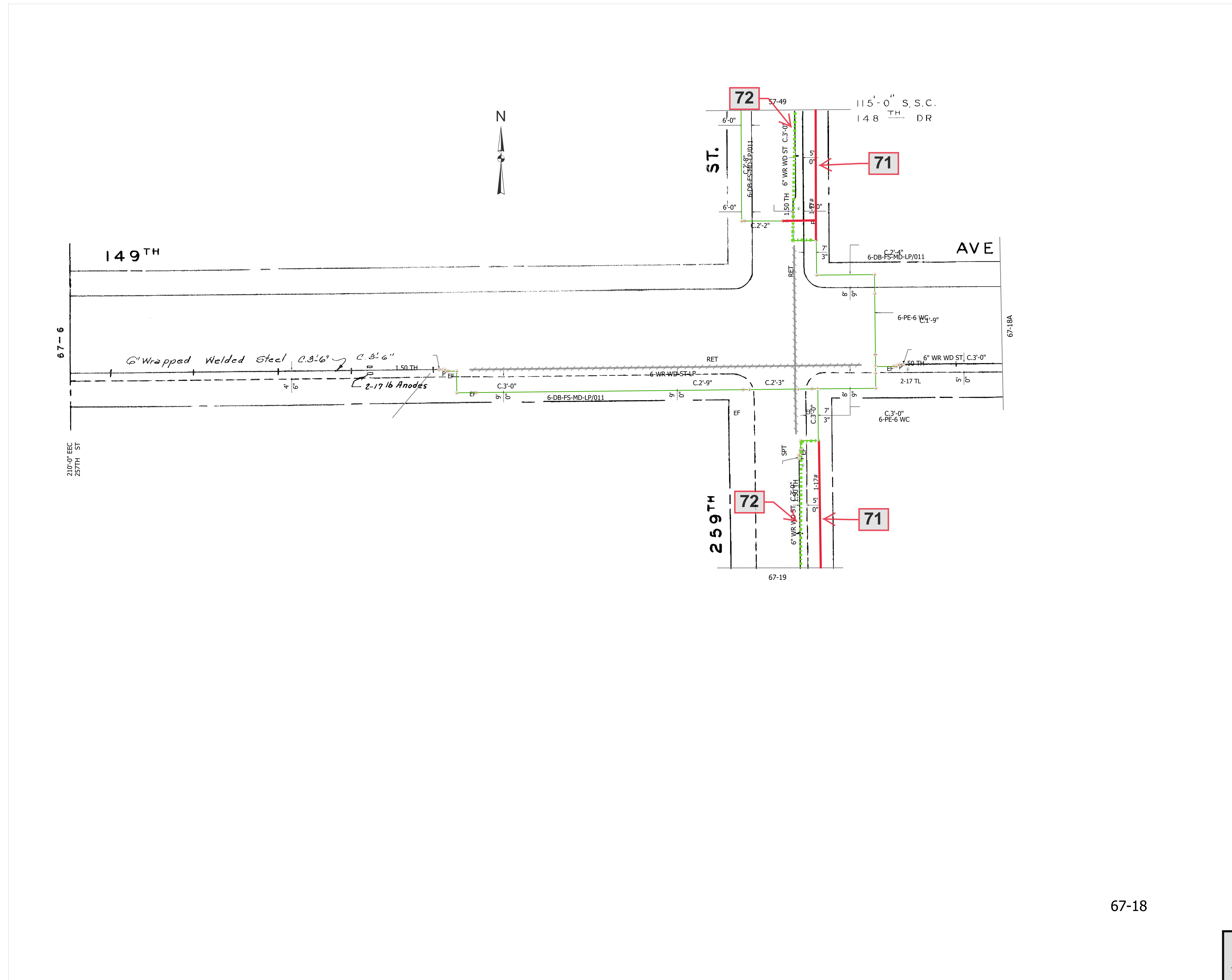


1 inch equals 30 feet EP7-27A25

*NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status*

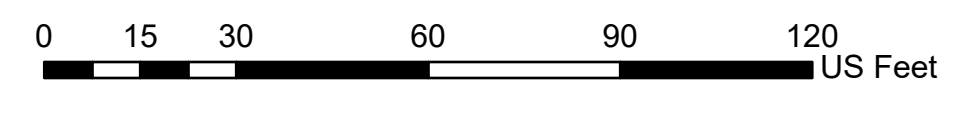


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67-18

HWQ274F2  
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ID 67 - 18

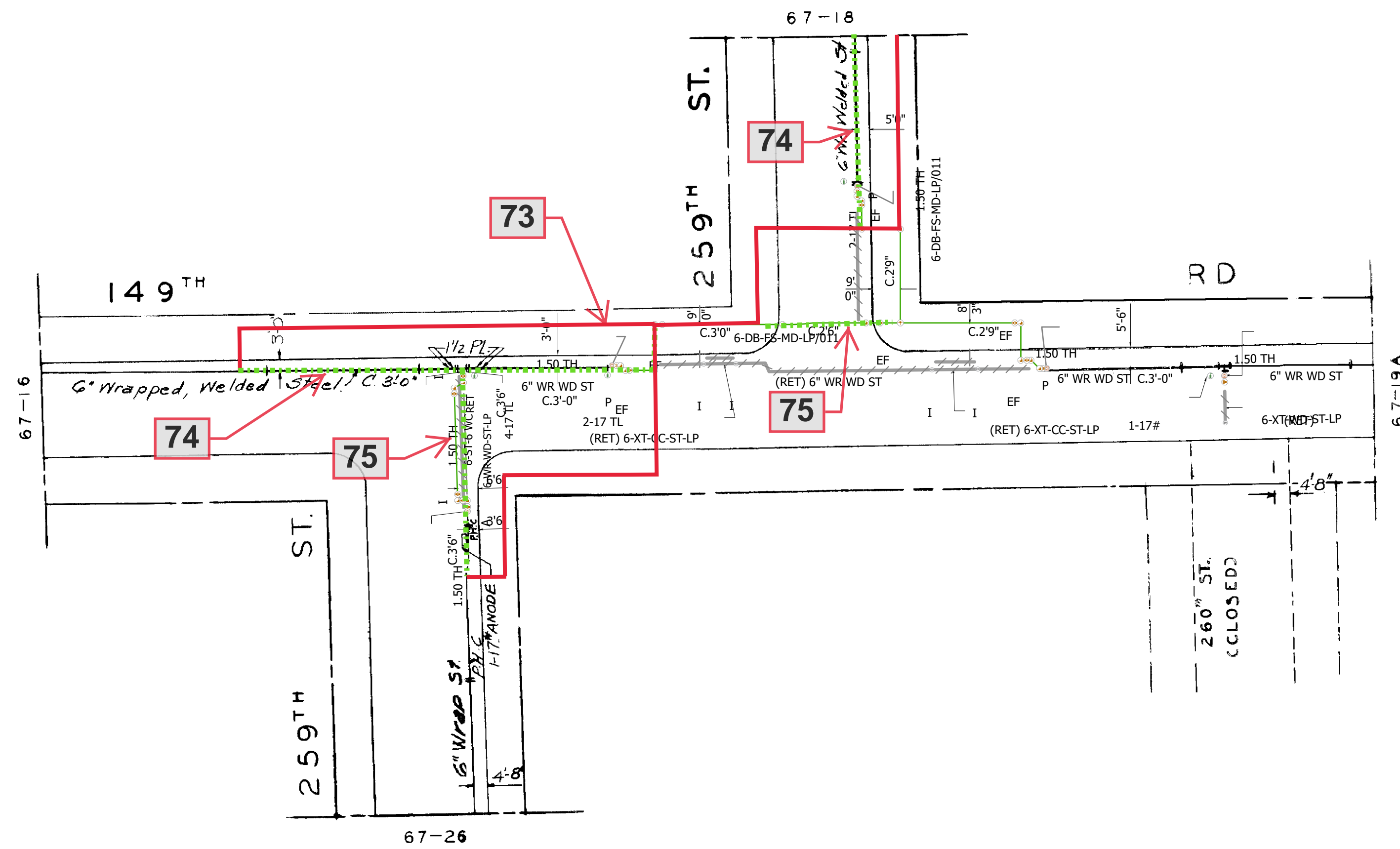


1 inch equals 30 feet EP7-27A26

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

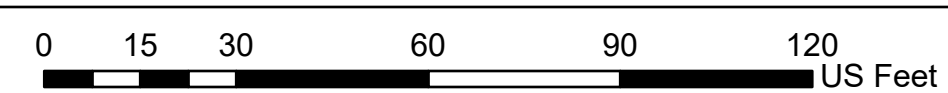


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ID-67-18



67-19

HWQ274F2  
SHEET 24 OF 27  
ID 67 - 19

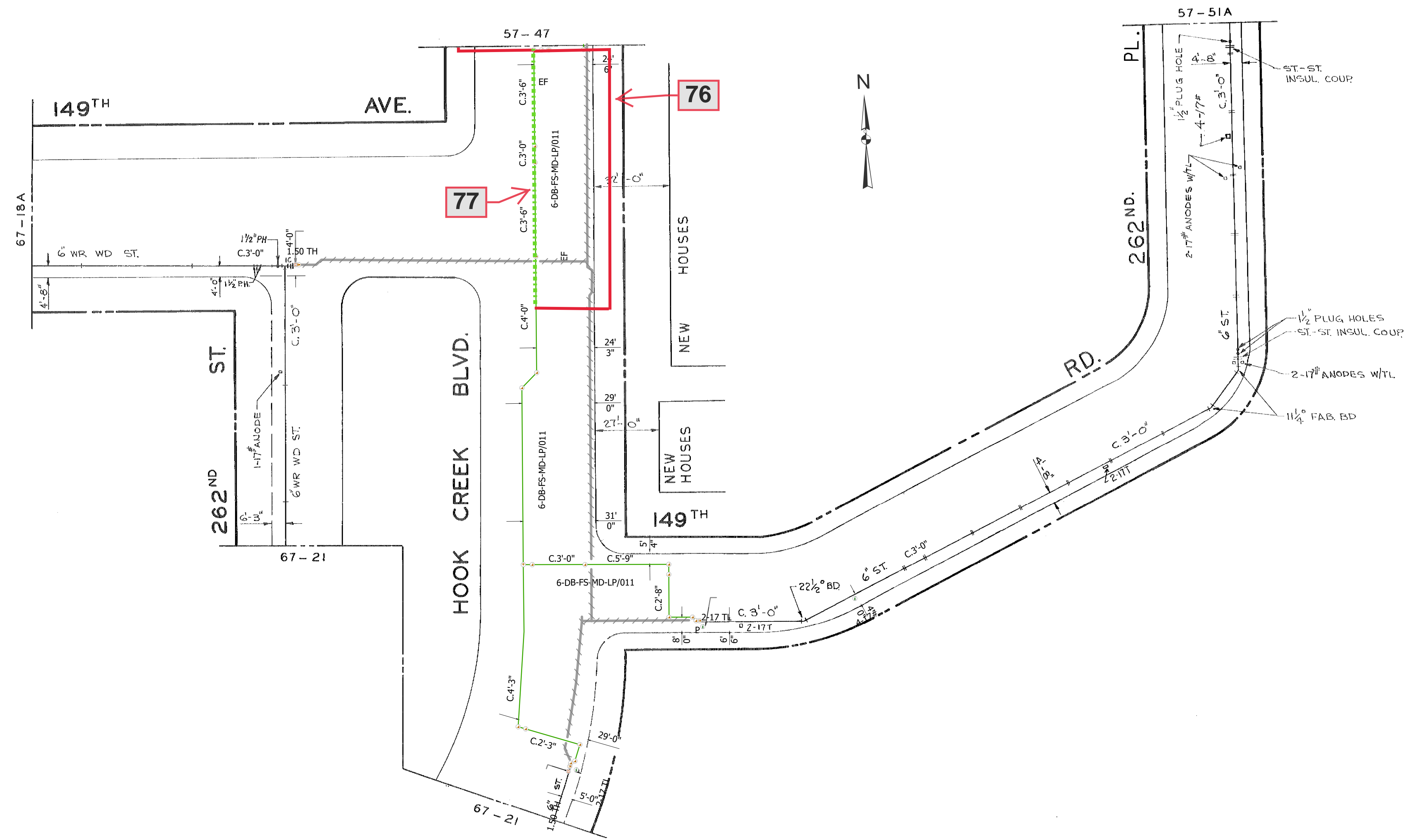


1 inch equals 30 feet

EP7-27A27

NOTE: The location of surface and underground objects shown are not warranted to be correct.  
Refer to the world map for the most current SOP status

**nationalgrid**



67-20

HWQ274F2  
SHEET 25 OF 27  
ID 67 - 20

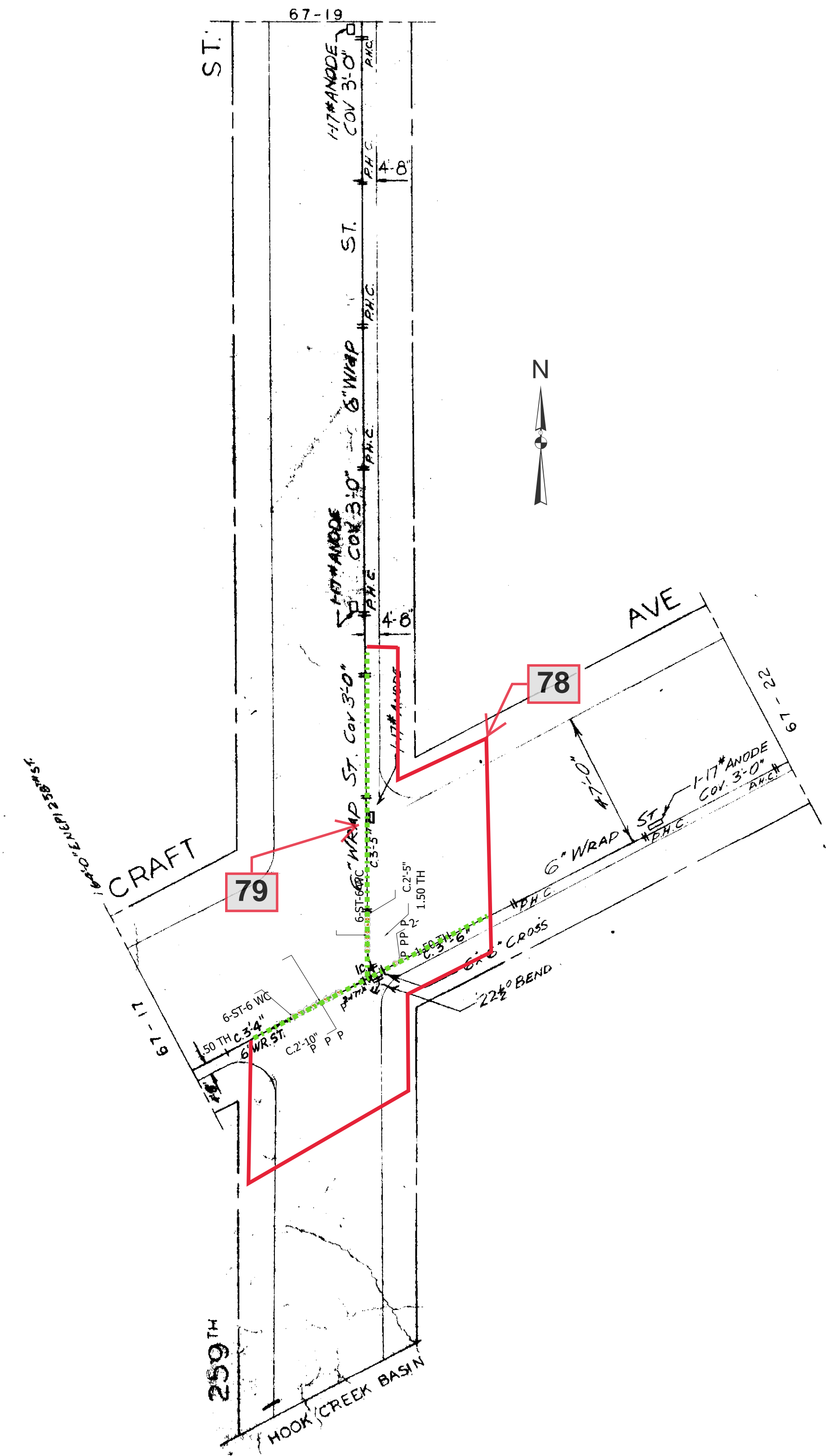
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1 inch equals 30 feet

EP7-27A28

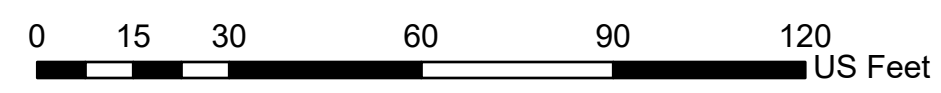
NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

**nationalgrid**



67-26

HWQ274F2  
 SHEET 26 OF 27  
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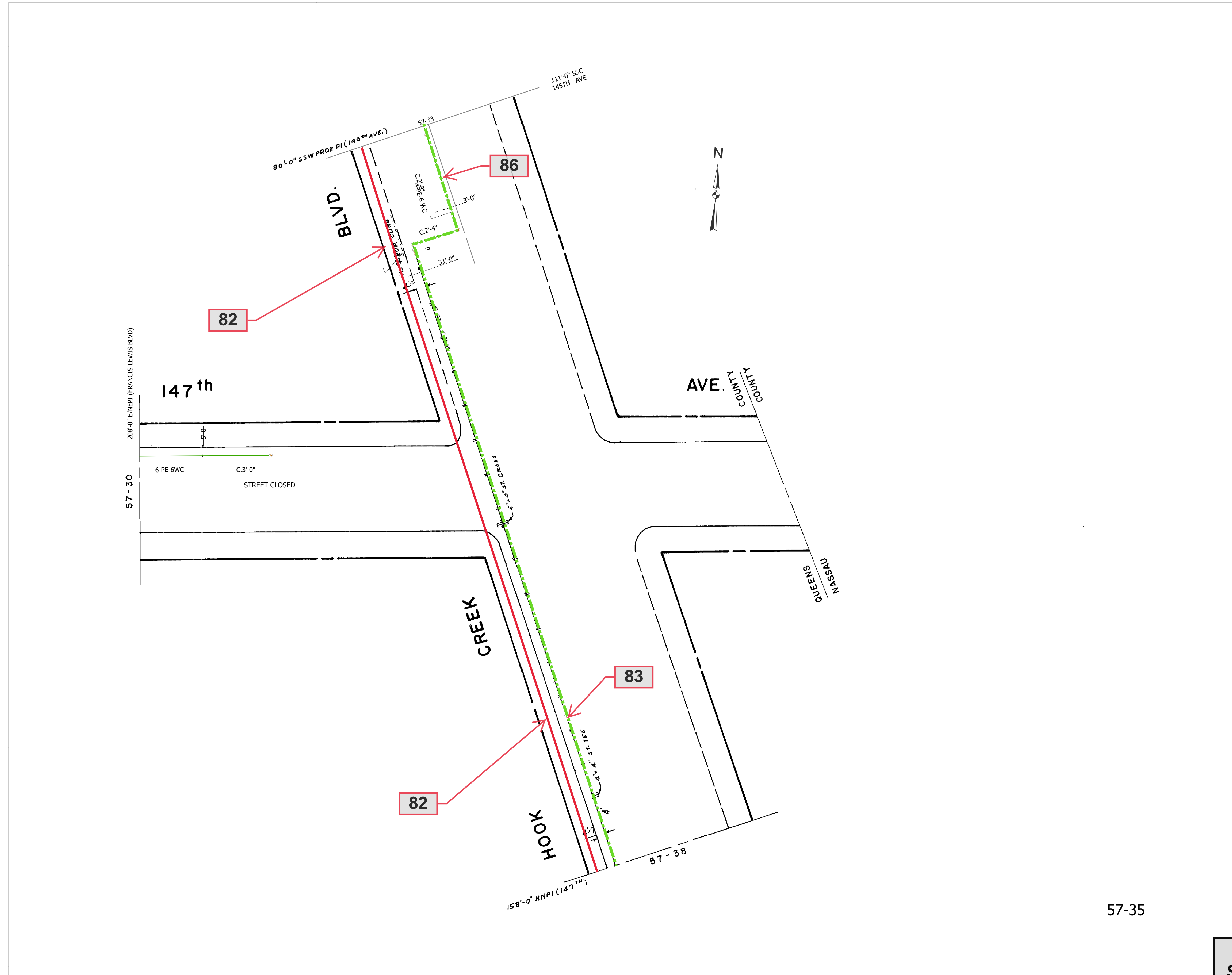


1 inch equals 30 feet EP7-27A29

NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

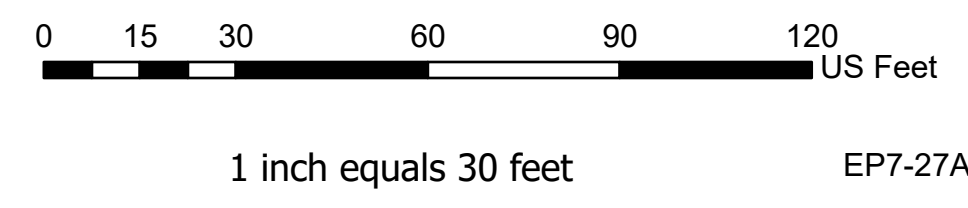






57-35

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ID 57 - 35



NOTE: The location of surface and underground objects shown are not warranted to be correct. Refer to the world map for the most current SOP status

ID-57-35  
ID-57-35



**VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID  
ITEMS QUANTITIES.**

(NO TEXT IN THIS AREA, TURN PAGE)

**SCOPE OF WORK  
SUPPORT AND PROTECTION  
FOR CONTRACT NUMBER HWQ274F2**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

**6.01.1 (NG) Support & Protect Gas Main Crossing Sewer Up To 24" In Diameter (Ea.)**

- 1 @ 149th Av & Hook Creek Blvd
- 2 @ 145th Av & Hook Creek Blvd
- 1 @ 147th Av & Francis Lewis Blvd
- 2 @ 148th Dr & 259th St
- 1 @ 147th Rd & 259th St
- 1 @ 147th Rd & Hook Creek Blvd
- 2 @ Hook Creek Blvd & Frankton St
- 1 @ 147th Dr & Francis Lewis Blvd
- 1 @ 147th Dr & 259th St
- 1 @ 147th Av & 259th St

**6.01.2A (NG) Support & Protect Gas Main Crossing Sewer 38"W x 24"H H.E.R.C. (Ea.)**

- 1 @ 257<sup>th</sup> St & Hook Creek Blvd
- 1 @ Hook Creek Blvd & Frankton St

**6.01.3 (NG) Support & Protect Gas Main Crossing Sewer 36" Thru 42" In Diameter (Ea.)**

- 1 @ 149th Rd & 259th St
- 1 @ 148th Av & 259th St
- 2 @ 149<sup>th</sup> Av & 259<sup>th</sup> St

**6.01.4 (NG) Support & Protect Gas Main Crossing Sewer 48" Thru 54" In Diameter (Ea.)**

- 1 @ 49th Av & Hook Creek Blvd

**6.01.4C (NG) Support & Protect Gas Main Crossing Sewer 45"W x 29"H H.E.R.C. (Ea.)**

- 1 @ 145th Av & Hook Creek Blvd
- 1 @ 147th Rd & 259th St
- 1 @ 147th Rd & Hook Creek Blvd
- 1 @ 147th Rd & Francis Lewis Blvd

**6.01.4D (NG) Support & Protect Gas Main Crossing Sewer 4'-0"W x 2'-6"H F.T.R.C. (Ea.)**

- 1 @ 147th Dr & Francis Lewis Blvd

**SCOPE OF WORK  
SUPPORT AND PROTECTION  
FOR CONTRACT NUMBER HWQ274F2**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

**6.01.5D (NG) Support & Protect Gas Main Crossing Sewer 53"W x 34"H H.E.R.C. (Ea.)**

1 @ 147th Dr & 259<sup>th</sup> St

**6.01.6E (NG) Support & Protect Gas Main Crossing Sewer 6'-0"W x 3'-0"H F.T.R.C. (Ea.)**

1 @ 147th Dr & Hook Creek Blvd

**6.01.6M (NG) Support & Protect Gas Main Crossing Sewer 5'-6"W x 4'-0"H F.T.R.C. (Ea.)**

1 @ 149th Rd & 259<sup>th</sup> St

**6.01.8 (NG) Support & Protect Gas Services Crossing Trenches and/or Excavations (Ea.)**

128 in Various Locations As Required

**6.01.9 (NG) Support & Protect Gas Main Crossing Water Main Up To 20" In Diameter (Ea.)**

1 @ 147th RD AND HOOK CREEK BLVD  
1 @ 257TH ST AND HOOK CREEK BLVD  
3 @ 145TH AV AND FRANCIS LEWIS BLVD  
2 @ 148TH RD AND HOOK CREEK BLVD  
1 @ 149TH RD AND 259TH ST  
2 @ 148TH AV AND 259TH ST  
2 @ 145TH AV AND HOOK CREEK BLVD  
2 @ HOOK CREEK BLVD AND FRANKTON ST  
1 @ 147TH AV AND FRANCIS LEWIS BLVD  
1 @ 147th DR AND HOOK CREEK BLVD  
2 @ 149TH AV AND 259TH ST  
2 @ 148TH RD AND 259TH ST  
2 @ 147<sup>th</sup> Rd & 259 St

**6.02 (NG) Extra Excavation For the Installation of Catch Basin Sewer Drain Pipes with gas interferences (Ea.)**

7 in Various Locations As Required

**6.03 (NG) Removal Of Abandoned Gas Facilities. All Sizes (L.F.)**

4200 in Various Locations As Required

**SCOPE OF WORK  
SUPPORT AND PROTECTION  
FOR CONTRACT NUMBER HWQ274F2**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

**6.03.1 (NG) Removal Of Abandoned Gas facilities with Possible Coal Tar Wrap. All sizes. (L.F.)  
(For National Grid work Only)**

7600 in Various Locations As Required

**6.04 (NG) Adjust Hardware to Grade Using Spacer Rings/Adaptors (Street repaving) (Ea.)**

100 in Various Locations As Required

**6.05 (NG) Adjust Hardware to Grade by Resetting (Road Reconstruction) (Ea.)**

70 in Various Locations As Required

**6.06 (NG) Special Care Excavation & Backfilling (C.Y.)**

3100 in various locations, as required, including but not limited to all gas services crossing unsheeted water main trenches.

**6.07 (NG) Test Pits For Gas Facilities (C.Y.)**

100 in Various Locations As Required

**6.09 (NG) Trench Excavation And Backfill For New Gas Mains & Services. Gas installed by others. (C.Y.) (For National Grid work Only)**

100 in Various Locations As Required

**END OF EP7-PAGES**

THE EP7-PAGES CONSIST OF SEVENTY-ONE (71) PAGES

**HAZ - PAGES****SUPPLEMENTAL DOCUMENTATION FOR USE WITH  
SPECIFICATIONS FOR HANDLING,  
TRANSPORTATION AND DISPOSAL OF  
NONHAZARDOUS AND POTENTIALLY HAZARDOUS  
CONTAMINATED MATERIALS**

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**NOTICE**

THE PAGES CONTAINED IN THIS SECTION ARE ISSUED FOR THE PURPOSE OF SPECIFYING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND HEREBY MADE PART OF SAID CONTRACT DOCUMENTS.

(NO TEXT ON THIS PAGE)



**PROJECT ID: HWQ274F2**

**RECONSTRUCTION OF THE ROSEDALE AREA  
FRANCIS LEWIS BLVD., HOOK CREEK BLVD., AND OTHERS**

**BOROUGH OF QUEENS  
CITY OF NEW YORK**

**SUPPLEMENTAL DOCUMENTATION FOR USE WITH SPECIFICATIONS FOR  
HANDLING, TRANSPORTATION, AND DISPOSAL  
OF POTENTIAL AND IDENTIFIED  
CONTAMINATED AND HAZARDOUS MATERIALS**

**SUPPLEMENTAL DOCUMENTATION FOR USE WITH SPECIFICATIONS FOR  
HANDLING, TRANSPORTATION, AND DISPOSAL  
OF POTENTIAL AND IDENTIFIED  
CONTAMINATED AND HAZARDOUS MATERIALS**

**RECONSTRUCTION OF THE ROSEDALE AREA  
FRANCIS LEWIS BLVD., HOOK CREEK BLVD., AND OTHERS**

**BOROUGH OF QUEENS  
CITY OF NEW YORK**

**Project ID: HWQ274F2**

**Prepared By:**

 **Department of  
Design and  
Construction**  
30-30 Thomson Avenue  
Long Island City, New York 11101

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These Haz-Pages are to be read in conjunction with the corresponding 8.01 sections of  
STANDARD HIGHWAY SPECIFICATIONS, May 16, 2022.

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**ATTACHMENT 1**

**Phase II Subsurface Corridor Investigation Report  
For  
RECONSTRUCTION OF THE ROSEDALE AREA  
FRANCIS LEWIS BLVD., HOOK CREEK BLVD., AND OTHERS  
(LiRo Engineers dated October 31, 2022)**

- Final -

**Phase II Subsurface Corridor Investigation Report**  
**For**  
**RECONSTRUCTION OF ROSEDALE AREA**  
**FRANCIS LEWIS BLVD., HOOK CREEK BLVD., AND OTHERS**  
**QUEENS, NEW YORK**

DDC PROJECT NO. HWQ274F2

TASK ID NO. 2022OEHS0792-01

WORK ORDER NO. OEHS-20201409798-WOL-224

CONTRACT REGISTRATION NO. 20201409798

Prepared for:



Office of Environmental and Hazmat Services  
30-30 Thomson Avenue, Third Floor  
Long Island City, New York 11101

Prepared by:



LiRo Engineers, Inc.  
703 Lorimer Street  
Brooklyn, New York 11211

PROJECT NO. 19-294-0265

October 31, 2022

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## EXECUTIVE SUMMARY

On behalf of the New York City Department of Design and Construction (DDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the HWQ274F2 Corridor bounded by Hook Creek Boulevard, 257<sup>th</sup> Street, Francis Lewis Boulevard, and the Nassau County line in the Rosedale neighborhood of Queens, New York (hereinafter referred to as the “Corridor”) to determine if the Corridor’s environmental condition might impact proposed construction activities. The proposed construction activities for the Corridor consists of excavation for the full reconstruction of streets including water main and storm and sanitary sewer replacement.

The Corridor is approximately 2.4 miles (12,747 feet) long and is comprised of the following street segments:

Street Segments	Length (feet)
Hook Creek Boulevard between 257 <sup>th</sup> Avenue and 149 <sup>th</sup> Avenue	2,512
Francis Lewis Boulevard between 145 <sup>th</sup> Avenue and Hook Creek Boulevard	1,400
259 <sup>th</sup> Street between 147 <sup>th</sup> Avenue and 148 <sup>th</sup> Avenue	925
Frankton Street between 145 <sup>th</sup> Avenue and Hook Creek Boulevard	415
145 <sup>th</sup> Avenue between Memphis Avenue and Hook Creek Boulevard	1,365
147 <sup>th</sup> Avenue between 258 <sup>th</sup> Street and Francis Lewis Boulevard	595
147 <sup>th</sup> Road between 258 <sup>th</sup> Street and Francis Lewis Boulevard	830
147 <sup>th</sup> Drive between 257 <sup>th</sup> Street and Hook Creek Boulevard	1,475
148 <sup>th</sup> Avenue between 259 <sup>th</sup> Street and Hook Creek Boulevard	845
148 <sup>th</sup> Road between 259 <sup>th</sup> Street and Hook Creek Boulevard	885
148 <sup>th</sup> Drive between 259 <sup>th</sup> Street and Hook Creek Boulevard	865
149 <sup>th</sup> Road from 262 <sup>nd</sup> Street to 145 feet east of 262 <sup>nd</sup> Street	145
Rosedale Road between Hook Creek Boulevard and the Nassau County line	410
262 <sup>nd</sup> Place from Rosedale Road to 80 feet south of Rosedale Road	80

As part of this investigation, LiRo was provided with the “*Notice of Commencement of Environmental Review and Establishment of Lead Agency Status for DOT Proposed Action: Reconstruction of the Rosedale Area Streets, Queens*”. According to that document, in January 2005, a “*Phase I Site Investigation Report of the Rosedale Project Area*” was prepared by the DDC’s consultant which identified four potential areas of contamination within or immediately adjacent to the project area. Based on these findings, a “*Limited Subsurface Corridor Investigation (LSCI)*” was conducted by LiRo and a report was issued in May 2005. The soil and groundwater laboratory analytical results identified the following:

- Benzo(a)anthracene and benzo(a)pyrene were detected in one soil sample at a level above the Technical and Administrative Guidance Memorandum (TAGM) recommended soil cleanup objectives and the Spill Technology and Remediation Series (STARS) human health guidance value.
- Chrysene was also detected in the same soil sample above the TAGM groundwater protection criteria and the recommended soil cleanup objectives.
- Zinc and copper were the only metals found above the TAGM criteria for soil.

Based on LiRo's review of the analytical results obtained in 2005, all concentrations were detected below the New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Restricted Use Commercial (Track 2) Soil Cleanup Objectives (SCOs).

The proposed depth of excavation for this DDC infrastructure project is estimated at 10 feet below grade (ftbg). Based on the review of available information provided by the DDC and discussions with the DDC Project Manager, LiRo proposed the advancement of 31 soil borings and three temporary well point (TWP) along the Corridor to characterize soil and groundwater (if observed) that may be encountered during construction and to assess the presence of subsurface contamination that might impact proposed construction activities. The Phase II SCI was completed between September 13, 2022 and September 21, 2022 and consisted of the following components:

- The advancement of 31 borings to terminal depths ranging from 10 to 15 ftbg and the field screening of soil samples, including photo-ionization detector (PID) readings and visual and olfactory indicators of contamination (staining, odors);
- The collection of 31 grab soil samples which were analyzed for United States Environmental Protection Agency (USEPA) Target Compound List (TCL) volatile organic compounds (VOCs);
- The collection of 31 composite soil samples which were analyzed for: Polycyclic Aromatic Hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); Total Petroleum Hydrocarbon Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO); Resource Conservation and Recovery Act (RCRA) Characteristics; and, Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals; and,
- The installation of three TWPs within soil borings SB-05, SB-14, and SB-21, the collection of one groundwater sample (TWP-05, TWP-14 and TWP-21) from each TWP and the laboratory analyses of these samples for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria); and,
- The preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution.

In order to evaluate the subsurface soil and groundwater quality, laboratory analytical results were compared with the regulatory standards identified in: (1) NYSDEC Subpart 375-6: Remedial Program Restricted Use Commercial (Track 2) SCOs; and/or, (2) Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 371. In order to evaluate the groundwater quality, the laboratory analytical results for the groundwater samples were compared to the NYCDEP Sewer Discharge Criteria.

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following findings, conclusions, and recommendations are presented:



### Findings

- In January 2005, a “Phase I Site Investigation Report of the Rosedale Project Area” was prepared by the DDC’s consultant which identified four potential areas of contamination within or immediately adjacent to the project area. Based on these findings, a Limited Subsurface Investigation was conducted by a DDC consultant and a report was issued in May 2005. Based on these findings, a “Limited Subsurface Corridor Investigation (LSCI)” was conducted by LiRo and a report was issued in May 2005. The soil and groundwater laboratory analytical results identified the following:
  - benzo(a)anthracene and benzo(a)pyrene were detected in one soil sample at a level above the TAGM recommended soil cleanup objectives and the STARS human health guidance value.
  - Chrysene was also detected in the same soil sample above the TAGM groundwater protection criteria and the recommended soil cleanup objectives.
  - Zinc and copper were the only metals found above the TAGM criteria for soil.
- Based on LiRo’s review of the analytical results obtained in 2005, all concentrations were detected below the NYSDEC Subpart 375-6: Remedial Program Restricted Use Commercial (Track 2) SCOs.
- The subsurface soils encountered during this Phase II SCI consisted predominantly of beige to dark brown fine to coarse sand with a trace of silt and gravel from grade to 15 ftbg. Man-made materials (i.e., brick ), which are indicative of urban fill, were encountered at three of thirty-one soil borings (SB-21, SB-22, and SB-23) at depths ranging from grade to 9 ftbg. A peat layer was encountered in Soil Boring SB-21 below the fill at 9 to 10 feet below ground surface. Groundwater was encountered within the on-site borings at depths ranging from 7 to 13 ftbg. Bedrock was not encountered during the Phase II SCI.
- Field screening (i.e., PID readings and visual and olfactory observations) did not identify impacted soils within the Corridor.
- Up to three VOCs were detected in nine of the 31 grab samples collected. The three detected VOCs were Acetone, methyl ethyl ketone, and/or methylene chloride that were at concentrations below the Part 375 Restricted Use Commercial SCOs in the nine grab samples. Acetone and methylene chloride are common laboratory cross contaminants and may not be representative of subsurface conditions.
- No PAHs were detected in the 31 composite samples collected.
- No PCBs were detected in the 31 composite samples collected.
- TCLP RCRA metals were detected in all 31 composite samples collected. Barium, chromium, lead, and/or selenium were detected at concentrations below their corresponding 6 NYCRR Part 371 and RCRA standards. Based on their consistency, most of the detected concentrations are attributed to background levels.

- Ignitability (flash point), reactivity (cyanide and sulfide), and corrosivity (pH) were within the acceptable RCRA ranges.
- TPHC-DRO were detected at concentrations ranging from approximately 0.758 mg/kg to 9.100 mg/kg in all 31 composite samples collected. TPHC-GRO were detected at concentrations ranging from approximately 0.033 micrograms per kilograms (mg/kg) to 2.63 mg/kg in all 31 composite samples collected. There are no regulatory standards for TPHC-DRO and TPHC-GRO. Analytical results will need to be compared to levels acceptable by the chosen receiving facility to determine appropriate waste characterization prior to off-site disposal.
- Total Suspended Solids (TSS) were detected at concentrations of 879 micrograms per liter (mg/L) in sample TWP-05 and 2,030 mg/L in sample TWP-21. These concentrations exceed the NYCDEP Sewer Discharge Limitation of 350 mg/L. The presence of TSS in the groundwater is attributed to the fact that the (unfiltered) sample was collected from a TWP and not a permanent monitoring well. However, the groundwater sample collected from a TWP is considered to be more representative of conditions to be encountered during construction activities. Based on the results for TSS, groundwater does not meet NYCDEP Sewer Discharge Criteria and may require pre-treatment prior to discharge. All other parameters were within NYCDEP Sewer Discharge Criteria. Refer to Table 6 for a summary of selected NYCDEP parameters in groundwater.

### Conclusions

- Field screening (i.e., PID readings and visual and olfactory observations) did not identify any petroleum-impacted soils within the Corridor;
- Laboratory analytical results did not identify sampled parameters exceeding the NYSDEC Restricted Use Commercial SCOs in the 31 composite samples. However, laboratory analytical results identified the presence of elevated concentrations of petroleum components (i.e., DRO/GRO) in subsurface soils in the Corridor. The DRO and GRO is attributed primarily to: (a) residuals from releases of petroleum products from the “High” and “Moderate” risk sites identified on and in the vicinity of the Corridor; and/or (b) contaminants in urban fill material placed on the Corridor;
- The subsurface soil samples collected from the Corridor did not exhibit hazardous waste characteristics;
- Groundwater samples contained concentrations of TSS that exceeded the NYCDEP Sewer Discharge Criteria. The presence of elevated levels of TSS in the groundwater may be attributed to the fact that the sample was unfiltered and collected from a TWP and not a permanent monitoring well. However, the groundwater samples collected from TWPs are considered to be more representative of conditions to be encountered during construction activities.

### Recommendations

- The Contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous contaminated soil. All soil shall be managed, transported and disposed of in accordance with NYSDEC Part 360 requirements. The Contractor should submit a Material Handling Plan, to identify the specific protocols and procedures that will be employed to manage potentially contaminated waste, if encountered, during construction, in accordance with applicable regulations;
- Due to the presence of DRO/GRO in the investigated sites, to minimize the creation and dispersion of fugitive airborne dust, the Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities;
- Should dewatering become necessary during construction activities within the Corridor, the Contractor will be required to obtain NYCDEP sewer discharge permit. In addition, based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater requires pre-treatment due to the presence of TSS prior to discharge to sanitary or combined sewers;
- If discharge into storm sewers is required during dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and,
- Before beginning any excavation activity, the Contractor should submit a Corridor-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the New York State Department of Health (NYSDOH) and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e., dust control procedures for DRO/GRO).

## 1.0 INTRODUCTION

On behalf of the New York City Department of Design and Construction (DDC), LiRo Engineers, Inc. (LiRo) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the HWQ274F2 Corridor bounded by Hook Creek Boulevard, 257<sup>th</sup> Street, Francis Lewis Boulevard, and the Nassau County line in the Rosedale neighborhood of Queens, New York (hereinafter referred to as the “Corridor”) to determine if the Corridor’s environmental condition might impact proposed construction activities. The proposed construction activities for the Corridor consists of excavation for the full reconstruction of streets including water main and storm and sanitary sewer replacement.

The Corridor is approximately 2.4 miles (12,747 feet) long and is comprised of the following street segments:

Street Segments	Length (feet)
Hook Creek Boulevard between 257 <sup>th</sup> Avenue and 149 <sup>th</sup> Avenue	2,512
Francis Lewis Boulevard between 145 <sup>th</sup> Avenue and Hook Creek Boulevard	1,400
259 <sup>th</sup> Street between 147 <sup>th</sup> Avenue and 148 <sup>th</sup> Avenue	925
Frankton Street between 145 <sup>th</sup> Avenue and Hook Creek Boulevard	415
145 <sup>th</sup> Avenue between Memphis Avenue and Hook Creek Boulevard	1,365
147 <sup>th</sup> Avenue between 258 <sup>th</sup> Street and Francis Lewis Boulevard	595
147 <sup>th</sup> Road between 258 <sup>th</sup> Street and Francis Lewis Boulevard	830
147 <sup>th</sup> Drive between 257 <sup>th</sup> Street and Hook Creek Boulevard	1,475
148 <sup>th</sup> Avenue between 259 <sup>th</sup> Street and Hook Creek Boulevard	845
148 <sup>th</sup> Road between 259 <sup>th</sup> Street and Hook Creek Boulevard	885
148 <sup>th</sup> Drive between 259 <sup>th</sup> Street and Hook Creek Boulevard	865
149 <sup>th</sup> Road from 262 <sup>nd</sup> Street to 145 feet east of 262 <sup>nd</sup> Street	145
Rosedale Road between Hook Creek Boulevard and the Nassau County line	410
262 <sup>nd</sup> Place from Rosedale Road to 80 feet south of Rosedale Road	80

### 1.1 Summary of Previous Environmental Investigations

As part of this investigation, LiRo was provided with the “Notice of Commencement of Environmental Review and Establishment of Lead Agency Status for DOT Proposed Action: Reconstruction of the Rosedale Area Streets, Queens”. According to that document, in January 2005, a “Phase I Site Investigation Report of the Rosedale Project Area” was prepared by the DDC’s consultant which identified four potential areas of contamination within or immediately adjacent to the project area. Based on these findings, a “Limited Subsurface Corridor Investigation (LSCI)” was conducted by LiRo and a report was issued in May 2005. The soil and groundwater laboratory analytical results identified the following:

- Benzo(a)anthracene and benzo(a)pyrene were detected in one soil sample at a level above the TAGM recommended soil cleanup objectives and the STARS human health guidance value.
- Chrysene was also detected in the same soil sample above the TAGM groundwater protection criteria and the recommended soil cleanup objectives.
- Zinc and copper were the only metals found above the TAGM criteria for soil.

Based on LiRo's review of the analytical results obtained in 2005, all concentrations were detected below the NYSDEC Subpart 375-6: Remedial Program Restricted Use Commercial (Track 2) SCOs.

## 1.2 Scope of Work

The Phase II SCI consisted of a field investigation, laboratory analyses, and the preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution. Drilling activities for the field investigation were performed by Associated Environmental Services, Limited (AES) of Hauppauge, New York. Oversight of drilling activities was performed by Eva Jakubowska of LiRo. Laboratory analyses were provided by Chemtech of Mountainside, New Jersey, a NYS Department of Health (NYSDOH) approved laboratory (No. 11376). Field derived Quality Assurance/Quality Control (QA/QC) samples (i.e., field blanks, trip blanks, duplicates) were not collected for this project. The field investigation was conducted from September 13 through September 21, 2022, and consisted of the following components.

- The advancement of 31 borings (SB-01 through SB-31) to terminal depths ranging from 10 to 15 ftbg.
- The borings were advanced using a GeoProbe direct push drill rig. Prior to direct push advancement, borings were cleared to a depth of 6 feet using a hand auger and/or a vacuum excavator (Vacex). Soil samples were collected using 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. In addition, a Health and Safety Plan was prepared prior to commencing fieldwork.
- Field screening, classification, and identification of soils was conducted from the ground surface to the bottom of each boring. Soil samples were visually classified in the field using the Unified Soil Classification System (USCS). Field screening consisted of visual and olfactory indicators of impacts as well as screening with a photoionization detector (PID).
- The collection of one composite and one grab sample from each of the 31 soil boring locations (SB-01 through SB-31). The composite samples were comprised of soil from the entire boring column. The grab samples were collected from the 6-inch interval exhibiting evidence of petroleum impacts (highest PID reading) or from the bottom 6-inch interval in each boring.
- Laboratory analysis of the composite samples for: (1) Polycyclic Aromatic Hydrocarbons (PAHs) via United States Environmental Protection Agency (USEPA) Method 8270D; (2) Polychlorinated Biphenyls (PCBs) via USEPA Method 3550B/8082; (3) Total Petroleum Hydrocarbon Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO) via USEPA Method 8015B; (4) Resource Conservation and Recovery Act (RCRA) Characteristics via USEPA SW-846; and, (5) Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals via USEPA SW-846.
- Laboratory analysis of the grab samples for TCL volatile organic compounds (VOCs) by USEPA Method 8260C.

- The installation of three TWPs in borings SB-05, SB-14, and SB-21, and the collection of one groundwater sample (TWP-05, TWP-14, and TWP-21) from each TWP using direct push technology by installing a slotted PVC screen perpendicular to the groundwater table and riser pipe to grade. Dedicated PVC tubing was deployed in each TWP and connected to a check valve to extract the groundwater samples.
- Laboratory analysis of the groundwater samples for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria).

## 2.0 CORRIDOR INFORMATION

### 2.1 Corridor Location, Description and Use

The Corridor is approximately 2.4 miles (12,747 feet) long and is located in the Rosedale section of the Borough of Queens, New York. The Corridor is bound by Hook Creek Boulevard, 257th Street, Francis Lewis Boulevard, and the Nassau County line, which is developed with paved roadways and existing infrastructure systems.

Property usage adjoining the Corridor during the inspection consists primarily of commercial and residential properties. A map of the Corridor area is presented as Figure 2.

### 2.2 Description of Surrounding Properties

Property usage surrounding the Corridor are primarily comprised of commercial and residential properties.

### 2.3 Corridor and Regional Topographic Setting

Based on a review of the *United States Geological Survey (USGS.) 7.5-Minute Quadrangle Map, Lynbrook, NY, dated 2021*, the elevation of the Corridor is approximately 10 feet above mean sea level (amsl). The topography of the immediate Corridor area is gently sloping to the south-southeast towards Hook Creek. A copy of the USGS Map is presented in Figure 1.

### 2.4 Corridor and Regional Geology

Based on the *Geologic Map of New York State (Lower Hudson Sheet dated 1970)*, the Corridor is located within the Coastal Plain Deposits and specifically within the Monmouth Group. The Coastal Plain Deposits range in depth from 0 to 2,000 ftbg.

Based on the *Surficial Geologic Map of New York (Lower Hudson Sheet dated 1989)*, the surficial geology in the Corridor area is characterized by outwash sand and gravel. The outwash sand and gravel varies in thickness from 6 to 60 feet.

The Corridor is located within the Atlantic Coastal Plain Physiographic Province which is characterized by flat to gently undulating plains of unconsolidated sedimentary deposits. The Corridor is located within the southern portion of the Wisconsin glaciation of the New York/New England region.

The subsurface soils encountered during this Phase II SCI consisted predominantly of beige to dark brown fine to coarse sand with a trace of silt and gravel from grade to 15 ftbg. Man-made materials (i.e., brick), which are indicative of urban fill, were encountered in the southeast portion of the Corridor at depths ranging from grade to 9 ftbg. Bedrock was not encountered during the Phase II SCI.

## 2.5 Corridor and Regional Hydrogeology

During the Phase II SCI, groundwater was encountered within the on-site borings at depths ranging from 7 to 13 ftbg. The nearest surface water body is Hook Creek, which is approximately 150 feet east and south of the Corridor. Groundwater is anticipated to flow south-southeast toward Hook Creek. Groundwater flow direction may also vary due to seasonal fluctuations in precipitation, local variation in subsurface lithology, underground structures, or local dewatering operations.

The first unconfined aquifer encountered is the upper glacial aquifer. The depth to the water table varies, but generally follows topography. Generally, groundwater flow follows topographic elevation of the area with flow migrating from higher to lower elevations.

Based on the information supplied by the *National Wetland Inventory* and the *New York State Department of Environmental Conservation (NYSDEC)* environmental resource mapper, the Corridor does not fall within mapped wetland areas. The closest national wetland is Hook Creek which is located approximately 100 feet east and south of the Corridor. This wetland is identified as E1UBL (Estuarine Subtidal Unconsolidated Bottom Subtidal). The closest NYSDEC wetland is located approximately 0.7 miles west of the Corridor.

*Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM)* were accessed from the FEMA website. Two map panels (number 3604970261F and 3604970263F, effective 9/05/07) indicate that portions of the Corridor are located within flood zones, while other portions are not. The Corridor is identified with the following:

- Flood Zone X (Area of Minimal Flood Hazard);
- Zone AE (Elevation 8); and,
- A 0.2 percent annual change flood hazard, areas of 1 percent annual chance flood with average depth less than one foot or with drainage areas of less than one square mile.



### 3.0 CORRIDOR EVALUATION

LiRo provided oversight for the advancement of 31 soil borings and the collection of soil and groundwater samples during the field investigation at the designated areas in the vicinity of the planned construction. The soil and groundwater samples from the borings and TWP's were transferred into laboratory supplied sample jars, properly labeled, and stored in a cooler with ice to preserve the samples at 4° Celsius prior to and during shipment. A chain-of-custody was prepared prior to sample shipment. A summary of the field observations, including the location of the sites and the details of the soil borings, is provided in Table 1.

#### 3.1 Soil Quality Investigation

Thirty-one (31) borings (SB-01 through SB-31) were advanced to terminal depths ranging from 10 to 15 ftbg using a GeoProbe direct push drill rig. Prior to direct push advancement, borings were cleared to a depth of 6 ftbg using a hand auger and/or a vacuum excavator. Soil samples were collected using 5-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. Soil boring locations are shown on Figure 2. The designations and sampling intervals for the samples that were submitted to the laboratory are included in Table 1. Maps depicting each boring location are included in Appendix A. Boring logs are provided in Appendix B. The locations of each boring are described below:

- **SB-01** – Advanced on the sidewalk along 145<sup>th</sup> Avenue, 122 feet east of Memphis Avenue and 3 feet north of the 145<sup>th</sup> Avenue curb line.
- **SB-02** – Advanced on the sidewalk along 145<sup>th</sup> Avenue, 118 feet west of Francis Lewis Boulevard and 3 feet south of the 145<sup>th</sup> Avenue curb line.
- **SB-03** – Advanced on the sidewalk along 145<sup>th</sup> Avenue, 49 feet east of Francis Lewis Boulevard and 13 feet south of the 145<sup>th</sup> Avenue curb line.
- **SB-04** – Advanced on the sidewalk along Frankton Street, 158 feet east of 145<sup>th</sup> Avenue and 3 feet south of the Frankton Street curb line.
- **SB-05** – Advanced on the sidewalk along Hook Creek Boulevard, 28 feet south of 257<sup>th</sup> Street and 2 feet west of the Hook Creek Boulevard curb line.
- **SB-06** – Advanced on the sidewalk along Hook Creek Boulevard, 106 feet south of Frankton Street and 4 feet east of the Hook Creek Boulevard curb line.
- **SB-07** – Advanced on the sidewalk along 145<sup>th</sup> Avenue, 130 feet east of Frankton Street and 2 feet north of the 145<sup>th</sup> Avenue curb line.
- **SB-08** – Advanced on the sidewalk along 145<sup>th</sup> Avenue, 23 feet east of Hook Creek Boulevard and 3 feet south of the 145<sup>th</sup> Avenue curb line.
- **SB-09** – Advanced on the sidewalk along Francis Lewis Boulevard, 116 feet south of 145<sup>th</sup> Avenue and 6 feet west of the Francis Lewis Boulevard curb line.

- **SB-10** – Advanced on the sidewalk along 147<sup>th</sup> Avenue, 108 feet west of 259<sup>th</sup> Street and 5 feet north of the 147<sup>th</sup> Avenue curb line.
- **SB-11** – Advanced on the sidewalk along 259<sup>th</sup> Street, 166 feet south of 147<sup>th</sup> Avenue and 3 feet west of the 259<sup>th</sup> Street curb line.
- **SB-12** – Advanced on the sidewalk along 147<sup>th</sup> Road, 115 feet east of 258<sup>th</sup> Street and 3 feet north of the 147<sup>th</sup> Road curb line.
- **SB-13** – Advanced on the sidewalk along 147<sup>th</sup> Drive, 230 feet east of 257<sup>th</sup> Street and 3 feet south of the 147<sup>th</sup> Drive curb line.
- **SB-14** – Advanced on the sidewalk along 259<sup>th</sup> Street, 111 feet south of 147<sup>th</sup> Drive and 1 foot west of the 259<sup>th</sup> Street curb line.
- **SB-15** – Advanced on the sidewalk along 147<sup>th</sup> Road, 235 feet west of Francis Lewis Boulevard and 3 feet north of the 147<sup>th</sup> Road curb line.
- **SB-16** – Advanced on the sidewalk along 147<sup>th</sup> Drive, 130 feet east of 259<sup>th</sup> Street and 5 feet south of the 147<sup>th</sup> Drive curb line.
- **SB-17** – Advanced on the sidewalk along 148<sup>th</sup> Avenue 404 feet west of Francis Lewis Boulevard and 3 feet south of the 148<sup>th</sup> Avenue curb line.
- **SB-18** – Advanced on the sidewalk along 148<sup>th</sup> Road, 199 feet west of Hook Creek Boulevard and 4 feet north of the 148<sup>th</sup> Road curb line.
- **SB-19** – Advanced on the sidewalk along 148<sup>th</sup> Road, 213 feet east of 259<sup>th</sup> Street and 5 feet north of the 148<sup>th</sup> Road curb line.
- **SB-20** – Advanced on the sidewalk along 148<sup>th</sup> Drive, 323 feet east of 259<sup>th</sup> Street and 5 feet south of the 148<sup>th</sup> Drive curb line.
- **SB-21** – Advanced on the sidewalk along 262<sup>nd</sup> Street, 11 feet north of 149<sup>th</sup> Road and 5 feet west of the 262<sup>nd</sup> Street curb line.
- **SB-22** – Advanced on the sidewalk along Hook Creek Boulevard, 65 feet north of 149<sup>th</sup> Avenue and 3 feet east of the Hook Creek Boulevard curb line.
- **SB-23** – Advanced on the sidewalk along 262<sup>nd</sup> Place, 47 feet south of Rosedale Road and 1 foot west of the 262<sup>nd</sup> Place curb line.
- **SB-24** – Advanced on the sidewalk along Rosedale Road 112 feet west of 262<sup>nd</sup> Place and 3 feet north of the Rosedale Road curb line.
- **SB-25** – Advanced on the sidewalk along Hook Creek Boulevard, 150 feet south of 148<sup>th</sup> Avenue and 2 feet west of the Hook Creek Boulevard curb line.

- **SB-26** – Advanced on the sidewalk along Francis Lewis Boulevard, 151 feet north of 147<sup>th</sup> Road and 7 feet east of the Francis Lewis Boulevard curb line.
- **SB-27** – Advanced on the sidewalk along Hook Creek Boulevard, 58 feet north of 147<sup>th</sup> Drive and 2 feet east of the Hook Creek Boulevard curb line.
- **SB-28** – Advanced on the sidewalk along Hook Creek Boulevard, 400 feet north of 147<sup>th</sup> Drive and 0.5 feet west of the Hook Creek Boulevard curb line.
- **SB-29** – Advanced on the sidewalk along Hook Creek Boulevard, 279 feet south of 145<sup>th</sup> Avenue and 13 feet west of the Hook Creek Boulevard curb line.
- **SB-30** – Advanced on the sidewalk along 147<sup>th</sup> Drive, 61 feet east of Francis Lewis Boulevard and 2 feet north of the 147<sup>th</sup> Drive curb line.
- **SB-31** – Advanced on the sidewalk along 148<sup>th</sup> Road, 10 feet west of Hook Creek Boulevard and 6 feet south of the 148<sup>th</sup> Road curb line.

Soil from each boring was classified and examined for visual evidence (i.e., staining, discoloration) and any olfactory indications (i.e., odors) of contamination. Continuous soil samples were collected from each of the borings at 4-foot or 5-foot intervals. In addition, a PID was used to screen the soil for VOC vapors. All re-useable sampling equipment was decontaminated using a deionized water and Alconox soap wash and then rinsed with deionized water.

In order to identify representative conditions relative to the presence of PAHs, PCBs, TPHC DRO/GRO, RCRA Characteristics, and TCLP RCRA metals over the entire soil column in each boring, composite soil samples were collected by mixing the soil from the entire column in a stainless steel bowl. Boring composite samples were collected from all 31 soil borings.

In order to identify representative conditions relative to the presence of VOCs, grab soil samples were collected from the bottom 6-inch interval in all 31 soil borings.

### 3.2 Groundwater Quality Investigation

As groundwater may be encountered within the depths associated with the future excavation, three groundwater samples were collected for screening and laboratory analysis during the soil boring activities. TWP (TWP-05, TWP-14, and TWP-21) were installed in soil borings SB-05, SB-14, and SB-21. Groundwater was encountered at depths ranging from approximately 7 to 13 ftbg. For the installation of the TWP, the GeoProbe unit was advanced to a depth of 15 ftbg, approximately 5 feet into the encountered water table. The TWPs consisted of a 20-foot length section of one-inch diameter schedule 40 PVC screen and riser. A groundwater sample was collected from each TWP for screening and laboratory analysis via dedicated Teflon tubing and check valves. All tubing was new, clean and unused and was properly disposed after use. Upon extraction, the samples were examined for visual evidence (i.e., discoloration, sheen) and any olfactory indications (i.e., odors) of contamination were noted.

The well construction logs are provided in Appendix B. The locations of the TWPs are provided in Figure 2.

### 3.3 Laboratory Analyses

The soil and groundwater samples were submitted to Chemtech, a NYSDOH approved laboratory (No. 11376). Field derived Quality Assurance/Quality Control (QA/QC) samples (i.e., field blank, trip blank, duplicate) were not collected for this project. Laboratory analytical reports are included in Appendix C.

The grab soil samples were analyzed for USEPA Target Compound List (TCL) volatile organic compounds (VOCs) by Method 8260C. The boring composite soil samples were analyzed for: (1) PAHs via USEPA Method 8270D; (2) PCBs via USEPA Method 3550B/8082; (3) TPHC DRO/GRO via USEPA Method 8015B; (4) RCRA Characteristics via USEPA SW-846; and, (5) TCLP RCRA Metals via USEPA SW-846.

The groundwater samples were analyzed for the parameters published by NYCDEP as Limitations for Effluent to Sanitary or Combined Sewers.

### 3.4 Data Evaluation

In order to evaluate the subsurface soil quality, the laboratory analytical results of the grab and composite soil samples were compared with the regulatory standards identified in: (1) New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Restricted Use Commercial (Track 2) Soil Cleanup Objectives (SCOs); and/or, (2) Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 371.

The analytical results of the groundwater samples were compared to the NYCDEP Sewer Discharge Criteria.

## 4.0 FINDINGS

This section discusses the analytical data and findings for the activities discussed in Section 3.0.

### 4.1 Field Screening

Field screening (i.e., PID readings and visual and olfactory observations) did not identify impacted soils within the Corridor. Refer to Table 1 for a summary of environmental boring data.

### 4.2 Soil and Groundwater Laboratory Analytical Results

#### 4.2.1 *Volatile Organic Compounds (VOCs) in Soil*

Up to three VOCs were detected in nine of the 31 grab samples collected. Acetone, methyl ethyl ketone, and/or methylene chloride were detected at concentrations below the Part 375 Restricted Use Commercial SCOs in the nine grab samples. Acetone and methylene chloride are common laboratory cross contaminant and is most likely not representative of subsurface conditions. Refer to Table 2 for a summary of TCL VOC detections.

#### 4.2.2 *Polycyclic Aromatic Hydrocarbons (PAHs) in Soil*

No PAHs were detected in the 31 composite samples collected. Refer to Table 3.

#### 4.2.3 *Polychlorinated Biphenyls (PCBs) in Soil*

No PCBs were detected in the 31 composite samples collected. Refer to Table 4.

#### 4.2.4 *Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) Metals in Soil*

TCLP RCRA metals were detected in all 31 composite samples collected. Barium, chromium, lead, and/or selenium were detected at concentrations below their corresponding 6 NYCRR Part 371 and RCRA standards. Based on their consistency, most of the detected concentrations are attributed to background levels. Refer to Table 5 for a summary of TCLP RCRA metals detections.

#### 4.2.5 *Waste Characterization of Soil*

Ignitability (flash point), reactivity (cyanide and sulfide), and corrosivity (pH) were within the acceptable RCRA ranges. TPHC-DRO were detected at concentrations ranging from approximately 0.758 mg/kg to 9.100 mg/kg in all 31 composite samples collected. TPHC-GRO were detected at concentrations ranging from approximately 0.033 mg/kg to 2.63 mg/kg in all 31 composite samples collected. There are no regulatory standards for TPHC-DRO and TPHC-GRO. Analytical results will need to be compared to levels acceptable by the chosen receiving facility to determine appropriate waste characterization prior to off-site disposal. Refer to Table 5 for a summary of TCLP parameters, RCRA Characteristics, and TPHC DRO/GRO results.

#### **4.2.6 Analysis of NYCDEP Parameters in Groundwater**

The three groundwater samples (TWP-05, TWP-14, and TWP-21) were analyzed for the parameters required by the NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (Daily Limit). Total Suspended Solids (TSS) were detected at concentrations of 879 mg/L in sample TWP-05 and 2,030 mg/L in sample TWP-21. These concentrations exceed the NYCDEP Sewer Discharge Limitation of 350 mg/L. The presence of TSS in the groundwater is attributed to the fact that the (unfiltered) sample was collected from a TWP and not a permanent monitoring well. However, the groundwater sample collected from a TWP is considered to be more representative of conditions to be encountered during construction activities.

Based on the results for TSS, groundwater does not meet NYCDEP Sewer Discharge Criteria and may require pre-treatment prior to discharge. All other parameters were within NYCDEP Sewer Discharge Criteria. Refer to Table 6 for a summary of selected NYCDEP parameters in groundwater.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of the field screening data, the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions and recommendations are presented:

### Conclusions

- Field screening (i.e., PID readings and visual and olfactory observations) did not identify any petroleum-impacted soils within the Corridor;
- Laboratory analytical results did not identify sampled parameters exceeding the NYSDEC Restricted Use Commercial SCOs in the 31 composite samples. However, laboratory analytical results identified the presence of elevated concentrations of petroleum components (i.e., DRO/GRO) in subsurface soils in the Corridor. The DRO and GRO is attributed primarily to: (a) residuals from releases of petroleum products from the “High” and “Moderate” risk sites identified on and in the vicinity of the Corridor; and/or (b) contaminants in urban fill material placed on the Corridor;
- The subsurface soil samples collected from the Corridor did not exhibit hazardous waste characteristics;
- Groundwater samples contained concentrations of TSS that exceeded the NYCDEP Sewer Discharge Criteria. The presence of elevated levels of TSS in the groundwater may be attributed to the fact that the sample was unfiltered and collected from a TWP and not a permanent monitoring well. However, the groundwater samples collected from TWPs are considered to be more representative of conditions to be encountered during construction activities.

### Recommendations

- The Contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous contaminated soil. All soil shall be managed, transported and disposed of in accordance with NYSDEC Part 360 requirements. The Contractor should submit a Material Handling Plan, to identify the specific protocols and procedures that will be employed to manage potentially contaminated waste, if encountered, during construction, in accordance with applicable regulations;
- Due to the presence of DRO/GRO in the investigated sites, to minimize the creation and dispersion of fugitive airborne dust, the Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A CAMP shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities;

- Should dewatering become necessary during construction activities within the Corridor, the Contractor will be required to obtain NYCDEP sewer discharge permit. In addition, based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater requires pre-treatment due to the presence of TSS prior to discharge to sanitary or combined sewers;
- If discharge into storm sewers is required during dewatering, it may be done under the appropriate NYSDEC SPDES permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and,
- Before beginning any excavation activity, the Contractor should submit a Corridor-specific HASP that will meet the requirements set forth by the OSHA, the NYSDOH and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e., dust control procedures for DRO/GRO).



## 6.0 STATEMENT OF LIMITATIONS

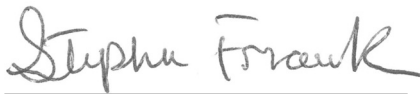
The data presented and the opinions expressed in this report are qualified as stated in the attachment to this section of the report.

Report Prepared By:



Amy Hewson  
Senior Environmental Analyst

Report Reviewed By:



Stephen Frank  
Senior Geologist

Report Reviewed By:



Robert Kreuzer  
Project Manager

## STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

The sole purpose of the investigation and of this report is to assess the physical characteristics of the Corridor with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Corridor.

LiRo derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Corridor, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Corridor, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

In preparing this report, LiRo has relied upon and presumed accurate certain information (or the absence thereof) about the Corridor and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, LiRo has not attempted to verify the accuracy or completeness of any such information.

The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Corridor.

Because of the limitations stated above, the findings, observations, and conclusions expressed by LiRo in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the Corridor with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings, observations, and conclusions are based solely upon Corridor conditions in existence at the time of investigation.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

**TABLES**

**TABLE 1 – SUMMARY OF ENVIRONMENTAL BORING DATA**

**TABLE 2 – SUMMARY OF TCL VOCs DETECTED IN SOIL**

**TABLE 3 – SUMMARY OF PAHs DETECTED IN SOIL**

**TABLE 4 – SUMMARY OF PCBs DETECTED IN SOIL**

**TABLE 5 – SUMMARY OF WASTE CHARACTERIZATION IN SOIL**

**TABLE 6 – SUMMARY OF GROUNDWATER QUALITY COMPARED TO NYC DEP**

**Table 1. Summary of Environmental Boring Data  
Phase II Subsurface Corridor Investigation**

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (ug/kg)	Total PAHs (ug/kg)	Total PCBs (ug/kg)	TCLP Metals/Waste Exceedance(s) (Yes/No)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-01	SB-01-8.5-9.0	<1	8.5-9.0	<1	NA	NA	NA	9	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-01-COMP		0-9.0	NA	ND	ND	No			
SB-02	SB-02-10.5-11.0	<1	10.5-11.0	ND	NA	NA	NA	11	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-02-COMP		0-11.0	NA	ND	ND	No			
SB-03	SB-03-11.5-12.0	<1	11.5-12.0	ND	NA	NA	NA	12	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-03-COMP		0-12.0	NA	ND	ND	No			
SB-04	SB-04-12.5-13.0	<1	12.5-13.0	<1	NA	NA	NA	13	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-04-COMP		0-13.0	NA	ND	ND	No			
SB-05	SB-05-8.5-9.0	<1	8.5-9.0	ND	NA	NA	NA	9	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-05-COMP		0-7.0	NA	ND	ND	No			
SB-06	SB-06-6.5-7.0	<1	6.5-7.0	48	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-06-COMP		0-7.0	NA	ND	ND	No			
SB-07	SB-07-7.5-8.0	<1	7.5-8.0	ND	NA	NA	NA	8	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-07-COMP		0-8.0	NA	ND	ND	No			
SB-08	SB-08-6.5-7.0	<1	6.5-7.0	16	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-08-COMP		0-7.0	NA	ND	ND	No			
SB-09	SB-09-11.5-12.0	<1	11.5-12.0	ND	NA	NA	NA	12	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-09-COMP		0-12.0	NA	ND	ND	No			
SB-10	SB-10-8.5-9.0	<1	8.5-9.0	ND	NA	NA	NA	9	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-10-COMP		0-9.0	NA	ND	ND	No			
SB-11	SB-11-8.5-9.0	<1	8.5-9.0	ND	NA	NA	NA	9	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-11-COMP		0-9.0	NA	ND	ND	No			
SB-12	SB-12-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-12-COMP		0-7.0	NA	ND	ND	No			
SB-13	SB-13-7.5-8.0	<1	7.5-8.0	ND	NA	NA	NA	8	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-13-COMP		0-8.0	NA	ND	ND	No			
SB-14	SB-14-6.5-7.0	<1	6.5-7.0	17	NA	NA	NA	7	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-14-COMP		0-7.0	NA	ND	ND	No			
SB-15	SB-15-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-15-COMP		0-7.0	NA	ND	ND	No			
SB-16	SB-16-6.5-7.0	<1	6.5-7.0	21	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-16-COMP		0-7.0	NA	ND	ND	No			
SB-17	SB-17-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-17-COMP		0-7.0	NA	ND	ND	No			
SB-18	SB-18-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-18-COMP		0-7.0	NA	ND	ND	No			

**Table 1. Summary of Environmental Boring Data  
Phase II Subsurface Corridor Investigation**

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (ug/kg)	Total PAHs (ug/kg)	Total PCBs (ug/kg)	TCLP Metals/Waste Exceedance(s) (Yes/No)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-19	SB-19-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-19-COMP		0-7.0	NA	ND	ND	No			
SB-20	SB-20-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-20-COMP		0-7.0	NA	ND	ND	No			
SB-21	SB-21-6.5-7.0	<1	6.5-7.0	135	NA	NA	NA	7	15	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-21-COMP		0-7.0	NA	ND	ND	No			
SB-22	SB-22-7.5-8.0	<1	7.5-8.0	109	NA	NA	NA	8	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-22-COMP		0-8.0	NA	ND	ND	No			
SB-23	SB-23-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-23-COMP		0-7.0	NA	ND	ND	No			
SB-24	SB-24-6.5-7.0	<1	6.5-7.0	26	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-24-COMP		0-7.0	NA	ND	ND	No			
SB-25	SB-25-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-25-COMP		0-7.0	NA	ND	ND	No			
SB-26	SB-26-8.5-7.0	<1	8.5-9.0	ND	NA	NA	NA	9	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-26-COMP		0-9.0	NA	ND	ND	No			
SB-27	SB-27-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-27-COMP		0-7.0	NA	ND	ND	No			
SB-28	SB-28-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-28-COMP		0-7.0	NA	ND	ND	No			
SB-29	SB-29-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-29-COMP		0-7.0	NA	ND	ND	No			
SB-30	SB-30-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-30-COMP		0-7.0	NA	ND	ND	No			
SB-31	SB-31-6.5-7.0	<1	6.5-7.0	ND	NA	NA	NA	7	10	No PID readings or visual or olfactory evidence of impacts were detected.
	SB-31-COMP		0-7.0	NA	ND	ND	No			

**Notes:**

1. Metal(s) exceeds Restricted Use (Track 2) Restricted-Residential and/or Commercial SCOs.

Soil samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbon (TPHC) Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO), Resource Conservation and Recovery Act (RCRA) Characteristics, and/or Toxicity Characteristic Leaching Procedure (TCLP) RCRA Metals.

NA = Not Analyzed/Not Applicable

ND = Non detect

ftbg = feet below grade surface

ppm = parts per million

mg/kg = milligram per kilogram

ug/kg = microgram per kilogram

Table 2. Summary of Target Compound List (TCL)  
Volatile Organic Compounds (VOCs) Detected in Soil

TCL VOC	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)								
		SB-01-8.5-9.0	SB-02-10.5-11.0	SB-03-11.5-12.0	SB-04-12.5-13.0	SB-05-8.5-9.0	SB-06-6.5-7.0	SB-07-7.5-8.0	SB-08-6.5-7.0	SB-09-11.5-12.0
		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022
		8.5-9.0	10.5-11.0	11.5-12.0	12.5-13.0	8.5-9.0	6.5-7.0	7.5-8.0	6.5-7.0	11.5-12.0
Acetone	500,000	0.017 J	ND	ND	0.018 J	ND	34.1	ND	15.6 J	ND
Methyl Ethyl Ketone	500,000	ND	ND	ND	0.0090 J	ND	14.3 J	ND	ND	ND
Methylene chloride	500,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	NS	0	ND	ND	0	ND	48	ND	16	ND

**Notes:**

All concentrations are reported in parts per billion (ppb) or ug/kg)

ftbg = feet below grade surface

NS = No Standard

RE = Re-evaluated

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

J = Compound detected below the quantitation limit

SCOs = Soil Cleanup Objectives as per the NYSDEC

Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 2. Summary of Target Compound List (TCL)  
Volatile Organic Compounds (VOCs) Detected in Soil

TCL VOC	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)								
		SB-10-8.5-9.0	SB-11-8.5-9.0	SB-12-6.5-7.0	SB-13-7.5-8.0	SB-14-6.5-7.0	SB-15-6.5-7.0	SB-16-6.5-7.0	SB-17-6.5-7.0	SB-18-6.5-7.0
		9/20/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022	9/16/2022
Acetone	500,000	ND	ND	ND	ND	16.8 J	ND	20.5 J	ND	ND
Methyl Ethyl Ketone	500,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	500,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs	NS	ND	ND	ND	ND	17	ND	21	ND	ND

**Notes:**

All concentrations are reported in parts per billion (ppb) or ug/kg)

ftbg = feet below grade surface

NS = No Standard

RE = Re-evaluated

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

J = Compound detected below the quantitation limit

SCOs = Soil Cleanup Objectives as per the NYSDEC

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Table 2. Summary of Target Compound List (TCL)  
Volatile Organic Compounds (VOCs) Detected in Soil

TCL VOC	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)									
		SB-19-6.5-7.0	SB-20-6.5-7.0	SB-21-6.5-7.0	SB-22-7.5-8.0	SB-23-6.5-7.0	SB-24-6.5-7.0	SB-25-6.5-7.0	SB-26-8.5-9.0	SB-27-6.5-7.0	
		9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/19/2022	9/19/2022	
		6.5-7.0	6.5-7.0	6.5-7.0	7.5-8.0	6.5-7.0	6.5-7.0	6.5-7.0	8.5-9.0	6.5-7.0	
Acetone	500,000	ND	ND	94.1	100	ND	25.5 J	ND	ND	ND	
Methyl Ethyl Ketone	500,000	ND	ND	25.5 J	ND	ND	ND	ND	ND	ND	
Methylene chloride	500,000	ND	ND	15.4	8.70 J	ND	ND	ND	ND	ND	
Total VOCs	NS	ND	ND	135	109	ND	26	ND	ND	ND	

**Notes:**

All concentrations are reported in parts per billion (ppb) or ug/kg)

ftbg = feet below grade surface

NS = No Standard

RE = Re-evaluated

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

J = Compound detected below the quantitation limit

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).



Table 2. Summary of Target Compound List (TCL)  
Volatile Organic Compounds (VOCs) Detected in Soil

TCL VOC	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)			
		SB-28-6.5-7.0	SB-29-6.5-7.0RE	SB-30-6.5-7.0	SB-31-6.5-7.0
		9/19/2022	9/19/2022	9/19/2022	9/16/2022
		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Acetone	500,000	ND	ND	ND	ND
Methyl Ethyl Ketone	500,000	ND	ND	ND	ND
Methylene chloride	500,000	ND	ND	ND	ND
Total VOCs	NS	ND	ND	ND	ND

**Notes:**

All concentrations are reported in parts per billion (ppb) or ug/kg)

ftbg = feet below grade surface

NS = No Standard

RE = Re-evaluated

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

J = Compound detected below the quantitation limit

SCOs = Soil Cleanup Objectives as per the NYSDEC

Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil

PAHs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)										
		SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SB-09-COMP	SB-10-COMP	SB-11-COMP
		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/19/2022
		0-9.0	0-11.0	0-12.0	0-13.0	0-7.0	0-7.0	0-8.0	0-7.0	0-12.0	0-9.0	0-9.0
Total PAHs	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
**All concentrations are reported in parts per billion (ppb or ug/kg)**  
 ftbg = feet below grade surface  
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)  
 NS = No Standard  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil

PAHs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)										
		SB-12-COMP	SB-13-COMP	SB-14-COMP	SB-15-COMP	SB-16-COMP	SB-17-COMP	SB-18-COMP	SB-19-COMP	SB-20-COMP	SB-21-COMP	SB-22-COMP
		9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022
		0-7.0	0-8.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-8.0
Total PAHs	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
**All concentrations are reported in parts per billion (ppb or ug/kg)**  
 ftbg = feet below grade surface  
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)  
 NS = No Standard  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 3. Summary of Polycyclic Aromatic Hydrocarbons (PAHs) Detected in Soil

PAHs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)									
		SB-23-COMP	SB-24-COMP	SB-25-COMP	SB-26-COMP	SB-27-COMP	SB-28-COMP	SB-29-COMP	SB-30-COMP	SB-31-COMP	
		9/16/2022	9/16/2022	9/16/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022	
		0-7.0	0-7.0	0-7.0	0-9.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	
Total PAHs	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	

**Notes:**

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 4. Summary of Polychlorinated Biphenyls (PCBs)  
Detected in Soil

PCBs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)										
		SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SB-09-COMP	SB-10-COMP	SB-11-COMP
		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/19/2022
		0-9.0	0-11.0	0-12.0	0-13.0	0-7.0	0-7.0	0-8.0	0-7.0	0-12.0	0-9.0	0-9.0
Total PCBs	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
**All concentrations are reported in parts per billion (ppb or ug/kg)**  
 ftbg = feet below grade surface  
 ND = Compound not detected above method detection limit (see attached lab report for  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 4. Summary of Polychlorinated Biphenyls (PCBs)  
Detected in Soil

PCBs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)										
		SB-12-COMP	SB-13-COMP	SB-14-COMP	SB-15-COMP	SB-16-COMP	SB-17-COMP	SB-18-COMP	SB-19-COMP	SB-20-COMP	SB-21-COMP	SB-22-COMP
		9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022
		0-7.0	0-8.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0	0-8.0
Total PCBs	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**  
**All concentrations are reported in parts per billion (ppb or ug/kg)**  
 ftbg = feet below grade surface  
 ND = Compound not detected above method detection limit (see attached lab report for  
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 4. Summary of Polychlorinated Biphenyls (PCBs)  
Detected in Soil

PCBs	Part 375-6.8 (b) Restricted Use (Track 2) Commercial Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)								
		SB-23-COMP	SB-24-COMP	SB-25-COMP	SB-26-COMP	SB-27-COMP	SB-28-COMP	SB-29-COMP	SB-30-COMP	SB-31-COMP
		9/16/2022	9/16/2022	9/16/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022
		0-7.0	0-7.0	0-7.0	0-9.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0
Total PCBs	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**

All concentrations are reported in parts per billion (ppb or ug/kg)

ftbg = feet below grade surface

ND = Compound not detected above method detection limit (see attached lab report for SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006).

Table 5. Summary of Waste Characterization in Soil

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collect, and Depth (ftbg)								
		SB-01-COMP	SB-02-COMP	SB-03-COMP	SB-04-COMP	SB-05-COMP	SB-06-COMP	SB-07-COMP	SB-08-COMP	SB-09-COMP
		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022
		0-9.0	0-11.0	0-12.0	0-13.0	0-7.0	0-7.0	0-8.0	0-7.0	0-12.0
<b>METALS<sup>1</sup></b>	<b>ug/L</b>									
Barium	100,000	1,060	843	938	828	1,240	958	1,010	1,050	991
Chromium	5,000	ND	ND	ND	ND	ND	29.4 J	ND	ND	ND
Lead	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	200	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>MISC. PARAMETERS (units)</b>										
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.44 H	6.45 H	6.70 H	6.70 H	6.82 H	6.92 H	6.70 H	7.43 H	6.81 H
Ignitability	>140 °F	No	No	No	No	No	No	No	No	No
TPHC Diesel Range Organics (mg/kg)	NS	0.888 J	0.827 J	1.150 J	1.420 J	0.936 J	1.230 J	1.040 J	0.785 J	0.758 J
TPHC Gasoline Range Organics (mg/kg)	NS	0.528 J	0.599 J	0.685 J	0.785 J	0.987 J	1.050 J	0.812 J	1.060 J	0.568 J

**Notes:**

ftbg = feet below grade surface  
 NS = No Standard  
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)  
 SU = Standard unit  
 J = Compound detected below the quantitation limit  
 H = Analysis exceeds hold time  
 N = Spiked sample recovery not within control limits  
 mg/Kg = milligram per kilogram  
 ug/L = microgram per liter  
<sup>1</sup> = TCLP RCRA Metals



Table 5. Summary of Waste Characterization in Soil

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collect, and Depth (ftbg)								
		SB-10-COMP	SB-11-COMP	SB-12-COMP	SB-13-COMP	SB-14-COMP	SB-15-COMP	SB-16-COMP	SB-17-COMP	SB-18-COMP
		9/20/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/16/2022	9/16/2022
		0-9.0	0-9.0	0-7.0	0-8.0	0-7.0	0-7.0	0-7.0	0-7.0	0-7.0
<b>METALS<sup>1</sup></b>	<b>ug/L</b>									
Barium	100,000	1,210	1,140 N	1,120 N	1,160 N	998 N	1,330 N	1,200 N	1,040	889
Chromium	5,000	ND	ND	ND	ND	ND	ND	ND	18.1 J	18.3 J
Lead	5,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	200	ND	ND	ND	ND	ND	ND	ND	ND	0.90 J
Selenium	1,000	44.0 J	ND	ND	ND	ND	ND	ND	ND	ND
<b>MISC. PARAMETERS (units)</b>										
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.55 H	7.02 H	7.18 H	6.23 H	6.98 H	6.40 H	7.19 H	7.12 H	6.73 H
Ignitability	>140 °F	No	No	No	No	No	No	No	No	No
TPHC Diesel Range Organics (mg/kg)	NS	0.938 J	1.090 J	0.905 J	0.914 J	0.839 J	0.943 J	1.010 J	1.810 J	1.570 J
TPHC Gasoline Range Organics (mg/kg)	NS	1.250 J	0.726 J	0.752 J	0.880 J	0.836 J	0.983 J	0.996 J	0.767 J	0.867 J

**Notes:**

ftbg = feet below grade surface  
 NS = No Standard  
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)  
 SU = Standard unit  
 J = Compound detected below the quantitation limit  
 H = Analysis exceeds hold time  
 N = Spiked sample recovery not within control limits  
 mg/Kg = milligram per kilogram  
 ug/L = microgram per liter  
<sup>1</sup> = TCLP RCRA Metals

Table 5. Summary of Waste Characterization in Soil

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collect, and Depth (ftbg)								
		SB-19-COMP	SB-20-COMP	SB-21-COMP	SB-22-COMP	SB-23-COMP	SB-24-COMP	SB-25-COMP	SB-26-COMP	SB-27-COMP
		9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/16/2022	9/19/2022	9/19/2022
		0-7.0	0-7.0	0-7.0	0-8.0	0-7.0	0-7.0	0-7.0	0-9.0	0-7.0
<b>METALS<sup>1</sup></b>	<b>ug/L</b>									
Barium	100,000	1,230	1,160	795	1,520	1,030	1,510	1,330	1,220 N	1,180 N
Chromium	5,000	12.6 J	17.5 J	18.8 J	15.0 J	14.8 J	14.5 J	10.9 J	ND	ND
Lead	5,000	ND	ND	ND	81.7	ND	ND	ND	ND	ND
Mercury	200	0.82 J	0.81 J	0.74 J	0.78 J	ND	ND	0.80 J	ND	ND
Selenium	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>MISC. PARAMETERS (units)</b>										
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (SU)	2-12.5	6.61 H	6.88 H	7.39 H	7.36 H	6.83 H	6.03 H	7.10 H	6.59 H	7.17 H
Ignitability	>140 °F	No	No	No	No	No	No	No	No	No
TPHC Diesel Range Organics (mg/kg)	NS	1.830 J	2.180	1.760 J	9.100	3.010	2.590	2.100	0.833 J	1.120 J
TPHC Gasoline Range Organics (mg/kg)	NS	1.240 J	0.779 J	2.630 J	0.824 J	0.784	0.753 J	0.033 J	0.761 J	0.828 J

**Notes:**

- ftbg = feet below grade surface
- NS = No Standard
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- SU = Standard unit
- J = Compound detected below the quantitation limit
- H = Analysis exceeds hold time
- N = Spiked sample recovery not within control limits
- mg/Kg = milligram per kilogram
- ug/L = microgram per liter
- <sup>1</sup> = TCLP RCRA Metals

Table 5. Summary of Waste Characterization in Soil

Parameter	6 NYCRR Part 371 and RCRA	Sample ID, Date Collect, and Depth (ftbg)			
		SB-28-COMP	SB-29-COMP	SB-30-COMP	SB-31-COMP
		9/19/2022	9/19/2022	9/19/2022	9/16/2022
		0-7.0	0-7.0	0-7.0	0-7.0
<b>METALS<sup>1</sup></b>	<b>ug/L</b>				
Barium	100,000	895 N	1,310 N	785	1,210
Chromium	5,000	ND	ND	ND	10.4 J
Lead	5,000	ND	ND	ND	ND
Mercury	200	ND	6.60	ND	ND
Selenium	1,000	ND	ND	ND	ND
<b>MISC. PARAMETERS (units)</b>					
Reactivity Sulfide (mg/kg)	500	ND	ND	ND	ND
Reactivity Cyanide (mg/kg)	250	ND	ND	ND	ND
pH (SU)	2-12.5	6.83 H	6.53 H	6.39 H	6.73 H
Ignitability	>140 °F	No	No	No	No
TPHC Diesel Range Organics (mg/kg)	NS	4.270	1.560 J	1.150 J	5.050
TPHC Gasoline Range Organics (mg/kg)	NS	1.050 J	0.887 J	0.877 J	0.789 J

**Notes:**

- ftbg = feet below grade surface
- NS = No Standard
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- SU = Standard unit
- J = Compound detected below the quantitation limit
- H = Analysis exceeds hold time
- N = Spiked sample recovery not within control limits
- mg/Kg = milligram per kilogram
- ug/L = microgram per liter
- <sup>1</sup> = TCLP RCRA Metals

Table 6. Groundwater Quality Compared to NYCDEP Sewer Effluent Parameters

Parameter <sup>1</sup>	NYCDEP Limitations to Sanitary or Combined Sewers		Well ID and Date Collected					
			TWP-05		TWP-14		TWP-21	
			9/21/2022		9/21/2022		9/21/2022	
Chloride <sup>4</sup>	NS	mg/L	302		377		52.5	
Flash Point - Liquid/Solid	> 140	°F	>212		>212		>212	
Nitrate+Nitrite	NS	mg/L	ND		2.30		ND	
Non-Polar Material <sup>2</sup>	50	mg/L	2.60	J	1.70	J	1.50	J
Phenolics	NS	mg/L	0.29		ND		0.20	
TKN	NS	mg/L	1.40		ND		1.50	
Total Nitrogen <sup>4</sup>	NS	mg/L	1.40		2.30		1.50	
Total Solids <sup>4</sup>	NS	mg/L	1,790		949		2,590	
Total Suspended Solids (TSS) <sup>3</sup>	350	mg/L	879		195		2,030	
Cadmium (instantaneous/composite)	2 / 0.69	mg/L	0.00174		0.00031	J	ND	
Copper	5	mg/L	0.0795		0.0644		0.171	
Lead	2	mg/L	0.0803		0.0630		0.153	
Mercury	0.05	mg/L	0.00058		0.00050		0.00056	
Nickel	3	mg/L	0.141		0.0342		0.181	
Zinc	5	mg/L	0.201		1.070		1.120	

**Notes:**

NS = No Standard/Not Sampled

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

J = Estimated value

mg/L = milligram per liter

**Shaded** = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit).

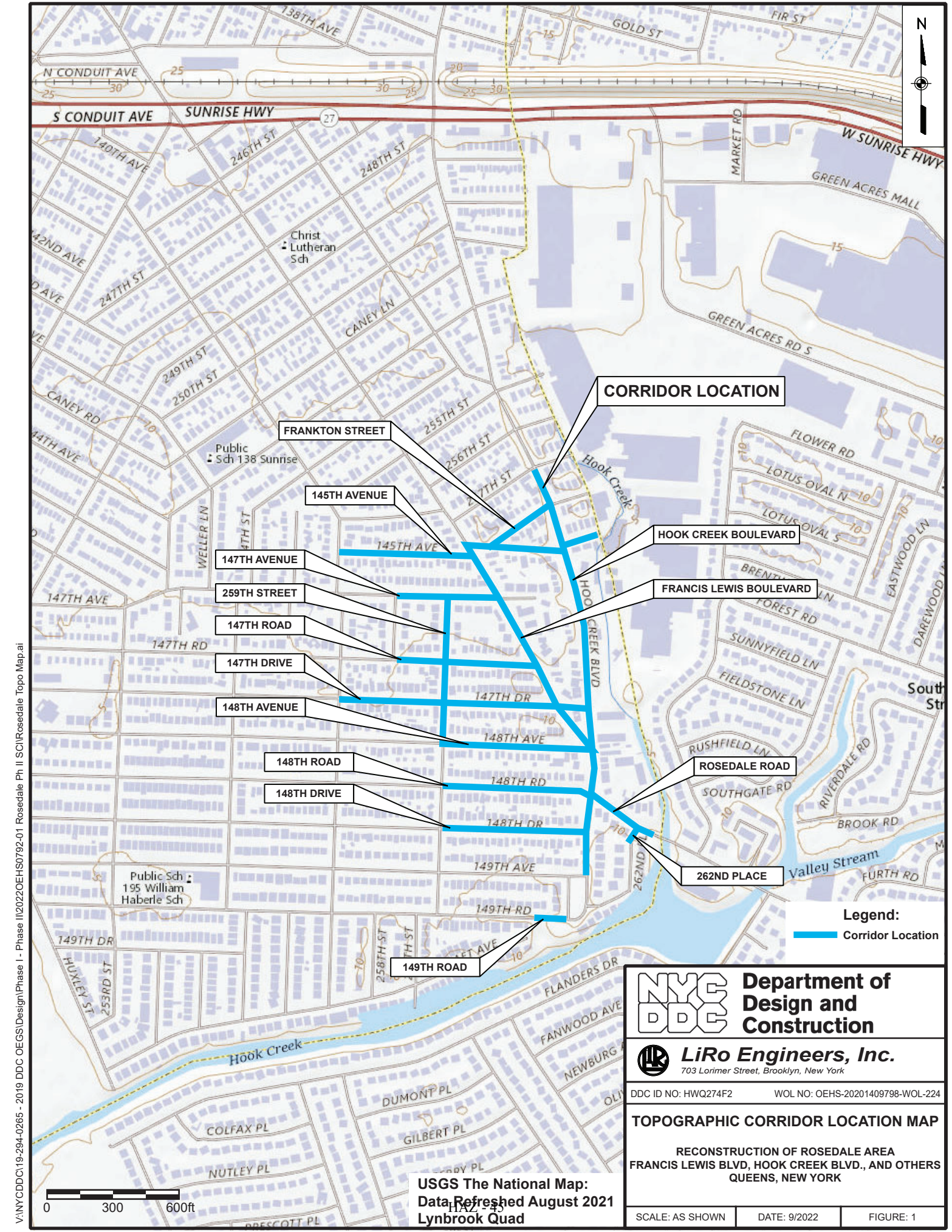
<sup>1</sup> All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.

<sup>2</sup> Analysis for non-polar materials was performed by USEPA method 1664.

<sup>3</sup> For discharge >= 10,000 gpd, the TSS limit is 350 mg/l. For discharge < 10,000 gpd, the limit is determined on a case by case basis.

<sup>4</sup> Analysis for Carbonaceous Biochemical Oxygen Demand (CBOD), Chloride, Total Solids, and Total Nitrogen are required if proposed discharge >= 10,000 gpd.

**FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP**



**CORRIDOR LOCATION**

**FRANKTON STREET**

**145TH AVENUE**

**147TH AVENUE**

**259TH STREET**

**147TH ROAD**

**147TH DRIVE**

**148TH AVENUE**

**148TH ROAD**

**148TH DRIVE**


**149TH ROAD**

**HOOK CREEK BOULEVARD**

**FRANCIS LEWIS BOULEVARD**

**ROSEDALE ROAD**

**262ND PLACE**

**Legend:**  
 Corridor Location

**NYC DDC** Department of Design and Construction

**LiRo Engineers, Inc.**  
 703 Lorimer Street, Brooklyn, New York

DDC ID NO: HWQ274F2 WOL NO: OEHS-20201409798-WOL-224

**TOPOGRAPHIC CORRIDOR LOCATION MAP**

RECONSTRUCTION OF ROSEDALE AREA  
 FRANCIS LEWIS BLVD, HOOK CREEK BLVD., AND OTHERS  
 QUEENS, NEW YORK

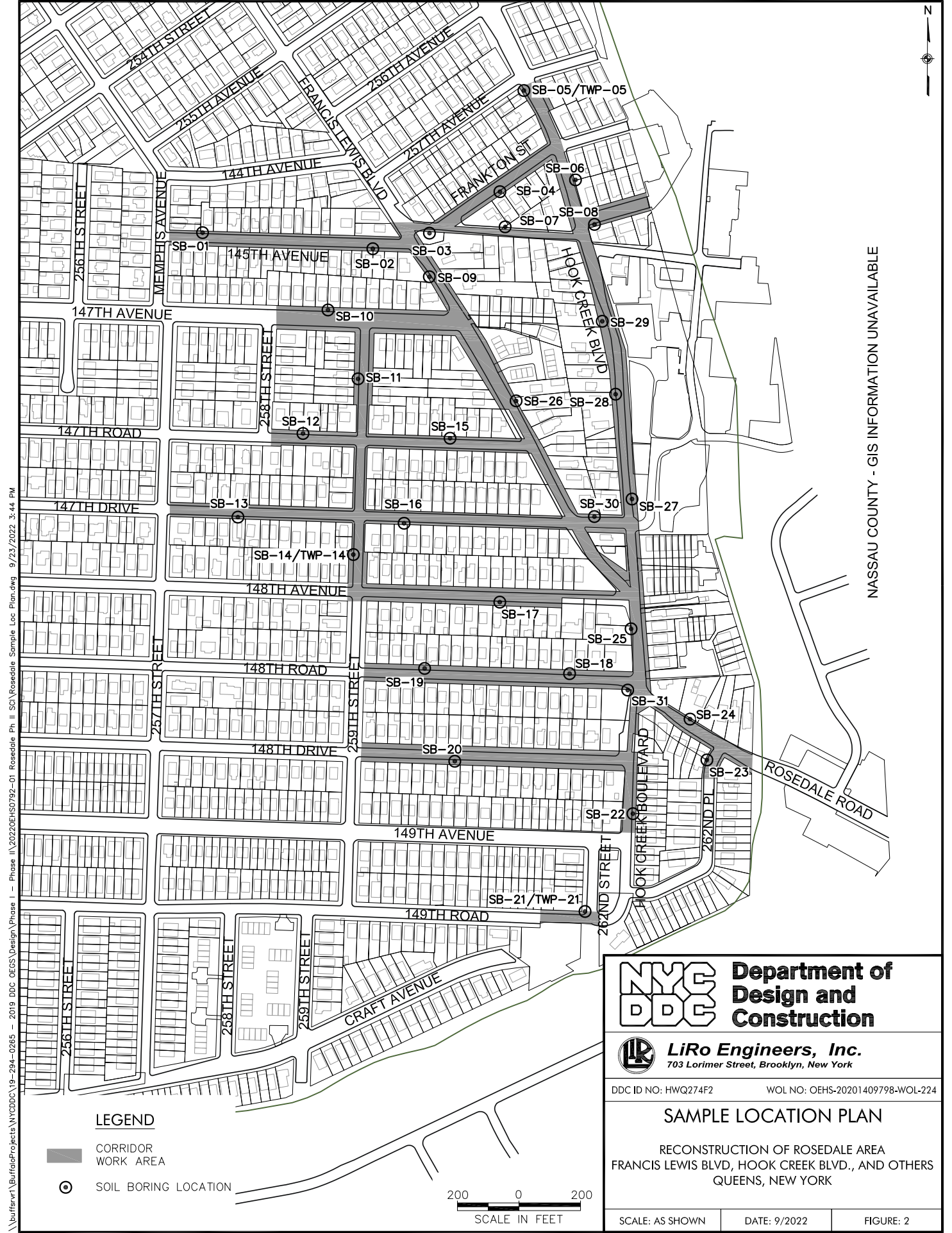
SCALE: AS SHOWN DATE: 9/2022 FIGURE: 1

**USGS The National Map:**  
 Data Refreshed August 2021  
 Lynbrook Quad



V:\NYCDDC\19-294-0265 - 2019 DDC OEHS\Design\Phase I - Phase II\2022OEHS0792-01 Rosedale Ph II SCIR\Rosedale Topo Map.ai

**FIGURE 2 – SAMPLE LOCATION PLAN**



NASSAU COUNTY - GIS INFORMATION UNAVAILABLE

\\buffsvr1\BurlInfoProjects\NYCDDC\19-294-0265 - 2019 DDC OECS\Design\Phase I - Phase I\20220EHSD792-01\_Rosedale\_Ph II\_SCI\_Rosedale\_Sample\_Loc\_Plan.dwg 9/23/2022 3:44 PM

**NYC DDC** Department of Design and Construction

**LiRo Engineers, Inc.**  
703 Lorimer Street, Brooklyn, New York

DDC ID NO: HWQ274F2 WOL NO: OEHS-20201409798-WOL-224

**SAMPLE LOCATION PLAN**

RECONSTRUCTION OF ROSEDALE AREA  
FRANCIS LEWIS BLVD, HOOK CREEK BLVD., AND OTHERS  
QUEENS, NEW YORK

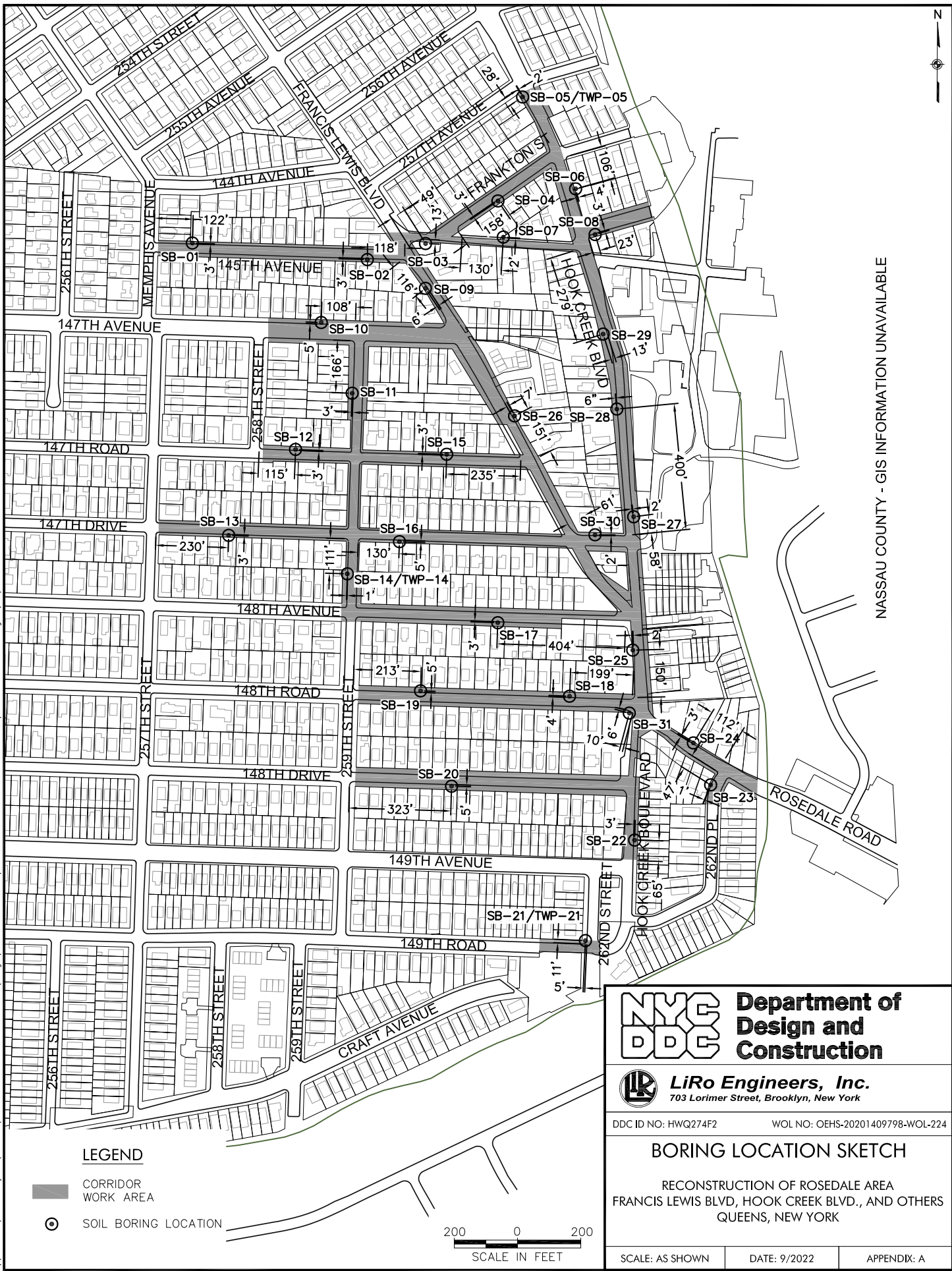
SCALE: AS SHOWN	DATE: 9/2022	FIGURE: 2
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200 0 200  
SCALE IN FEET



**APPENDIX A**  
**BORING LOCATION SKETCHES**

\\buffsvr1\BuffaloProjects\NYCDDC\19-294-0265 - 2019 DDC OECS\Design\Phase I - Phase I\20220EHSD792-01\_Rosedale\_Ph II\_SCI\_Rosedale\_SB\_Sketch.dwg 9/23/2022 3:42 PM



NASSAU COUNTY - GIS INFORMATION UNAVAILABLE

**LEGEND**

- CORRIDOR WORK AREA
- SOIL BORING LOCATION



**NYC DDC** Department of Design and Construction

**LiRo Engineers, Inc.**  
703 Lorimer Street, Brooklyn, New York

DDC ID NO: HWQ274F2 WOL NO: OEHS-20201409798-WOL-224

**BORING LOCATION SKETCH**

RECONSTRUCTION OF ROSEDALE AREA  
FRANCIS LEWIS BLVD, HOOK CREEK BLVD., AND OTHERS  
QUEENS, NEW YORK

SCALE: AS SHOWN	DATE: 9/2022	APPENDIX: A
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**APPENDIX B**  
**GEOLOGIC BORING LOGS / TEMPORARY WELL CONSTRUCTION DETAILS**



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-01
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01
<b>GROUNDWATER:</b> 9 ft bgs					<b>LOCATION:</b> 145th Ave.
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022
<b>DATE</b>					<b>DRILLER:</b> John Veiss
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick
<b>TYPE</b>					
<b>TYPE</b>					
<b>TYPE</b>					
<b>TYPE</b>					

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1					NA	Reddish-brown to beige	NA	0-6.0': Fine Sand, trace of silt, trace of gravel.	SP	Hand cleared to 6 ftbg PID: 0.0 ppm Dry	
6					90%	Light brown	Medium loose	6.0-10.0': Fine to medium Sand	SW	PID: 0.0 ppm Wet at 9 ft	
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 8.5-9.0 ftbg. Composite sample collected from 0-9.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-01



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-02	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 11 ft bgs					<b>LOCATION:</b> 147th Ave.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Burgundy brown to reddish-brown	NA	0-6.0': Fine Sand and gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Dry	
6					100%	Light brown	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Moist	
10					100%	Light brown	Medium loose	10.0-15.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 11 ft	
15								End of Boring at 15 ftbg			
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 10.5-11.0 ftbg. Composite sample collected from 0-11.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-02



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.						<b>BORING NO.:</b> SB-03	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2						<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.						<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 12 ft bgs						<b>LOCATION:</b> 145th Ave.	
<b>CAS.</b>				<b>SAMPLER</b>		<b>TUBE</b>	
<b>GROUND ELEVATION:</b> NA						<b>DATE STARTED:</b> September 13, 2022	
<b>DATE:</b>						<b>DATE FINISHED:</b> September 20, 2022	
<b>TIME:</b>						<b>DRILLER:</b> John Veiss	
<b>LEVEL:</b>						<b>GEOLOGIST:</b> Eva Jakubowska	
<b>TYPE:</b>						<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE:</b> NA							
<b>TYPE:</b> DIA.							
<b>TYPE:</b> WT.							
<b>TYPE:</b> FALL							

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Patterned]					NA	Beige	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Dry
6						80%	Beige	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Moist
10						90%	Orange-brown to brown	Medium loose	10.0-15.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 12 ft
15									End of Boring at 15 ftbg		
20											
25											
30											

**COMMENTS:** Grab sample collected @ 11.5-12.0 ftbg. Composite sample collected from 0-12.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).

**PROJECT NO.:** 19-294-0265.01  
**BORING NO.:** SB-03



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-04	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 13 ft bgs					<b>LOCATION:</b> Frankton St.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Darn brown to brown	NA	0-6.0': Fine to medium Sand, trace of gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Dry
6					100%	Dark brown	Medium loose	6.0-10.0': Fine to medium Sand, trace of gravel.		PID: 0.0 ppm Moist
10					100%	Brown	Medium loose	10.0-15.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 13 ft
15								End of Boring at 15 ftbg		
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 12.5-13.0 ftbg. Composite sample collected from 0-13.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-04



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-05/TWP-05				
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1				
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01				
<b>GROUNDWATER:</b> 9 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.				
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA				
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022				
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022				
<b>DATE</b>					<b>DRILLER:</b> John Veiss				
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska				
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick				
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Orange-brown	NA	0-6.0': Fine Sand.		SW	Hand cleared to 6 ftbg PID: 0.0 ppm Dry
6					80%	Orange brown	Medium loose	6.0-10.0': Fine to medium Sand.			PID: 0.0 ppm Wet at 9 ft
10					70%	Beige	Medium loose	10.0-15.0': Fine to medium Sand, trace of small gravel.			PID: 0.0 ppm Wet
15							End of Boring at 15 ftbg				
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 8.5-9.0 ftbg. Composite sample collected from 0-9.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-05/TWP-05





# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-06	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.	
<b>CAS.</b>			<b>SAMPLER</b>		<b>TUBE</b>	
<b>DATE</b>					<b>GROUND ELEVATION:</b> NA	
<b>TIME</b>					<b>DATE STARTED:</b> September 13, 2022	
<b>LEVEL</b>					<b>DATE FINISHED:</b> September 20, 2022	
<b>TYPE</b>					<b>DRILLER:</b> John Veiss	
<b>TYPE</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>TYPE</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1						NA	Beige	NA	0-6.0': Fine Sand, some gravel.	SP	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6						80%	Beige	Medium loose	6.0-10.0': Fine to medium Sand	SW	PID: 0.0 ppm Wet at 7 ft
10									End of Boring at 10 ftbg		
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-06



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-07	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 8 ft bgs					<b>LOCATION:</b> 145th Ave	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6										
					100%	Burgundy brown	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 8 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 7.5-8.0 ftbg. Composite sample collected from 0-8.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-07



# LiRo Engineers, Inc.

## TEST BORING LOG

PROJECT: Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					BORING NO:	SB-08
CLIENT: Department of Design and Construction - HWQ274F2					SHEET:	1 of 1
BORING CONTRACTOR: Associated Environmental Services, LLC.					JOB NO.:	19-294-0265.01
GROUNDWATER: 7 ft bgs					LOCATION:	145th Ave
CAS.					GROUND ELEVATION:	NA
SAMPLER					DATE STARTED:	September 13, 2022
TUBE					DATE FINISHED:	September 20, 2022
DATE	TIME	LEVEL	TYPE	TYPE	DRILLER:	John Veiss
			NA	DIA.	GEOLOGIST:	Eva Jakubowska
				WT.	REVIEWED BY:	Thomas Fralick
				FALL		

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1					NA	Brown	NA	0-6.0': Fine to medium Sand, trace of gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6					50%	Beige	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 7 ft	
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

COMMENTS: Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	PROJECT NO.: 19-294-0265.01
	BORING NO.: SB-08



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-09	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 12 ft bgs					<b>LOCATION:</b> Frankton St.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 13, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 20, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b>	
<b>TYPE</b>						
<b>TYPE</b>						
<b>NA</b>						
<b>DIA.</b>						
<b>WT.</b>						
<b>FALL</b>						

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS		
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION					
1						NA	Orange brown	NA	0-6.0': Fine Sand.	SP	Hand cleared to 6 ftbg PID: 0.0 ppm Dry		
6						100%	Orange brown	Medium loose	6.0-10.0': Fine to medium Sand.				
10						80%	Beige	Medium loose	10.0-15.0': Fine to medium Sand.				
15												SW	PID: 0.0 ppm Wet at 12 ft
									End of Boring at 15 ftbg				
20													
25													
30													

<b>COMMENTS:</b> Grab sample collected @ 11.5-12.0 ftbg. Composite sample collected from 0-12.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-09





# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-11	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 9 ft bgs					<b>LOCATION:</b> 259th St.	
<b>CAS.</b>			<b>SAMPLER</b>		<b>TUBE</b>	
<b>GROUND ELEVATION:</b> NA					<b>DATE STARTED:</b> September 14, 2022	
<b>DATE:</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>TIME:</b>					<b>DRILLER:</b> John Veiss	
<b>LEVEL:</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>TYPE:</b> NA					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE:</b> DIA.						
<b>TYPE:</b> WT.						
<b>TYPE:</b> FALL						

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Brown to beige	NA	0-2.0': Fine to medium Sand, some gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
											2.0-6.0': Fine to medium Sand.
6											
					80%	Orange brown to beige	Medium loose	6.0-10.0': Fine to medium Sand			PID: 0.0 ppm Wet at 9 ft
10											
										End of Boring at 10 ftbg	
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 8.5-9.0 ftbg. Composite sample collected from 0-9.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-11





# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-13		
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1		
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01		
<b>GROUNDWATER:</b> 8 ft bgs					<b>LOCATION:</b> 147th Dr.		
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA		
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 14, 2022		
<b>TUBE</b>					<b>DATE FINISHED:</b> September 19, 2022		
<b>DATE</b>					<b>DRILLER:</b> John Veiss		
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska		
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick		
<b>TYPE</b>							
<b>TYPE</b>							
<b>TYPE</b>							
<b>TYPE</b>							
<b>TYPE</b>							
<b>TYPE</b>							

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Brown to orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6										
10					80%	Orange brown to light brown	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 8 ft
								End of Boring at 10 ftbg		
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 7.5-8.0 ftbg. Composite sample collected from 0-8.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-13





# LiRo Engineers, Inc.

## TEST BORING LOG

PROJECT: Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					BORING NO.: SB-14/TWP-14	
CLIENT: Department of Design and Construction - HWQ274F2					SHEET: 1 of 1	
BORING CONTRACTOR: Associated Environmental Services, LLC.					JOB NO.: 19-294-0265.01	
GROUNDWATER: 7 ft bgs					LOCATION: 259th St.	
CAS.					GROUND ELEVATION: NA	
SAMPLER					DATE STARTED: September 14, 2022	
TUBE					DATE FINISHED: September 19, 2022	
DATE					DRILLER: John Veiss	
TIME					GEOLOGIST: Eva Jakubowska	
LEVEL					REVIEWED BY:	
TYPE						
TYPE						
NA						
DIA.						
WT.						
FALL						

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Brown to beige	NA	0-6.0': Fine to medium Sand.		SW	Hand cleared to 6 ftbg PID: 0.0 ppm Dry
6					70%	Light brown	Medium loose	6.0-10.0': Fine to medium Sand.			PID: 0.0 ppm Wet at 7 ft
10					80%	Beige	Medium loose	10.0-15.0': Fine to medium Sand, trace of small gravel.			PID: 0.0 ppm Wet
15							End of Boring at 15 ftbg				
20											
25											
30											

COMMENTS: Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	PROJECT NO.: 19-294-0265.01
	BORING NO.: SB-14/TWP-14



# LiRo Engineers, Inc.

## TEST BORING LOG

**PROJECT:** Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.

**BORING NO.:** SB-15  
**SHEET:** 1 of 1

**CLIENT:** Department of Design and Construction - HWQ274F2

**JOB NO.:** 19-294-0265.01

**BORING CONTRACTOR:** Associated Environmental Services, LLC.

**LOCATION:** 147th Rd.

GROUNDWATER: 7 ft bgs				CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		
			NA	DIA.		
				WT.		
				FALL		

**GROUND ELEVATION:** NA  
**DATE STARTED:** September 14, 2022  
**DATE FINISHED:** September 19, 2022  
**DRILLER:** John Veiss  
**GEOLOGIST:** Eva Jakubowska  
**REVIEWED BY:** Thomas Fralick

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS		
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION				
1	Gravelly Sand					NA	Brown to orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6												
10						100%	Light brown	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 7 ft	
15												
20												
25												
30												

End of Boring at 10 ftbg

**COMMENTS:** Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).

**PROJECT NO.:** 19-294-0265.01  
**BORING NO.:** SB-15



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-16				
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1				
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01				
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 147th Dr.				
					<b>GROUND ELEVATION:</b> NA				
<b>DATE</b>	<b>TIME</b>	<b>LEVEL</b>	<b>TYPE</b>	<b>TYPE</b>					
			NA	DIA.					
				WT.					
			FALL						
					<b>DRILLER:</b> John Veiss				
					<b>GEOLOGIST:</b> Eva Jakubowska				
					<b>REVIEWED BY:</b> Thomas Fralick				

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Brown to orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					90%	Light brown	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-16



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-17	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 148th Ave.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 15, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Burgundy brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6											
						100%	Orange	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 7 ft
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-17



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-18				
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1				
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01				
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 148th Rd..				
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA				
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 15, 2022				
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022				
<b>DATE</b>					<b>DRILLER:</b> John Veiss				
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska				
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick				
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Dark brown to brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6					100%	Beige	Medium loose	6.0-10.0': Fine to medium Sand		PID: 0.0 ppm Wet at 7 ft	
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-18



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-19	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 148th Rd.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 15, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Orange brown	NA	0-6.0': Fine to medium Sand, small gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					80%	Orange brown	Medium loose	6.0-10.0': Medium to coarse Sand		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-19



# LiRo Engineers, Inc.

## TEST BORING LOG

**PROJECT:** Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.

**BORING NO.:** SB-20

**CLIENT:** Department of Design and Construction - HWQ274F2

**SHEET:** 1 of 1

**BORING CONTRACTOR:** Associated Environmental Services, LLC.

**JOB NO.:** 19-294-0265.01

**GROUNDWATER:** 7 ft bgs

**CAS.**

**SAMPLER**

**TUBE**

**LOCATION:** 148th Dr.

**GROUND ELEVATION:** NA

DATE	TIME	LEVEL	TYPE	TYPE
			NA	DIA.
				WT.
				FALL

**DATE STARTED:** September 15, 2022

**DATE FINISHED:** September 16, 2022

**DRILLER:** John Veiss

**GEOLOGIST:** Eva Jakubowska

**REVIEWED BY:** Thomas Fralick

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Light brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					80%	Orange	Medium loose	6.0-10.0': Medium to coarse Sand		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

**COMMENTS:** Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).

**PROJECT NO.:** 19-294-0265.01

**BORING NO.:** SB-20



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-21/TWP-21	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 262nd St.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 14, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	STRATA	SAMPLE				DESCRIPTION				USCS	REMARKS
		"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Grid Pattern]				NA	Brown	NA	0-6.0': Fine to medium Sand, gravel and fill material.	FILL	Hand cleared to 6 ftbg PID: 0.0 ppm Dry	
6					50%	Dark brown to dark gray	Medium loose	6.0-9.0': Fine to medium Sand, fill material.		PID: 0.0 ppm Wet at 7 ft	
10		[Wavy Pattern]						9-10' Peat.	PT		
15	[Dotted Pattern]				50%	Gray	Medium loose	10.0-15.0': Fine to medium Sand, some small gravel.	SW	PID: 0.0 ppm Wet	
								End of Boring at 15 ftbg			
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-21/TWP-21





# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-22	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 8 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.	
<b>CAS.</b>			<b>SAMPLER</b>		<b>TUBE</b>	
<b>GROUND ELEVATION:</b> NA					<b>DATE STARTED:</b> September 15, 2022	
<b>DATE</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>TIME</b>					<b>DRILLER:</b> John Veiss	
<b>LEVEL</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>TYPE</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS		
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION				
1					NA	Dark brown	NA	0-6.0': Fine to medium Sand, gravel and fill material.	FILL	Hand cleared to 6 ftbg PID: 0.0 ppm Moist		
6								6.0-10.0': Fine to medium Sand and fill.				
						90%	Dark gray to brown	Medium loose	7.0-10.0': Fine to medium Sand.	SW	PID: 0.0 ppm Wet at 8 ft	
10												
								End of Boring at 10 ftbg				
15												
20												
25												
30												

<b>COMMENTS:</b> Grab sample collected @ 7.5-8.0 ftbg. Composite sample collected from 0-8.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-22



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-23	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> 262nd Pl.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 15, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS	
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1					NA	Brown	NA	0-6.0': Fine Sand, gravel and fill material (red brick pieces).	FILL	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6											
						90%	Brown to orange	Loose	6.0-10.0': Fine to medium Sand.	SW	PID: 0.0 ppm Wet at 7 ft
10											
	End of Boring at 10 ftbg										
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).					<b>PROJECT NO.:</b> 19-294-0265.01	
					<b>BORING NO.:</b> SB-23	



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-24				
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1				
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01				
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Hundry Harbor Dr.				
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA				
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 15, 2022				
<b>TUBE</b>					<b>DATE FINISHED:</b> September 16, 2022				
<b>DATE</b>					<b>DRILLER:</b> John Veiss				
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska				
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick				
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									
<b>TYPE</b>									

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1					NA	Orange	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6					90%	Orange to light brown	Loose	6.0-10.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 7 ft	
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-24



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-25	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Harbor Creek Blvd.	
			<b>CAS.</b>	<b>SAMPLER</b>	<b>TUBE</b>	<b>GROUND ELEVATION:</b> NA
<b>DATE</b>	<b>TIME</b>	<b>LEVEL</b>	<b>TYPE</b>	<b>TYPE</b>		<b>DATE STARTED:</b> September 15, 2022
			NA	DIA.		<b>DATE FINISHED:</b> September 16, 2022
				WT.		<b>DRILLER:</b> John Veiss
			FALL			<b>GEOLOGIST:</b> Eva Jakubowska
					<b>REVIEWED BY:</b> Thomas Fralick	

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]								SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					NA	Orange	NA	0-6.0': Fine to medium Sand.		
10					70%	Orange	Medium loose	6.0-10.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 7 ft
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-25



# LiRo Engineers, Inc.

## TEST BORING LOG

PROJECT: Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					BORING NO.: SB-26
CLIENT: Department of Design and Construction - HWQ274F2					SHEET: 1 of 1
BORING CONTRACTOR: Associated Environmental Services, LLC.					JOB NO.: 19-294-0265.01
GROUNDWATER: 9 ft bgs					LOCATION: Francis Lewis Blvd.
CAS.			SAMPLER	TUBE	GROUND ELEVATION: NA
DATE	TIME	LEVEL	TYPE	TYPE	DATE STARTED: September 14, 2022
			NA	DIA.	DATE FINISHED: September 19, 2022
				WT.	DRILLER: John Veiss
			FALL		GEOLOGIST: Eva Jakubowska
					REVIEWED BY:

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6										
					100%	Orange brown	Medium loose	6.0-10.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 9 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

COMMENTS: Grab sample collected @ 8.5-9.0 ftbg. Composite sample collected from 0-9.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).					PROJECT NO.: 19-294-0265.01
					BORING NO.: SB-26



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-27	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 14, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 19, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS		
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION				
1						NA	Brown	NA	0-3.0': Fine to medium Sand and gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
									3.0-6.0': Fine to medium Sand.			
6									6.0-10.0': Fine to medium Sand			
						70%	Brown	Medium loose				PID: 0.0 ppm Wet at 7 ft
10												
										End of Boring at 10 ftbg		
15												
20												
25												
30												

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-27



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-28	
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1	
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01	
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.	
<b>CAS.</b>					<b>GROUND ELEVATION:</b> NA	
<b>SAMPLER</b>					<b>DATE STARTED:</b> September 14, 2022	
<b>TUBE</b>					<b>DATE FINISHED:</b> September 19, 2022	
<b>DATE</b>					<b>DRILLER:</b> John Veiss	
<b>TIME</b>					<b>GEOLOGIST:</b> Eva Jakubowska	
<b>LEVEL</b>					<b>REVIEWED BY:</b> Thomas Fralick	
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						
<b>TYPE</b>						

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Dark brown to brown	NA	0-6.0': Fine to medium Sand and gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					80%	Beige	Medium loose	6.0-10.0': Fine to medium Sand.		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-28



# LiRo Engineers, Inc.

## TEST BORING LOG

**PROJECT:** Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.

**BORING NO.:** SB-29

**CLIENT:** Department of Design and Construction - HWQ274F2

**SHEET:** 1 of 1

**BORING CONTRACTOR:** Associated Environmental Services, LLC.

**JOB NO.:** 19-294-0265.01

**GROUNDWATER:** 7 ft bgs

**CAS.** **SAMPLER** **TUBE**

**LOCATION:** Hook Creek Blvd.

**GROUND ELEVATION:** NA

DATE	TIME	LEVEL	TYPE	TYPE
			NA	DIA.
				WT.
			FALL	

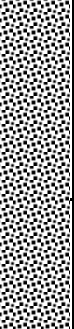
**DATE STARTED:** September 14, 2022

**DATE FINISHED:** September 19, 2022

**DRILLER:** John Veiss

**GEOLOGIST:** Eva Jakubowska

**REVIEWED BY:** Thomas Fralick

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1					NA	Orange brown	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					90%	Light brown	Medium loose	6.0-10.0': Medium to coarse Sand.		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

**COMMENTS:** Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).

**PROJECT NO.:** 19-294-0265.01

**BORING NO.:** SB-29





# LiRo Engineers, Inc.

## TEST BORING LOG

PROJECT: Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					BORING NO.: SB-30	
CLIENT: Department of Design and Construction - HWQ274F2					SHEET: 1 of 1	
BORING CONTRACTOR: Associated Environmental Services, LLC.					JOB NO.: 19-294-0265.01	
GROUNDWATER: 7 ft bgs					LOCATION: 147th Dr.	
CAS.					GROUND ELEVATION: NA	
SAMPLER					DATE STARTED: September 14, 2022	
TUBE					DATE FINISHED: September 19, 2022	
DATE					DRILLER: John Veiss	
TIME					GEOLOGIST: Eva Jakubowska	
LEVEL					REVIEWED BY: Thomas Fralick	
TYPE						
TYPE						
DIA.						
WT.						
FALL						

DEPTH FEET	SAMPLE				DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
1	[Pattern]				NA	Brown to orange brown	NA	0-6.0': Fine to medium Sand, trace of gravel.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist
6					90%	Brown to beige	Medium loose	6.0-10.0': Fine to medium Sand, trace of gravel.		PID: 0.0 ppm Wet at 7 ft
10										
								End of Boring at 10 ftbg		
15										
20										
25										
30										

COMMENTS: Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	PROJECT NO.: 19-294-0265.01
	BORING NO.: SB-30



# LiRo Engineers, Inc.

## TEST BORING LOG

<b>PROJECT:</b> Reconstruction of Rosedale Area in Francis Lewis Blvd., Hook Creek Blvd., and Others in Queens, New York.					<b>BORING NO.:</b> SB-31		
<b>CLIENT:</b> Department of Design and Construction - HWQ274F2					<b>SHEET:</b> 1 of 1		
<b>BORING CONTRACTOR:</b> Associated Environmental Services, LLC.					<b>JOB NO.:</b> 19-294-0265.01		
<b>GROUNDWATER:</b> 7 ft bgs					<b>LOCATION:</b> Hook Creek Blvd.		
					<b>GROUND ELEVATION:</b> NA		
<b>DATE</b>	<b>TIME</b>	<b>LEVEL</b>	<b>TYPE</b>	<b>TYPE</b>	<b>DATE STARTED:</b> September 15, 2022		
			NA	DIA.	<b>DATE FINISHED:</b> September 16, 2022		
				WT.	<b>DRILLER:</b> John Veiss		
			FALL		<b>GEOLOGIST:</b> Eva Jakubowska		
					<b>REVIEWED BY:</b> Thomas Fralick		

DEPTH FEET	SAMPLE					DESCRIPTION				USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION			
1	[Pattern]				NA	Orange	NA	0-6.0': Fine to medium Sand.	SW	Hand cleared to 6 ftbg PID: 0.0 ppm Moist	
6					90%	Beige	Loose	6.0-10.0': Fine to medium Sand.			
10											
								End of Boring at 10 ftbg			
15											
20											
25											
30											

<b>COMMENTS:</b> Grab sample collected @ 6.5-7.0 ftbg. Composite sample collected from 0-7.0 ftbg. Soil was classified in accordance with the Unified Soil Classification System (USCS).	<b>PROJECT NO.:</b> 19-294-0265.01
	<b>BORING NO.:</b> SB-31

<b>DRILLING SUMMARY</b>	<b>TEMPORARY WELL CONSTRUCTION DETAIL</b>
-------------------------	---

Geologist:  
Eva Jakubowska

Drilling Company:  
Associated Environmental Services

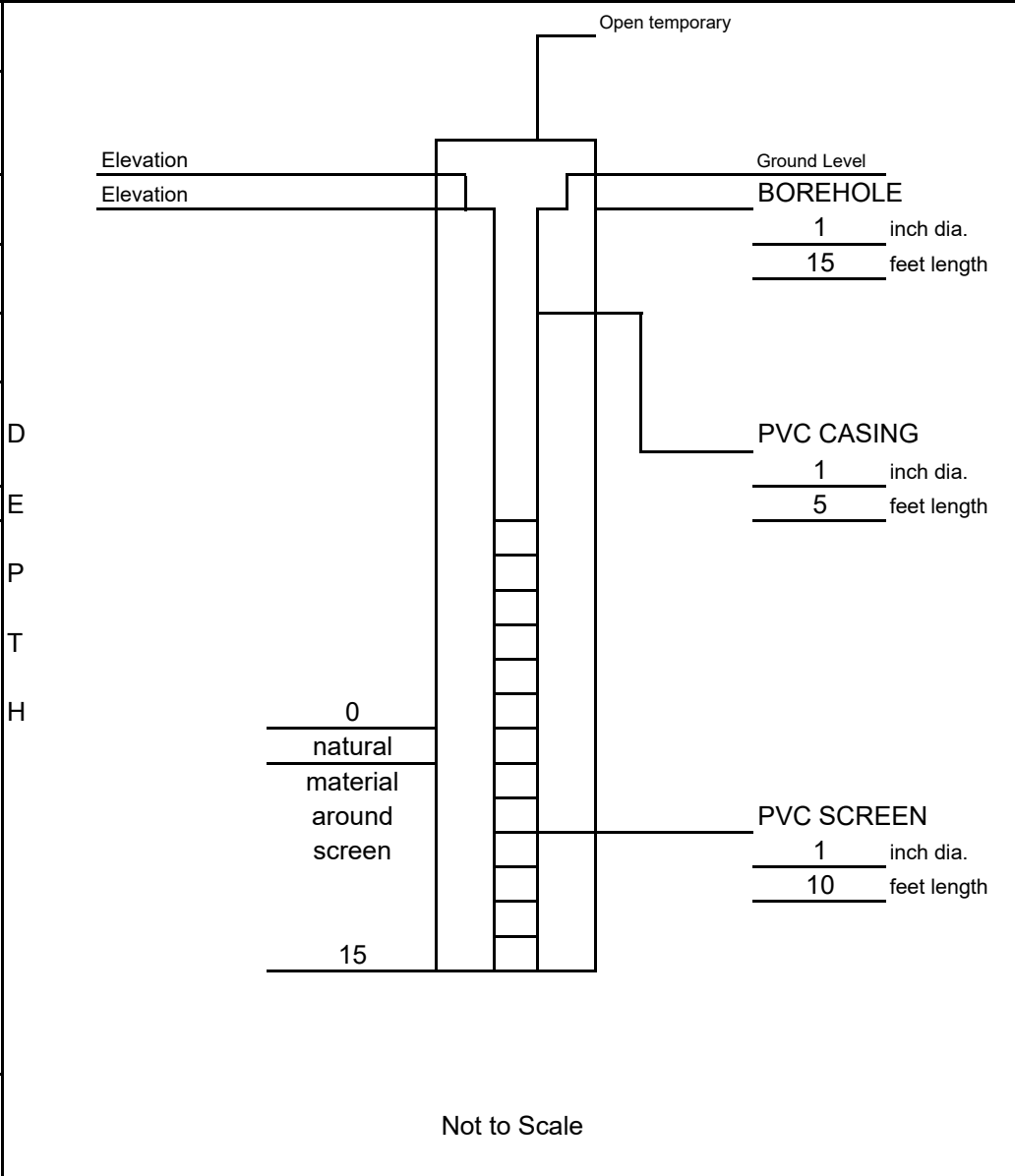
Driller:  
John Veiss

Rig Make/Model:  
GeoProbe

Date:  
9/20/2022

**GEOLOGIC LOG**

Depth(ft.)	Description
	See boring log SB-05



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: None	Type: 1" PVC	Type: no filter pack    Setting: N/A
Monitor: 1" PVC	Slot Size: 0.010"	<b>SEAL MATERIAL</b> Type: Bentonite    Setting: none Type: Cement    Setting: NA

**COMMENTS:**  
Temporary well.  
Soil boring terminated at 15 ftbg. TWP-05 well driven to a depth of 15 ftbg by direct push methods. GW present at 9 ftbg.

**LEGEND**

	Open Formation
--	----------------

<b>Client:</b> NYCDDC-OEHS	<b>Location:</b> Rosedale Area Queens, NY	<b>Project No.:</b> 19-294-0265.01
<b>LiRo Engineers, Inc.</b>	<b>MONITORING WELL CONSTRUCTION DETAILS</b>	<b>Well Number:</b> <b>TWP-05</b>

<b>DRILLING SUMMARY</b>	<b>TEMPORARY WELL CONSTRUCTION DETAIL</b>
-------------------------	---

Geologist:  
Eva Jakubowska

Drilling Company:  
Associated Environmental Services

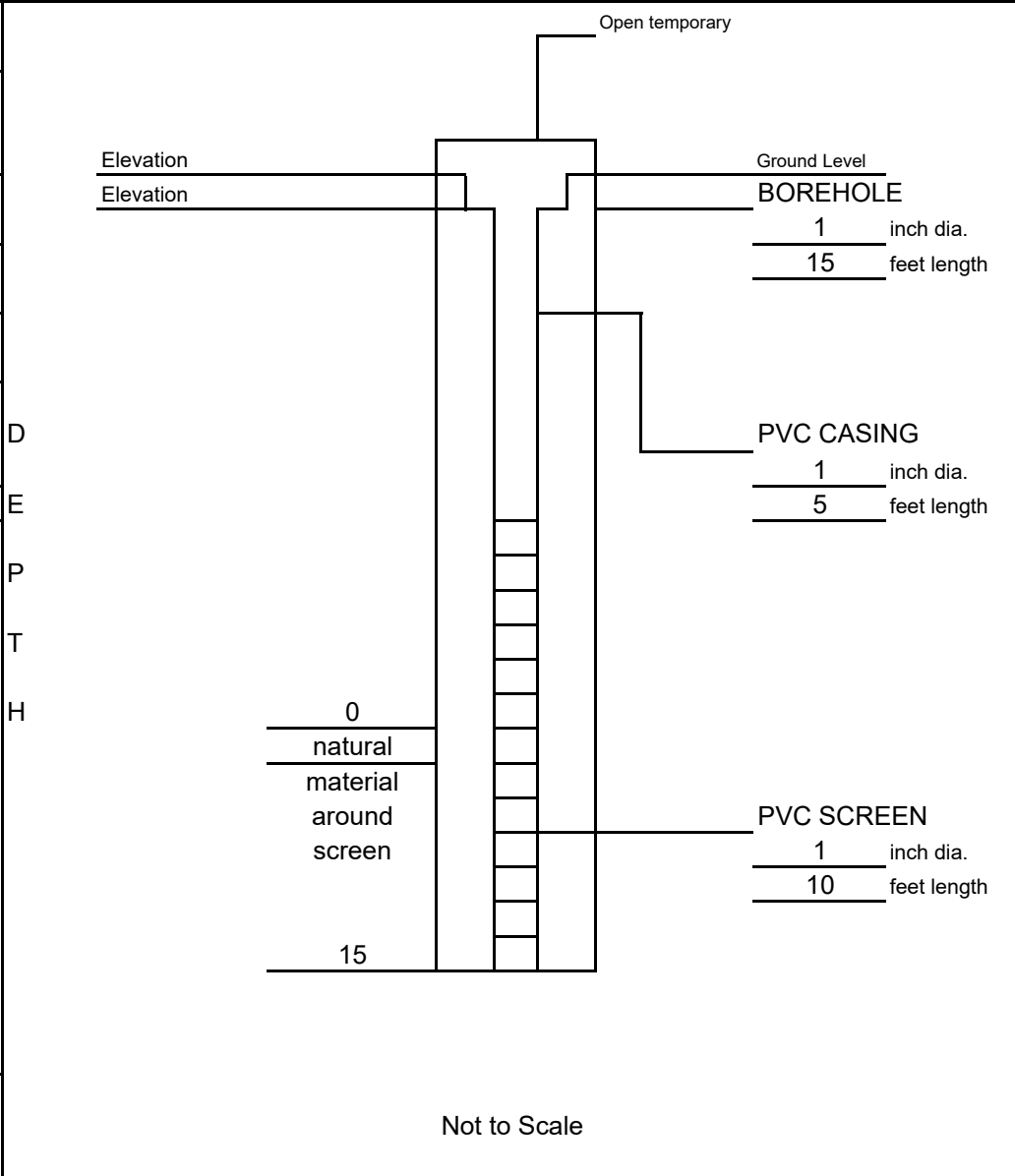
Driller:  
John Veiss

Rig Make/Model:  
GeoProbe

Date:  
9/16/2022

**GEOLOGIC LOG**

Depth(ft.)	Description
	See boring log SB-14



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: None	Type: 1" PVC	Type: no filter pack    Setting: N/A
Monitor: 1" PVC	Slot Size: 0.010"	<b>SEAL MATERIAL</b> Type: Bentonite    Setting: none Type: Cement    Setting: NA

**COMMENTS:**  
Temporary well.  
Soil boring terminated at 15 ftbg. TWP-14 well driven to a depth of 15 ftbg by direct push methods. GW present at 7 ftbg.

**LEGEND**

	Open Formation
--	----------------

<b>Client:</b> NYCDDC-OEHS	<b>Location:</b> Rosedale Area/259th St. Queens, NY	<b>Project No.:</b> 19-294-0265.01
<b>LiRo Engineers, Inc.</b>	<b>MONITORING WELL CONSTRUCTION DETAILS</b>	<b>Well Number:</b> <b>TWP-14</b>

<b>DRILLING SUMMARY</b>	<b>TEMPORARY WELL CONSTRUCTION DETAIL</b>
-------------------------	---

Geologist:  
Eva Jakubowska

Drilling Company:  
Associated Environmental Services

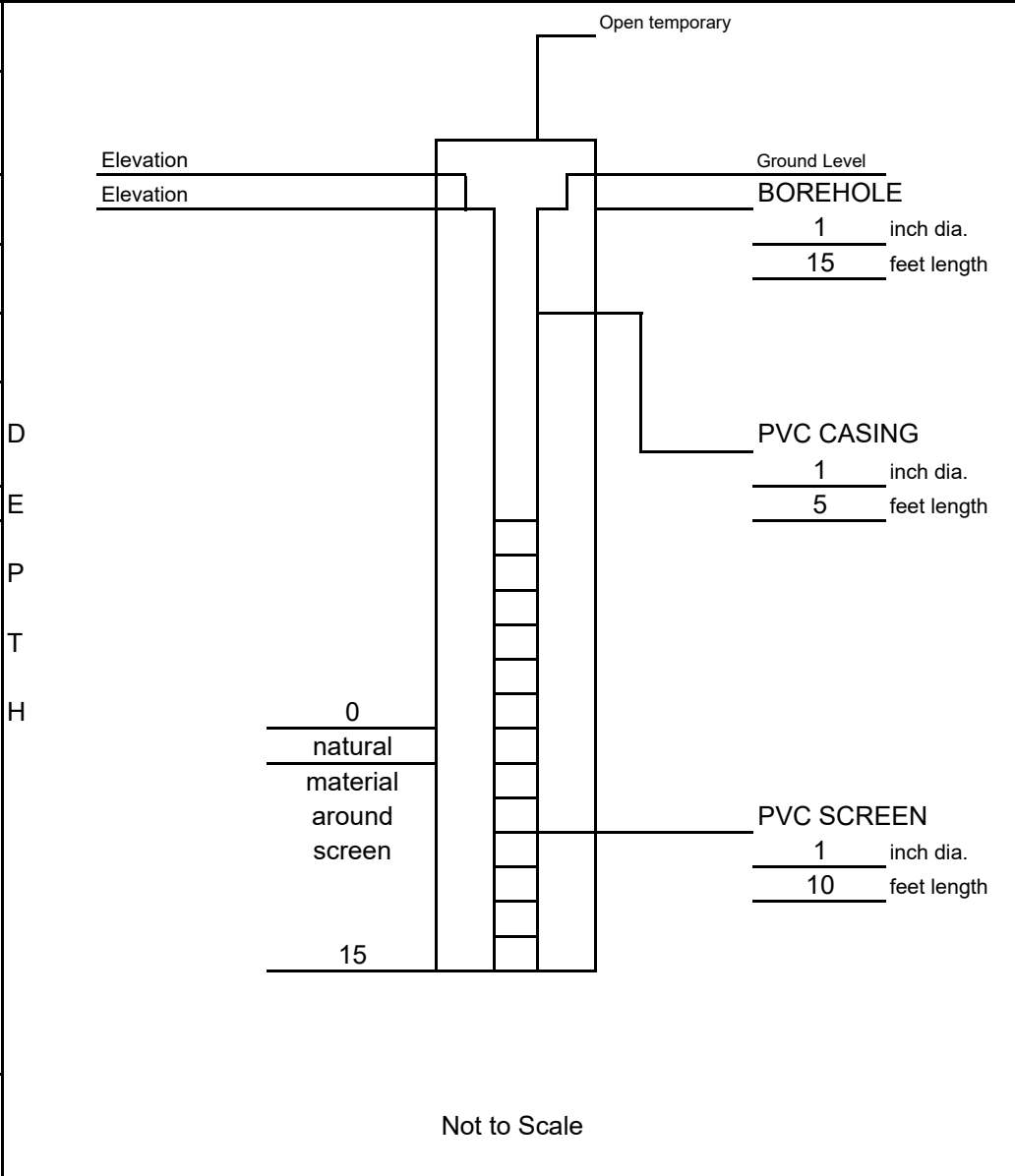
Driller:  
John Veiss

Rig Make/Model:  
GeoProbe

Date:  
9/16/2022

**GEOLOGIC LOG**

Depth(ft.)	Description
	See boring log SB-21



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: None	Type: 1" PVC	Type: no filter pack    Setting: N/A
Monitor: 1" PVC	Slot Size: 0.010"	<b>SEAL MATERIAL</b> Type: Bentonite    Setting: none Type: Cement    Setting: NA

**COMMENTS:**  
Temporary well.  
Soil boring terminated at 15 ftbg. TWP-21 well driven to a depth of 15 ftbg by direct push methods. GW present at 7 ftbg.

**LEGEND**

	Open Formation
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<b>Client:</b> NYCDDC-OEHS	<b>Location:</b> Rosedale Area/262nd St. Queens, NY	<b>Project No.:</b> 19-294-0265.01
<b>LiRo Engineers, Inc.</b>	<b>MONITORING WELL CONSTRUCTION DETAILS</b>	<b>Well Number:</b> <b>TWP-21</b>

**APPENDIX C**  
**LABORATORY ANALYTICAL RESULTS**

**DATA FOR**  
**VOLATILE ORGANICS**  
**SEMI-VOLATILE ORGANICS**  
**GC SEMI-VOLATILES**  
**METALS**  
**GENERAL CHEMISTRY**

**PROJECT NAME : DDC OEGS - RECONSTRUCTION OF ROSEDALE AREA**

**LIRO ENGINEERS, INC.**

**690 Delaware Ave.**

**Buffalo, NY - 14209**

**Phone No: 716-882-5476**

**ORDER ID : N4697**

**ATTENTION : Steve Frank**



Date : 09/23/2022

Dear Steve Frank,

**20** soil samples for the **DDC OEGS - Reconstruction of Rosedale Area** project were received on **09/16/2022**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns regarding this

The invoice for this workorder is also attached to the e-mail.

Regards,

Samantha Beazley

[Samantha@chemtech.net](mailto:Samantha@chemtech.net)



CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: **Ueo Engineers, Inc.**  
 ADDRESS: **703 Lorimer street**  
 CITY: **Brooklyn** STATE: **NY** ZIP: **11211**  
 ATTENTION: **Steve Frank**  
 PHONE: **716 882-5476** FAX: \_\_\_\_\_

CLIENT PROJECT INFORMATION

PROJECT NAME: **Reconstruction of Rosedale Area**  
 PROJECT NO.: **19-294-0265.01** LOCATION: **Queens, NY**  
 PROJECT MANAGER: **Steve Frank**  
 e-mail: **hewsona@uio.com/frank@uio.com**  
 PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

CLIENT BILLING INFORMATION

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_  
 ADDRESS: **same**  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

DATA TURNAROUND INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
 HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
 EDD: **5 days** DAYS\*  
 \*TO BE APPROVED BY CHEMTECH  
 STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)  
 Level 2 (Results + QC)  NJ Reduced  US EPA CLP  
 Level 3 (Results + QC)  NYS ASP A  NYS ASP B  
 + Raw Data  Other \_\_\_\_\_  
 EDD FORMAT \_\_\_\_\_

*ICL VOC PAHS PCBs PRO/GRO RPA Characterization TCLP RCRA Metals*

ANALYSIS

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER				
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9					
1.	SB-22-7.5-8.0'	S	X		9/16/22	1030	1	X													
2.	SB-22-comp	S	X		9/16/22	1035	2		X	X	X	X	X								
3.	SB-23-6.5-7.0'	S		X		1000	1	X													
4.	SB-23-comp	S	X			1005	2		X	X	X	X	X								
5.	SB-24-6.5-7.0'	S		X		0915	1	X													
6.	SB-24-comp	S	X			0920	2		X	X	X	X	X								
7.	SB-31-6.5-7.0'	I		X		0900	1	X													
8.	SB-31-comp	I	X			0905	2		X	X	X	X	X								
9.	SB-21-6.5-7.0'	I		X		1040	1	X													
10.	SB-21-comp	I	X			1045	2		X	X	X	X	X								

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <i>[Signature]</i>	DATE/TIME: 9/16/22	RECEIVED BY: <i>[Signature]</i> 1315	Conditions of bottles or coolers at receipt: <input checked="" type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>4.2</b> °C
RELINQUISHED BY SAMPLER: 2. _____	DATE/TIME:	RECEIVED BY:	Comments:
RELINQUISHED BY SAMPLER: 3. <i>[Signature]</i>	DATE/TIME: <b>1555</b> 9-16-22	RECEIVED BY: <b>SB</b>	

Page **HAZ-88** of **88** CLIENT:  Hand Delivered  Other \_\_\_\_\_  
 CHEMTECH:  Picked Up  Field Sampling Shipment Complete  
 YES  NO

04697

2036380

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: URO Engineers, Inc.

ADDRESS: 703 Lorimer str.

CITY: Brooklyn STATE: NY ZIP: 11211

ATTENTION: Steve Frank

PHONE: 716 882-5476 FAX: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT NO.: \_\_\_\_\_ LOCATION: \_\_\_\_\_

PROJECT MANAGER: same as pg. 1

e-mail: hewsona@uro.com

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_

ADDRESS: same

CITY \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

ANALYSIS (

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*

HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*

EDD: 5 day TAT DAYS\*

\*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)

Level 2 (Results + QC)  NJ Reduced  US EPA CLP

Level 3 (Results + QC + Raw Data)  NYS ASP A  NYS ASP B

Other \_\_\_\_\_

EDD FORMAT \_\_\_\_\_

TCL VOCs  
PAHs  
PCBs  
DRO/GRO  
RCA Characterization  
TCLP RCA Method

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER			
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9				
1.	SB-20-6.5-7.0'	S		X	9/16/22	1100	1	X												
2.	SB-20-COMP	S	X		11	1105	2		X	X	X	X	X							
3.	SB-19-6.5-7.0'	S		X		1120	1	X												
4.	SB-19-COMP	S	X			1125	2		X	X	X	X	X							
5.	SB-18-6.5-7.0'	S		X		1140	1	X												
6.	SB-18-COMP	S	X			1145	2		X	X	X	X	X							
7.	SB-25-6.5-7.0'	S		X		1215	1	X												
8.	SB-25-COMP	S	X			1220	2		X	X	X	X	X							
9.	SB-17-6.5-7.0'	S		X		1245	1	X												
10.	SB-17-COMP	S	X			1250	2		X	X	X	X	X							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>9/16/22</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>9/16/22</u>
RELINQUISHED BY SAMPLER: 2. _____	DATE/TIME:	RECEIVED BY:	
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>9-16-22</u>	RECEIVED BY: <u>SB</u>	

Conditions of bottles or coolers at receipt:  COMPLIANT  NON COMPLIANT  COOLER TEMP \_\_\_\_\_ °C

Comments: \_\_\_\_\_

Page HAZ 89

CLIENT:  Hand Delivered  Other \_\_\_\_\_

CHEMTECH:  Picked Up  Field Sampling

Shipment Complete  YES  NO

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-7.5-8.0	SDG No.:	N4697
Lab Sample ID:	N4697-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010579.D	1		09/20/22 16:47	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.96	U	0.96	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	0.99	U	0.99	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.80	U	0.80	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.96	U	0.96	5.60	ug/Kg
67-64-1	Acetone	100		13.6	27.8	ug/Kg
75-15-0	Carbon Disulfide	0.83	U	0.83	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	8.70	J	6.60	11.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.60	ug/Kg
110-82-7	Cyclohexane	0.93	U	0.93	5.60	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	27.8	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
74-97-5	Bromochloromethane	0.90	U	0.90	5.60	ug/Kg
67-66-3	Chloroform	0.74	U	0.74	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.83	U	0.83	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.89	U	0.89	5.60	ug/Kg
71-43-2	Benzene	0.73	U	0.73	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.93	U	0.93	5.60	ug/Kg
79-01-6	Trichloroethene	0.81	U	0.81	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.72	U	0.72	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	27.8	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.82	U	0.82	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.60	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-7.5-8.0	SDG No.:	N4697
Lab Sample ID:	N4697-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010579.D	1		09/20/22 16:47	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.96	U	0.96	5.60	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	27.8	ug/Kg
124-48-1	Dibromochloromethane	0.83	U	0.83	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.83	U	0.83	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.84	U	0.84	5.60	ug/Kg
108-90-7	Chlorobenzene	0.72	U	0.72	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	11.1	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.60	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.60	ug/Kg
75-25-2	Bromoform	0.90	U	0.90	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.80	U	0.80	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.74	U	0.74	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.71	U	0.71	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.4		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	32.6		54 - 147	65%	SPK: 50
2037-26-5	Toluene-d8	49.5		78 - 125	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.1		50 - 146	74%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	14200	7.789			
540-36-3	1,4-Difluorobenzene	21800	8.685			
3114-55-4	Chlorobenzene-d5	18600	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	6940	13.422			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown5.741	7.00	J		5.74	ug/Kg
000090-12-0	Naphthalene, 1-methyl-	6.90	J		16.3	ug/Kg

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-7.5-8.0	SDG No.:	N4697
Lab Sample ID:	N4697-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010579.D	1		09/20/22 16:47	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
------------	-----------	-------	-----------	-----	------------	-------------------

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 10:35
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.36	H	1	0	0	pH		09/16/22 17:33	9045D
Ignitability	NO		1	0	0	oC		09/19/22 15:42	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:29	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:18	9034

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	8.9      Decanted:
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010614.D	1	09/17/22 09:42	09/19/22 16:37	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	9100		240	1830	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	13.0		37 - 130	65%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	8.9      Decanted:
Sample Wt/Vol:	5      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028357.D	50	09/21/22 14:47	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	824	J	199	2470	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.5		50 - 150	112%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-22-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-02	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	8.9	Decanted:		
Sample Wt/Vol:	30.06	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056794.D	1	09/17/22 08:56	09/19/22 12:41	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	5.10	U	5.10	18.6	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	18.6	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	4.60	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	3.60	U	3.60	18.6	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	3.50	U	3.50	18.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.4		40 - 162	97%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.0		32 - 176	85%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.08      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054991.D	1	09/17/22 09:18	09/20/22 18:10	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	80.9	U	80.9	190	ug/Kg
208-96-8	Acenaphthylene	75.2	U	75.2	190	ug/Kg
83-32-9	Acenaphthene	86.4	U	86.4	190	ug/Kg
86-73-7	Fluorene	86.3	U	86.3	190	ug/Kg
85-01-8	Phenanthrene	91.5	U	91.5	190	ug/Kg
120-12-7	Anthracene	92.0	U	92.0	190	ug/Kg
206-44-0	Fluoranthene	87.4	U	87.4	190	ug/Kg
129-00-0	Pyrene	81.2	U	81.2	190	ug/Kg
56-55-3	Benzo(a)anthracene	95.0	U	95.0	190	ug/Kg
218-01-9	Chrysene	93.6	U	93.6	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	75.5	U	75.5	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	80.6	U	80.6	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.1	U	74.1	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	58.4		27 - 109	58%	SPK: 100
321-60-8	2-Fluorobiphenyl	53.8		30 - 103	54%	SPK: 100
1718-51-0	Terphenyl-d14	52.0		21 - 107	52%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	39700		8.059		
1146-65-2	Naphthalene-d8	169000		10.885		
15067-26-2	Acenaphthene-d10	122000		14.704		
1517-22-2	Phenanthrene-d10	283000		17.448		
1719-03-5	Chrysene-d12	283000		21.725		
1520-96-3	Perylene-d12	298000		25.027		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.08      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054991.D	1	09/17/22 09:18	09/20/22 18:10	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 98 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-22-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7440-39-3	Barium	1520		1	77.9	500	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7440-47-3	Chromium	15.0	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7439-92-1	Lead	81.7		1	19.4	60.0	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7439-97-6	Mercury	0.78	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:46	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/20/22 15:46	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ -99 = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.8
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010580.D	1		09/20/22 17:10	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.94	U	0.94	5.50	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.50	ug/Kg
75-01-4	Vinyl Chloride	0.99	U	0.99	5.50	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.50	ug/Kg
75-00-3	Chloroethane	0.97	U	0.97	5.50	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.50	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.79	U	0.79	5.50	ug/Kg
75-35-4	1,1-Dichloroethene	0.94	U	0.94	5.50	ug/Kg
67-64-1	Acetone	13.3	U	13.3	27.3	ug/Kg
75-15-0	Carbon Disulfide	0.82	U	0.82	5.50	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.50	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.50	ug/Kg
75-09-2	Methylene Chloride	6.50	U	6.50	10.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
75-34-3	1,1-Dichloroethane	0.76	U	0.76	5.50	ug/Kg
110-82-7	Cyclohexane	0.92	U	0.92	5.50	ug/Kg
78-93-3	2-Butanone	7.90	U	7.90	27.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.86	U	0.86	5.50	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
74-97-5	Bromochloromethane	0.88	U	0.88	5.50	ug/Kg
67-66-3	Chloroform	0.73	U	0.73	5.50	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.82	U	0.82	5.50	ug/Kg
108-87-2	Methylcyclohexane	0.87	U	0.87	5.50	ug/Kg
71-43-2	Benzene	0.72	U	0.72	5.50	ug/Kg
107-06-2	1,2-Dichloroethane	0.92	U	0.92	5.50	ug/Kg
79-01-6	Trichloroethene	0.80	U	0.80	5.50	ug/Kg
78-87-5	1,2-Dichloropropane	0.71	U	0.71	5.50	ug/Kg
75-27-4	Bromodichloromethane	0.76	U	0.76	5.50	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.00	U	5.00	27.3	ug/Kg
108-88-3	Toluene	0.69	U	0.69	5.50	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.81	U	0.81	5.50	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.77	U	0.77	5.50	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.8
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010580.D	1		09/20/22 17:10	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.94	U	0.94	5.50	ug/Kg
591-78-6	2-Hexanone	5.10	U	5.10	27.3	ug/Kg
124-48-1	Dibromochloromethane	0.82	U	0.82	5.50	ug/Kg
106-93-4	1,2-Dibromoethane	0.82	U	0.82	5.50	ug/Kg
127-18-4	Tetrachloroethene	0.83	U	0.83	5.50	ug/Kg
108-90-7	Chlorobenzene	0.71	U	0.71	5.50	ug/Kg
100-41-4	Ethyl Benzene	0.76	U	0.76	5.50	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.9	ug/Kg
95-47-6	o-Xylene	0.86	U	0.86	5.50	ug/Kg
100-42-5	Styrene	0.86	U	0.86	5.50	ug/Kg
75-25-2	Bromoform	0.88	U	0.88	5.50	ug/Kg
98-82-8	Isopropylbenzene	0.79	U	0.79	5.50	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.50	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.73	U	0.73	5.50	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.69	U	0.69	5.50	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.70	U	0.70	5.50	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.50	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.50	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.50	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	58.6		50 - 163	117%	SPK: 50
1868-53-7	Dibromofluoromethane	48.6		54 - 147	97%	SPK: 50
2037-26-5	Toluene-d8	50.5		78 - 125	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3		50 - 146	93%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	188000	7.783			
540-36-3	1,4-Difluorobenzene	327000	8.685			
3114-55-4	Chlorobenzene-d5	311000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	144000	13.422			

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.8
Sample Wt/Vol:	5.08 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010580.D	1		09/20/22 17:10	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 10:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.83	H	1	0	0	pH		09/16/22 17:35	9045D
Ignitability	NO		1	0	0	oC		09/19/22 15:50	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:29	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:20	9034

Comments: pH result reported at temperature 21.6 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	12.6      Decanted:
Sample Wt/Vol:	30.08      Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010615.D	1	09/17/22 09:42	09/19/22 17:10	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	3010		250	1900	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	14.9		37 - 130	74%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	12.6      Decanted:
Sample Wt/Vol:	5      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028358.D	50	09/21/22 15:25	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	784	J	207	2570	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.9		50 - 150	100%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
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() = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	12.6      Decanted:
Sample Wt/Vol:	30.01      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056795.D	1	09/17/22 08:56	09/19/22 12:57	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.4	ug/kg
11104-28-2	Aroclor-1221	5.40	U	5.40	19.4	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.4	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.4	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.4	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.4	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.4	ug/kg
11100-14-4	Aroclor-1268	6.60	U	6.60	19.4	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.4	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	16.1		40 - 162	80%	SPK: 20
2051-24-3	Decachlorobiphenyl	12.3		32 - 176	61%	SPK: 20

Comments:

U = Not Detected  
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 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	12.6
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP011746.D	1	09/17/22 09:18	09/19/22 21:34	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	84.5	U	84.5	190	ug/Kg
208-96-8	Acenaphthylene	78.5	U	78.5	190	ug/Kg
83-32-9	Acenaphthene	90.2	U	90.2	190	ug/Kg
86-73-7	Fluorene	90.1	U	90.1	190	ug/Kg
85-01-8	Phenanthrene	95.6	U	95.6	190	ug/Kg
120-12-7	Anthracene	96.0	U	96.0	190	ug/Kg
206-44-0	Fluoranthene	91.2	U	91.2	190	ug/Kg
129-00-0	Pyrene	84.8	U	84.8	190	ug/Kg
56-55-3	Benzo(a)anthracene	99.2	U	99.2	190	ug/Kg
218-01-9	Chrysene	97.7	U	97.7	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	78.9	U	78.9	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	84.1	U	84.1	190	ug/Kg
50-32-8	Benzo(a)pyrene	77.4	U	77.4	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg

**SURROGATES**

4165-60-0	Nitrobenzene-d5	98.5	27 - 109	99%	SPK: 100
321-60-8	2-Fluorobiphenyl	92.3	30 - 103	92%	SPK: 100
1718-51-0	Terphenyl-d14	88.0	21 - 107	88%	SPK: 100

**INTERNAL STANDARDS**

3855-82-1	1,4-Dichlorobenzene-d4	385000	7.934
1146-65-2	Naphthalene-d8	1710000	10.746
15067-26-2	Acenaphthene-d10	1130000	14.575
1517-22-2	Phenanthrene-d10	2440000	17.328
1719-03-5	Chrysene-d12	2340000	21.404
1520-96-3	Perylene-d12	2300000	23.851

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	12.6
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP011746.D	1	09/17/22 09:18	09/19/22 21:34	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 108<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-23-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-04	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7440-39-3	Barium	1030		1	77.9	500	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7440-47-3	Chromium	14.8	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:48	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/20/22 15:50	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 109 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.1
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010602.D	1		09/21/22 16:31	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	5.90	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.90	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	5.90	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	5.90	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	5.90	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.90	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.85	U	0.85	5.90	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	5.90	ug/Kg
67-64-1	Acetone	25.5	J	14.4	29.5	ug/Kg
75-15-0	Carbon Disulfide	0.89	U	0.89	5.90	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.90	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	5.90	ug/Kg
75-09-2	Methylene Chloride	7.00	U	7.00	11.8	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.80	U	0.80	5.90	ug/Kg
75-34-3	1,1-Dichloroethane	0.83	U	0.83	5.90	ug/Kg
110-82-7	Cyclohexane	0.99	U	0.99	5.90	ug/Kg
78-93-3	2-Butanone	8.60	U	8.60	29.5	ug/Kg
56-23-5	Carbon Tetrachloride	0.93	U	0.93	5.90	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.80	U	0.80	5.90	ug/Kg
74-97-5	Bromochloromethane	0.96	U	0.96	5.90	ug/Kg
67-66-3	Chloroform	0.79	U	0.79	5.90	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.89	U	0.89	5.90	ug/Kg
108-87-2	Methylcyclohexane	0.94	U	0.94	5.90	ug/Kg
71-43-2	Benzene	0.78	U	0.78	5.90	ug/Kg
107-06-2	1,2-Dichloroethane	0.99	U	0.99	5.90	ug/Kg
79-01-6	Trichloroethene	0.86	U	0.86	5.90	ug/Kg
78-87-5	1,2-Dichloropropane	0.77	U	0.77	5.90	ug/Kg
75-27-4	Bromodichloromethane	0.83	U	0.83	5.90	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.40	U	5.40	29.5	ug/Kg
108-88-3	Toluene	0.74	U	0.74	5.90	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.87	U	0.87	5.90	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.84	U	0.84	5.90	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.1
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010602.D	1		09/21/22 16:31	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	5.90	ug/Kg
591-78-6	2-Hexanone	5.50	U	5.50	29.5	ug/Kg
124-48-1	Dibromochloromethane	0.89	U	0.89	5.90	ug/Kg
106-93-4	1,2-Dibromoethane	0.89	U	0.89	5.90	ug/Kg
127-18-4	Tetrachloroethene	0.90	U	0.90	5.90	ug/Kg
108-90-7	Chlorobenzene	0.77	U	0.77	5.90	ug/Kg
100-41-4	Ethyl Benzene	0.83	U	0.83	5.90	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.8	ug/Kg
95-47-6	o-Xylene	0.93	U	0.93	5.90	ug/Kg
100-42-5	Styrene	0.93	U	0.93	5.90	ug/Kg
75-25-2	Bromoform	0.96	U	0.96	5.90	ug/Kg
98-82-8	Isopropylbenzene	0.85	U	0.85	5.90	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.90	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.79	U	0.79	5.90	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.74	U	0.74	5.90	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.76	U	0.76	5.90	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	5.90	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.90	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.90	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	50.5		50 - 163	101%	SPK: 50
1868-53-7	Dibromofluoromethane	36.7		54 - 147	73%	SPK: 50
2037-26-5	Toluene-d8	39.3		78 - 125	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	27.6		50 - 146	55%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	20900	7.783			
540-36-3	1,4-Difluorobenzene	35100	8.691			
3114-55-4	Chlorobenzene-d5	32300	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	11900	13.422			



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.1
Sample Wt/Vol:	5.05 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010602.D	1		09/21/22 16:31	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
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 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 09:20
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-06	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.03	H	1	0	0	pH		09/16/22 17:36	9045D
Ignitability	NO		1	0	0	oC		09/19/22 15:58	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/19/22 11:20	09/20/22 10:29	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:23	9034

Comments: pH result reported at temperature 22.0 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	13.4      Decanted:
Sample Wt/Vol:	30.05      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010616.D	1	09/17/22 09:42	09/19/22 17:40	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	2590		252	1920	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	17.8		37 - 130	89%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-24-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-06	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	13.4	Decanted:		
Sample Wt/Vol:	5.09	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028359.D	50	09/21/22 16:02	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	753	J	205	2550	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.9		50 - 150	115%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-24-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-06	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	13.4	Decanted:		
Sample Wt/Vol:	30.05	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056801.D	1	09/17/22 08:56	09/19/22 14:32	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.6	ug/kg
11104-28-2	Aroclor-1221	5.40	U	5.40	19.6	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.6	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.6	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.6	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	19.6	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.6	ug/kg
11100-14-4	Aroclor-1268	6.60	U	6.60	19.6	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	18.8		40 - 162	94%	SPK: 20
2051-24-3	Decachlorobiphenyl	14.7		32 - 176	74%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.4
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054981.D	1	09/17/22 09:18	09/20/22 11:11	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	85.2	U	85.2	200	ug/Kg
208-96-8	Acenaphthylene	79.2	U	79.2	200	ug/Kg
83-32-9	Acenaphthene	90.9	U	90.9	200	ug/Kg
86-73-7	Fluorene	90.8	U	90.8	200	ug/Kg
85-01-8	Phenanthrene	96.3	U	96.3	200	ug/Kg
120-12-7	Anthracene	96.8	U	96.8	200	ug/Kg
206-44-0	Fluoranthene	92.0	U	92.0	200	ug/Kg
129-00-0	Pyrene	85.5	U	85.5	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	98.5	U	98.5	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	79.5	U	79.5	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	84.8	U	84.8	200	ug/Kg
50-32-8	Benzo(a)pyrene	78.0	U	78.0	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	71.3		27 - 109	71%	SPK: 100
321-60-8	2-Fluorobiphenyl	70.1		30 - 103	70%	SPK: 100
1718-51-0	Terphenyl-d14	65.8		21 - 107	66%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	36500	8.06			
1146-65-2	Naphthalene-d8	145000	10.886			
15067-26-2	Acenaphthene-d10	99300	14.705			
1517-22-2	Phenanthrene-d10	240000	17.454			
1719-03-5	Chrysene-d12	257000	21.726			
1520-96-3	Perylene-d12	274000	25.034			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.4
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054981.D	1	09/17/22 09:18	09/20/22 11:11	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 118 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-24-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-06	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7440-39-3	Barium	1510		1	77.9	500	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7440-47-3	Chromium	14.5	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:50	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/20/22 15:54	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 19 Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	8.8
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010600.D	1		09/21/22 15:44	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.94	U	0.94	5.50	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.50	ug/Kg
75-01-4	Vinyl Chloride	0.99	U	0.99	5.50	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.50	ug/Kg
75-00-3	Chloroethane	0.97	U	0.97	5.50	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.50	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.79	U	0.79	5.50	ug/Kg
75-35-4	1,1-Dichloroethene	0.94	U	0.94	5.50	ug/Kg
67-64-1	Acetone	13.3	U	13.3	27.3	ug/Kg
75-15-0	Carbon Disulfide	0.82	U	0.82	5.50	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.50	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.50	ug/Kg
75-09-2	Methylene Chloride	6.50	U	6.50	10.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
75-34-3	1,1-Dichloroethane	0.76	U	0.76	5.50	ug/Kg
110-82-7	Cyclohexane	0.92	U	0.92	5.50	ug/Kg
78-93-3	2-Butanone	8.00	U	8.00	27.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.86	U	0.86	5.50	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.74	U	0.74	5.50	ug/Kg
74-97-5	Bromochloromethane	0.88	U	0.88	5.50	ug/Kg
67-66-3	Chloroform	0.73	U	0.73	5.50	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.82	U	0.82	5.50	ug/Kg
108-87-2	Methylcyclohexane	0.87	U	0.87	5.50	ug/Kg
71-43-2	Benzene	0.72	U	0.72	5.50	ug/Kg
107-06-2	1,2-Dichloroethane	0.92	U	0.92	5.50	ug/Kg
79-01-6	Trichloroethene	0.80	U	0.80	5.50	ug/Kg
78-87-5	1,2-Dichloropropane	0.71	U	0.71	5.50	ug/Kg
75-27-4	Bromodichloromethane	0.76	U	0.76	5.50	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.00	U	5.00	27.3	ug/Kg
108-88-3	Toluene	0.69	U	0.69	5.50	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.81	U	0.81	5.50	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.78	U	0.78	5.50	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	8.8
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010600.D	1		09/21/22 15:44	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.94	U	0.94	5.50	ug/Kg
591-78-6	2-Hexanone	5.10	U	5.10	27.3	ug/Kg
124-48-1	Dibromochloromethane	0.82	U	0.82	5.50	ug/Kg
106-93-4	1,2-Dibromoethane	0.82	U	0.82	5.50	ug/Kg
127-18-4	Tetrachloroethene	0.83	U	0.83	5.50	ug/Kg
108-90-7	Chlorobenzene	0.71	U	0.71	5.50	ug/Kg
100-41-4	Ethyl Benzene	0.76	U	0.76	5.50	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.9	ug/Kg
95-47-6	o-Xylene	0.86	U	0.86	5.50	ug/Kg
100-42-5	Styrene	0.86	U	0.86	5.50	ug/Kg
75-25-2	Bromoform	0.88	U	0.88	5.50	ug/Kg
98-82-8	Isopropylbenzene	0.79	U	0.79	5.50	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.50	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.73	U	0.73	5.50	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.69	U	0.69	5.50	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.70	U	0.70	5.50	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.50	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.50	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.50	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	55.3		50 - 163	111%	SPK: 50
1868-53-7	Dibromofluoromethane	40.0		54 - 147	80%	SPK: 50
2037-26-5	Toluene-d8	42.3		78 - 125	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.0		50 - 146	74%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	190000	7.783			
540-36-3	1,4-Difluorobenzene	359000	8.685			
3114-55-4	Chlorobenzene-d5	361000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	168000	13.422			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
016844-98-7	Propanoic acid, TMS derivative	11.6	J		6.97	ug/Kg

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	8.8
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010600.D	1		09/21/22 15:44	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 09:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-08	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.73	H	1	0	0	pH		09/16/22 17:38	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:05	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:29	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:25	9034

Comments: pH result reported at temperature 22.4 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22		
Client Sample ID:	SB-31-COMP	SDG No.:	N4697		
Lab Sample ID:	N4697-08	Matrix:	SOIL		
Analytical Method:	8015D DRO	% Moisture:	16.5	Decanted:	
Sample Wt/Vol:	30.01	Units:	g	Final Vol:	1 mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010617.D	1	09/17/22 09:42	09/19/22 18:10	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	5050		262	2000	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	18.4		37 - 130	92%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22		
Client Sample ID:	SB-31-COMP	SDG No.:	N4697		
Lab Sample ID:	N4697-08	Matrix:	SOIL		
Analytical Method:	8015D GRO	% Moisture:	16.5	Decanted:	
Sample Wt/Vol:	5.08	Units:	g	Final Vol:	5 mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028360.D	50	09/21/22 16:40	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	789	J	213	2650	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.5		50 - 150	113%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-31-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-08	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	16.5	Decanted:		
Sample Wt/Vol:	30.1	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056802.D	1	09/17/22 08:56	09/19/22 14:47	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.60	U	3.60	20.3	ug/kg
11104-28-2	Aroclor-1221	5.60	U	5.60	20.3	ug/kg
11141-16-5	Aroclor-1232	4.70	U	4.70	20.3	ug/kg
53469-21-9	Aroclor-1242	2.90	U	2.90	20.3	ug/kg
12672-29-6	Aroclor-1248	3.60	U	3.60	20.3	ug/kg
11097-69-1	Aroclor-1254	5.00	U	5.00	20.3	ug/kg
37324-23-5	Aroclor-1262	4.00	U	4.00	20.3	ug/kg
11100-14-4	Aroclor-1268	6.80	U	6.80	20.3	ug/kg
11096-82-5	Aroclor-1260	3.90	U	3.90	20.3	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.6		40 - 162	103%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.4		32 - 176	92%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	16.5
Sample Wt/Vol:	30.1      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054989.D	1	09/17/22 09:18	09/20/22 16:46	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	88.2	U	88.2	200	ug/Kg
208-96-8	Acenaphthylene	82.0	U	82.0	200	ug/Kg
83-32-9	Acenaphthene	94.2	U	94.2	200	ug/Kg
86-73-7	Fluorene	94.1	U	94.1	200	ug/Kg
85-01-8	Phenanthrene	99.8	U	99.8	200	ug/Kg
120-12-7	Anthracene	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	95.3	U	95.3	200	ug/Kg
129-00-0	Pyrene	88.6	U	88.6	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	82.4	U	82.4	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	87.9	U	87.9	200	ug/Kg
50-32-8	Benzo(a)pyrene	80.8	U	80.8	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	63.3		27 - 109	63%	SPK: 100
321-60-8	2-Fluorobiphenyl	63.3		30 - 103	63%	SPK: 100
1718-51-0	Terphenyl-d14	60.1		21 - 107	60%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	38300		8.058		
1146-65-2	Naphthalene-d8	157000		10.884		
15067-26-2	Acenaphthene-d10	109000		14.704		
1517-22-2	Phenanthrene-d10	262000		17.453		
1719-03-5	Chrysene-d12	261000		21.725		
1520-96-3	Perylene-d12	273000		25.027		



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	16.5
Sample Wt/Vol:	30.1      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054989.D	1	09/17/22 09:18	09/20/22 16:46	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 128<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-31-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-08	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7440-39-3	Barium	1210		1	77.9	500	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7440-47-3	Chromium	10.4	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:53	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/20/22 15:58	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
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 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - N<sub>2</sub> Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	26.4
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010582.D	1		09/20/22 17:57	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.20	U	1.20	6.80	ug/Kg
74-87-3	Chloromethane	1.40	U	1.40	6.80	ug/Kg
75-01-4	Vinyl Chloride	1.20	U	1.20	6.80	ug/Kg
74-83-9	Bromomethane	1.60	U	1.60	6.80	ug/Kg
75-00-3	Chloroethane	1.20	U	1.20	6.80	ug/Kg
75-69-4	Trichlorofluoromethane	1.30	U	1.30	6.80	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.98	U	0.98	6.80	ug/Kg
75-35-4	1,1-Dichloroethene	1.20	U	1.20	6.80	ug/Kg
67-64-1	Acetone	94.1		16.5	33.9	ug/Kg
75-15-0	Carbon Disulfide	1.00	U	1.00	6.80	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.30	U	1.30	6.80	ug/Kg
79-20-9	Methyl Acetate	1.70	U	1.70	6.80	ug/Kg
75-09-2	Methylene Chloride	15.4		8.10	13.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.92	U	0.92	6.80	ug/Kg
75-34-3	1,1-Dichloroethane	0.95	U	0.95	6.80	ug/Kg
110-82-7	Cyclohexane	1.10	U	1.10	6.80	ug/Kg
78-93-3	2-Butanone	25.5	J	9.90	33.9	ug/Kg
56-23-5	Carbon Tetrachloride	1.10	U	1.10	6.80	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.92	U	0.92	6.80	ug/Kg
74-97-5	Bromochloromethane	1.10	U	1.10	6.80	ug/Kg
67-66-3	Chloroform	0.91	U	0.91	6.80	ug/Kg
71-55-6	1,1,1-Trichloroethane	1.00	U	1.00	6.80	ug/Kg
108-87-2	Methylcyclohexane	1.10	U	1.10	6.80	ug/Kg
71-43-2	Benzene	0.89	U	0.89	6.80	ug/Kg
107-06-2	1,2-Dichloroethane	1.10	U	1.10	6.80	ug/Kg
79-01-6	Trichloroethene	0.99	U	0.99	6.80	ug/Kg
78-87-5	1,2-Dichloropropane	0.88	U	0.88	6.80	ug/Kg
75-27-4	Bromodichloromethane	0.95	U	0.95	6.80	ug/Kg
108-10-1	4-Methyl-2-Pentanone	6.20	U	6.20	33.9	ug/Kg
108-88-3	Toluene	0.85	U	0.85	6.80	ug/Kg
10061-02-6	t-1,3-Dichloropropene	1.00	U	1.00	6.80	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.96	U	0.96	6.80	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	26.4
Sample Wt/Vol:	5.01      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010582.D	1		09/20/22 17:57	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.20	U	1.20	6.80	ug/Kg
591-78-6	2-Hexanone	6.30	U	6.30	33.9	ug/Kg
124-48-1	Dibromochloromethane	1.00	U	1.00	6.80	ug/Kg
106-93-4	1,2-Dibromoethane	1.00	U	1.00	6.80	ug/Kg
127-18-4	Tetrachloroethene	1.00	U	1.00	6.80	ug/Kg
108-90-7	Chlorobenzene	0.88	U	0.88	6.80	ug/Kg
100-41-4	Ethyl Benzene	0.95	U	0.95	6.80	ug/Kg
179601-23-1	m/p-Xylenes	2.00	U	2.00	13.6	ug/Kg
95-47-6	o-Xylene	1.10	U	1.10	6.80	ug/Kg
100-42-5	Styrene	1.10	U	1.10	6.80	ug/Kg
75-25-2	Bromoform	1.10	U	1.10	6.80	ug/Kg
98-82-8	Isopropylbenzene	0.98	U	0.98	6.80	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.50	U	1.50	6.80	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.91	U	0.91	6.80	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.85	U	0.85	6.80	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.87	U	0.87	6.80	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.70	U	1.70	6.80	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.30	U	1.30	6.80	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.40	U	1.40	6.80	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	59.3		50 - 163	119%	SPK: 50
1868-53-7	Dibromofluoromethane	49.0		54 - 147	98%	SPK: 50
2037-26-5	Toluene-d8	50.4		78 - 125	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.2		50 - 146	90%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	184000	7.783			
540-36-3	1,4-Difluorobenzene	320000	8.685			
3114-55-4	Chlorobenzene-d5	304000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	134000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	26.4
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010582.D	1		09/20/22 17:57	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 10:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.39	H	1	0	0	pH		09/16/22 17:39	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:12	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:28	9034

Comments: pH result reported at temperature 22.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	18.8      Decanted:
Sample Wt/Vol:	30.06      Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010604.D	1	09/17/22 09:42	09/19/22 11:31	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1760	J	269	2050	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	14.4		37 - 130	72%	SPK: 20

Comments:

U = Not Detected  
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 MDL = Method Detection Limit  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	18.8      Decanted:
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028361.D	50	09/21/22 17:17	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	2630	J	222	2760	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	21.5		50 - 150	107%	SPK: 20

Comments:

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**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-21-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-10	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	18.8	Decanted:		
Sample Wt/Vol:	30.03	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056803.D	1	09/17/22 08:56	09/19/22 15:03	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.80	U	3.80	20.9	ug/kg
11104-28-2	Aroclor-1221	5.80	U	5.80	20.9	ug/kg
11141-16-5	Aroclor-1232	4.80	U	4.80	20.9	ug/kg
53469-21-9	Aroclor-1242	3.00	U	3.00	20.9	ug/kg
12672-29-6	Aroclor-1248	3.70	U	3.70	20.9	ug/kg
11097-69-1	Aroclor-1254	5.20	U	5.20	20.9	ug/kg
37324-23-5	Aroclor-1262	4.10	U	4.10	20.9	ug/kg
11100-14-4	Aroclor-1268	7.00	U	7.00	20.9	ug/kg
11096-82-5	Aroclor-1260	4.00	U	4.00	20.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.4		40 - 162	97%	SPK: 20
2051-24-3	Decachlorobiphenyl	14.8		32 - 176	74%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	18.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054982.D	1	09/17/22 09:18	09/20/22 11:53	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	90.9	U	90.9	210	ug/Kg
208-96-8	Acenaphthylene	84.5	U	84.5	210	ug/Kg
83-32-9	Acenaphthene	97.0	U	97.0	210	ug/Kg
86-73-7	Fluorene	96.9	U	96.9	210	ug/Kg
85-01-8	Phenanthrene	100	U	100	210	ug/Kg
120-12-7	Anthracene	100	U	100	210	ug/Kg
206-44-0	Fluoranthene	98.1	U	98.1	210	ug/Kg
129-00-0	Pyrene	91.3	U	91.3	210	ug/Kg
56-55-3	Benzo(a)anthracene	110	U	110	210	ug/Kg
218-01-9	Chrysene	110	U	110	210	ug/Kg
205-99-2	Benzo(b)fluoranthene	84.9	U	84.9	210	ug/Kg
207-08-9	Benzo(k)fluoranthene	90.5	U	90.5	210	ug/Kg
50-32-8	Benzo(a)pyrene	83.3	U	83.3	210	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	210	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	130	U	130	210	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	210	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	59.6		27 - 109	60%	SPK: 100
321-60-8	2-Fluorobiphenyl	60.0		30 - 103	60%	SPK: 100
1718-51-0	Terphenyl-d14	58.6		21 - 107	59%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	35700	8.061			
1146-65-2	Naphthalene-d8	143000	10.887			
15067-26-2	Acenaphthene-d10	99900	14.706			
1517-22-2	Phenanthrene-d10	249000	17.45			
1719-03-5	Chrysene-d12	263000	21.728			
1520-96-3	Perylene-d12	275000	25.03			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	18.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054982.D	1	09/17/22 09:18	09/20/22 11:53	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 138A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-21-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-10	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7440-39-3	Barium	795		1	77.9	500	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7440-47-3	Chromium	18.8	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7439-97-6	Mercury	0.74	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:55	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/21/22 16:45	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 139 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010584.D	1		09/20/22 18:44	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	5.90	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.90	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	5.90	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	5.90	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	5.90	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	5.90	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.86	U	0.86	5.90	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	5.90	ug/Kg
67-64-1	Acetone	14.5	U	14.5	29.7	ug/Kg
75-15-0	Carbon Disulfide	0.89	U	0.89	5.90	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.90	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	5.90	ug/Kg
75-09-2	Methylene Chloride	7.10	U	7.10	11.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.81	U	0.81	5.90	ug/Kg
75-34-3	1,1-Dichloroethane	0.83	U	0.83	5.90	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	5.90	ug/Kg
78-93-3	2-Butanone	8.60	U	8.60	29.7	ug/Kg
56-23-5	Carbon Tetrachloride	0.94	U	0.94	5.90	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.81	U	0.81	5.90	ug/Kg
74-97-5	Bromochloromethane	0.96	U	0.96	5.90	ug/Kg
67-66-3	Chloroform	0.80	U	0.80	5.90	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.89	U	0.89	5.90	ug/Kg
108-87-2	Methylcyclohexane	0.95	U	0.95	5.90	ug/Kg
71-43-2	Benzene	0.78	U	0.78	5.90	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	5.90	ug/Kg
79-01-6	Trichloroethene	0.87	U	0.87	5.90	ug/Kg
78-87-5	1,2-Dichloropropane	0.77	U	0.77	5.90	ug/Kg
75-27-4	Bromodichloromethane	0.83	U	0.83	5.90	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.40	U	5.40	29.7	ug/Kg
108-88-3	Toluene	0.75	U	0.75	5.90	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.88	U	0.88	5.90	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.84	U	0.84	5.90	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010584.D	1		09/20/22 18:44	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	5.90	ug/Kg
591-78-6	2-Hexanone	5.60	U	5.60	29.7	ug/Kg
124-48-1	Dibromochloromethane	0.89	U	0.89	5.90	ug/Kg
106-93-4	1,2-Dibromoethane	0.89	U	0.89	5.90	ug/Kg
127-18-4	Tetrachloroethene	0.90	U	0.90	5.90	ug/Kg
108-90-7	Chlorobenzene	0.77	U	0.77	5.90	ug/Kg
100-41-4	Ethyl Benzene	0.83	U	0.83	5.90	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	11.9	ug/Kg
95-47-6	o-Xylene	0.94	U	0.94	5.90	ug/Kg
100-42-5	Styrene	0.94	U	0.94	5.90	ug/Kg
75-25-2	Bromoform	0.96	U	0.96	5.90	ug/Kg
98-82-8	Isopropylbenzene	0.86	U	0.86	5.90	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.90	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.80	U	0.80	5.90	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.75	U	0.75	5.90	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.76	U	0.76	5.90	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	5.90	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.90	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.90	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	59.2		50 - 163	118%	SPK: 50
1868-53-7	Dibromofluoromethane	49.3		54 - 147	99%	SPK: 50
2037-26-5	Toluene-d8	50.2		78 - 125	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	45.4		50 - 146	91%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	173000	7.783			
540-36-3	1,4-Difluorobenzene	304000	8.685			
3114-55-4	Chlorobenzene-d5	286000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	131000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010584.D	1		09/20/22 18:44	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 11:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.88	H	1	0	0	pH		09/16/22 17:40	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:20	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:30	9034

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22		
Client Sample ID:	SB-20-COMP	SDG No.:	N4697		
Lab Sample ID:	N4697-12	Matrix:	SOIL		
Analytical Method:	8015D DRO	% Moisture:	12.8	Decanted:	
Sample Wt/Vol:	30.1	Units:	g	Final Vol:	1 mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010605.D	1	09/17/22 09:42	09/19/22 12:01	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	2180		250	1910	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	22.3		37 - 130	111%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	12.8      Decanted:
Sample Wt/Vol:	5.09      Units:    g	Final Vol:	5                  mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028362.D	50	09/21/22 17:55	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	779	J	204	2540	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	20.6		50 - 150	103%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	12.8      Decanted:
Sample Wt/Vol:	30.07      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056804.D	1	09/17/22 08:56	09/19/22 15:19	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.5	ug/kg
11104-28-2	Aroclor-1221	5.40	U	5.40	19.5	ug/kg
11141-16-5	Aroclor-1232	4.50	U	4.50	19.5	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.5	ug/kg
12672-29-6	Aroclor-1248	3.40	U	3.40	19.5	ug/kg
11097-69-1	Aroclor-1254	4.80	U	4.80	19.5	ug/kg
37324-23-5	Aroclor-1262	3.80	U	3.80	19.5	ug/kg
11100-14-4	Aroclor-1268	6.60	U	6.60	19.5	ug/kg
11096-82-5	Aroclor-1260	3.70	U	3.70	19.5	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.9		40 - 162	99%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.4		32 - 176	87%	SPK: 20

Comments:

<p>U = Not Detected          LOQ = Limit of Quantitation          MDL = Method Detection Limit          LOD = Limit of Detection          E = Value Exceeds Calibration Range          P = Indicates &gt;25% difference for detected concentrations between the two GC columns          Q = indicates LCS control criteria did not meet requirements          M = MS/MSD acceptance criteria did not meet requirements</p>	<p>J = Estimated Value          B = Analyte Found in Associated Method Blank          N = Presumptive Evidence of a Compound          * = Values outside of QC limits          D = Dilution          S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.          () = Laboratory InHouse Limit</p>
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### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	12.8
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054984.D	1	09/17/22 09:18	09/20/22 13:16	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	84.7	U	84.7	190	ug/Kg
208-96-8	Acenaphthylene	78.8	U	78.8	190	ug/Kg
83-32-9	Acenaphthene	90.5	U	90.5	190	ug/Kg
86-73-7	Fluorene	90.3	U	90.3	190	ug/Kg
85-01-8	Phenanthrene	95.8	U	95.8	190	ug/Kg
120-12-7	Anthracene	96.3	U	96.3	190	ug/Kg
206-44-0	Fluoranthene	91.5	U	91.5	190	ug/Kg
129-00-0	Pyrene	85.1	U	85.1	190	ug/Kg
56-55-3	Benzo(a)anthracene	99.5	U	99.5	190	ug/Kg
218-01-9	Chrysene	98.0	U	98.0	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	79.1	U	79.1	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	84.4	U	84.4	190	ug/Kg
50-32-8	Benzo(a)pyrene	77.6	U	77.6	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	70.3		27 - 109	70%	SPK: 100
321-60-8	2-Fluorobiphenyl	72.7		30 - 103	73%	SPK: 100
1718-51-0	Terphenyl-d14	72.0		21 - 107	72%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	35100		8.059		
1146-65-2	Naphthalene-d8	144000		10.885		
15067-26-2	Acenaphthene-d10	99500		14.704		
1517-22-2	Phenanthrene-d10	245000		17.454		
1719-03-5	Chrysene-d12	251000		21.726		
1520-96-3	Perylene-d12	262000		25.034		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	12.8
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054984.D	1	09/17/22 09:18	09/20/22 13:16	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 148 A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-20-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-12	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7440-39-3	Barium	1160		1	77.9	500	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7440-47-3	Chromium	17.5	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7439-97-6	Mercury	0.81	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:57	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/21/22 16:49	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 149 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.1
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010601.D	1		09/21/22 16:08	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	6.00	ug/Kg
74-87-3	Chloromethane	1.30	U	1.30	6.00	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	6.00	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	6.00	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	6.00	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	6.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.87	U	0.87	6.00	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	6.00	ug/Kg
67-64-1	Acetone	14.7	U	14.7	30.1	ug/Kg
75-15-0	Carbon Disulfide	0.90	U	0.90	6.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	6.00	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	6.00	ug/Kg
75-09-2	Methylene Chloride	7.20	U	7.20	12.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.82	U	0.82	6.00	ug/Kg
75-34-3	1,1-Dichloroethane	0.84	U	0.84	6.00	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	6.00	ug/Kg
78-93-3	2-Butanone	8.80	U	8.80	30.1	ug/Kg
56-23-5	Carbon Tetrachloride	0.95	U	0.95	6.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.82	U	0.82	6.00	ug/Kg
74-97-5	Bromochloromethane	0.98	U	0.98	6.00	ug/Kg
67-66-3	Chloroform	0.81	U	0.81	6.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.90	U	0.90	6.00	ug/Kg
108-87-2	Methylcyclohexane	0.96	U	0.96	6.00	ug/Kg
71-43-2	Benzene	0.79	U	0.79	6.00	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	6.00	ug/Kg
79-01-6	Trichloroethene	0.88	U	0.88	6.00	ug/Kg
78-87-5	1,2-Dichloropropane	0.78	U	0.78	6.00	ug/Kg
75-27-4	Bromodichloromethane	0.84	U	0.84	6.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.50	U	5.50	30.1	ug/Kg
108-88-3	Toluene	0.76	U	0.76	6.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.89	U	0.89	6.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.85	U	0.85	6.00	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.1
Sample Wt/Vol:	5.01      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010601.D	1		09/21/22 16:08	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	6.00	ug/Kg
591-78-6	2-Hexanone	5.60	U	5.60	30.1	ug/Kg
124-48-1	Dibromochloromethane	0.90	U	0.90	6.00	ug/Kg
106-93-4	1,2-Dibromoethane	0.90	U	0.90	6.00	ug/Kg
127-18-4	Tetrachloroethene	0.91	U	0.91	6.00	ug/Kg
108-90-7	Chlorobenzene	0.78	U	0.78	6.00	ug/Kg
100-41-4	Ethyl Benzene	0.84	U	0.84	6.00	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	12.0	ug/Kg
95-47-6	o-Xylene	0.95	U	0.95	6.00	ug/Kg
100-42-5	Styrene	0.95	U	0.95	6.00	ug/Kg
75-25-2	Bromoform	0.98	U	0.98	6.00	ug/Kg
98-82-8	Isopropylbenzene	0.87	U	0.87	6.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.40	U	1.40	6.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.81	U	0.81	6.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.76	U	0.76	6.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.77	U	0.77	6.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	6.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	6.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	6.00	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.6		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	39.7		54 - 147	79%	SPK: 50
2037-26-5	Toluene-d8	42.1		78 - 125	84%	SPK: 50
460-00-4	4-Bromofluorobenzene	35.7		50 - 146	71%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	200000	7.783			
540-36-3	1,4-Difluorobenzene	369000	8.685			
3114-55-4	Chlorobenzene-d5	366000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	167000	13.422			



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.1
Sample Wt/Vol:	5.01      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010601.D	1		09/21/22 16:08	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 11:25
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.61	H	1	0	0	pH		09/16/22 17:43	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:28	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:32	9034

Comments: pH result reported at temperature 22.6 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	14.8      Decanted:
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010606.D	1	09/17/22 09:42	09/19/22 12:31	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1830	J	257	1950	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	13.8		37 - 130	69%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	14.8      Decanted:
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028363.D	50	09/21/22 18:32	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	1240	J	210	2600	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	24.6		50 - 150	123%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
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 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	14.8      Decanted:
Sample Wt/Vol:	30.04      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056805.D	1	09/17/22 08:56	09/19/22 15:35	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.60	U	3.60	19.9	ug/kg
11104-28-2	Aroclor-1221	5.50	U	5.50	19.9	ug/kg
11141-16-5	Aroclor-1232	4.60	U	4.60	19.9	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.9	ug/kg
12672-29-6	Aroclor-1248	3.50	U	3.50	19.9	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	19.9	ug/kg
37324-23-5	Aroclor-1262	3.90	U	3.90	19.9	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	19.9	ug/kg
11096-82-5	Aroclor-1260	3.80	U	3.80	19.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	18.4		40 - 162	92%	SPK: 20
2051-24-3	Decachlorobiphenyl	13.6		32 - 176	68%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
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 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.8
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054983.D	1	09/17/22 09:18	09/20/22 12:34	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	86.5	U	86.5	200	ug/Kg
208-96-8	Acenaphthylene	80.4	U	80.4	200	ug/Kg
83-32-9	Acenaphthene	92.4	U	92.4	200	ug/Kg
86-73-7	Fluorene	92.3	U	92.3	200	ug/Kg
85-01-8	Phenanthrene	97.9	U	97.9	200	ug/Kg
120-12-7	Anthracene	98.4	U	98.4	200	ug/Kg
206-44-0	Fluoranthene	93.4	U	93.4	200	ug/Kg
129-00-0	Pyrene	86.9	U	86.9	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.8	U	80.8	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	86.2	U	86.2	200	ug/Kg
50-32-8	Benzo(a)pyrene	79.3	U	79.3	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	97.2		27 - 109	97%	SPK: 100
321-60-8	2-Fluorobiphenyl	96.4		30 - 103	96%	SPK: 100
1718-51-0	Terphenyl-d14	92.2		21 - 107	92%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	38200		8.058		
1146-65-2	Naphthalene-d8	154000		10.884		
15067-26-2	Acenaphthene-d10	107000		14.703		
1517-22-2	Phenanthrene-d10	262000		17.453		
1719-03-5	Chrysene-d12	270000		21.73		
1520-96-3	Perylene-d12	281000		25.032		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.8
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054983.D	1	09/17/22 09:18	09/20/22 12:34	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 158A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-19-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-14	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7440-39-3	Barium	1230		1	77.9	500	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7440-47-3	Chromium	12.6	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7439-97-6	Mercury	0.82	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 12:59	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/21/22 16:53	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 159 Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5.06      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010603.D	1		09/21/22 16:55	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	5.80	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.80	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	5.80	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.80	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.80	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.80	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.83	U	0.83	5.80	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	5.80	ug/Kg
67-64-1	Acetone	14.1	U	14.1	28.9	ug/Kg
75-15-0	Carbon Disulfide	0.87	U	0.87	5.80	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.80	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	5.80	ug/Kg
75-09-2	Methylene Chloride	6.90	U	6.90	11.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.79	U	0.79	5.80	ug/Kg
75-34-3	1,1-Dichloroethane	0.81	U	0.81	5.80	ug/Kg
110-82-7	Cyclohexane	0.97	U	0.97	5.80	ug/Kg
78-93-3	2-Butanone	8.40	U	8.40	28.9	ug/Kg
56-23-5	Carbon Tetrachloride	0.91	U	0.91	5.80	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.79	U	0.79	5.80	ug/Kg
74-97-5	Bromochloromethane	0.94	U	0.94	5.80	ug/Kg
67-66-3	Chloroform	0.78	U	0.78	5.80	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.87	U	0.87	5.80	ug/Kg
108-87-2	Methylcyclohexane	0.93	U	0.93	5.80	ug/Kg
71-43-2	Benzene	0.76	U	0.76	5.80	ug/Kg
107-06-2	1,2-Dichloroethane	0.97	U	0.97	5.80	ug/Kg
79-01-6	Trichloroethene	0.84	U	0.84	5.80	ug/Kg
78-87-5	1,2-Dichloropropane	0.75	U	0.75	5.80	ug/Kg
75-27-4	Bromodichloromethane	0.81	U	0.81	5.80	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.30	U	5.30	28.9	ug/Kg
108-88-3	Toluene	0.73	U	0.73	5.80	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.86	U	0.86	5.80	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.82	U	0.82	5.80	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5.06      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010603.D	1		09/21/22 16:55	VY092122

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	5.80	ug/Kg
591-78-6	2-Hexanone	5.40	U	5.40	28.9	ug/Kg
124-48-1	Dibromochloromethane	0.87	U	0.87	5.80	ug/Kg
106-93-4	1,2-Dibromoethane	0.87	U	0.87	5.80	ug/Kg
127-18-4	Tetrachloroethene	0.88	U	0.88	5.80	ug/Kg
108-90-7	Chlorobenzene	0.75	U	0.75	5.80	ug/Kg
100-41-4	Ethyl Benzene	0.81	U	0.81	5.80	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.6	ug/Kg
95-47-6	o-Xylene	0.91	U	0.91	5.80	ug/Kg
100-42-5	Styrene	0.91	U	0.91	5.80	ug/Kg
75-25-2	Bromoform	0.94	U	0.94	5.80	ug/Kg
98-82-8	Isopropylbenzene	0.83	U	0.83	5.80	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.80	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.78	U	0.78	5.80	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.73	U	0.73	5.80	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.74	U	0.74	5.80	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.80	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.80	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.80	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	48.8		50 - 163	98%	SPK: 50
1868-53-7	Dibromofluoromethane	38.1		54 - 147	76%	SPK: 50
2037-26-5	Toluene-d8	41.6		78 - 125	83%	SPK: 50
460-00-4	4-Bromofluorobenzene	33.8		50 - 146	68%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	208000	7.783			
540-36-3	1,4-Difluorobenzene	382000	8.685			
3114-55-4	Chlorobenzene-d5	367000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	166000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5.06      Units:    g	Final Vol:	5000              uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010603.D	1		09/21/22 16:55	VY092122

<b>CAS Number</b>	<b>Parameter</b>	<b>Conc.</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LOQ / CRQL</b>	<b>Units</b>
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 11:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.73	H	1	0	0	pH		09/16/22 17:45	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:35	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:35	9034

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	16.8      Decanted:
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010607.D	1	09/17/22 09:42	09/19/22 13:01	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1570	J	263	2000	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	12.8		37 - 130	64%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-18-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-16	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	16.8	Decanted:		
Sample Wt/Vol:	5.03	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028364.D	50	09/21/22 19:10	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	867	J	216	2690	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	24.6		50 - 150	123%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	16.8
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	Injection Volume :	
		PH :	
		Decanted:	
		Final Vol:	10000

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056806.D	1	09/17/22 08:56	09/19/22 15:50	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.70	U	3.70	20.4	ug/kg
11104-28-2	Aroclor-1221	5.60	U	5.60	20.4	ug/kg
11141-16-5	Aroclor-1232	4.70	U	4.70	20.4	ug/kg
53469-21-9	Aroclor-1242	2.90	U	2.90	20.4	ug/kg
12672-29-6	Aroclor-1248	3.60	U	3.60	20.4	ug/kg
11097-69-1	Aroclor-1254	5.10	U	5.10	20.4	ug/kg
37324-23-5	Aroclor-1262	4.00	U	4.00	20.4	ug/kg
11100-14-4	Aroclor-1268	6.90	U	6.90	20.4	ug/kg
11096-82-5	Aroclor-1260	3.90	U	3.90	20.4	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	18.1		40 - 162	91%	SPK: 20
2051-24-3	Decachlorobiphenyl	14.9		32 - 176	74%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	16.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054987.D	1	09/17/22 09:18	09/20/22 15:21	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	88.7	U	88.7	200	ug/Kg
208-96-8	Acenaphthylene	82.5	U	82.5	200	ug/Kg
83-32-9	Acenaphthene	94.7	U	94.7	200	ug/Kg
86-73-7	Fluorene	94.6	U	94.6	200	ug/Kg
85-01-8	Phenanthrene	100	U	100	200	ug/Kg
120-12-7	Anthracene	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	95.8	U	95.8	200	ug/Kg
129-00-0	Pyrene	89.1	U	89.1	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	82.8	U	82.8	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	88.3	U	88.3	200	ug/Kg
50-32-8	Benzo(a)pyrene	81.3	U	81.3	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	70.8		27 - 109	71%	SPK: 100
321-60-8	2-Fluorobiphenyl	72.3		30 - 103	72%	SPK: 100
1718-51-0	Terphenyl-d14	68.8		21 - 107	69%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	37100		8.064		
1146-65-2	Naphthalene-d8	151000		10.884		
15067-26-2	Acenaphthene-d10	105000		14.703		
1517-22-2	Phenanthrene-d10	257000		17.453		
1719-03-5	Chrysene-d12	262000		21.724		
1520-96-3	Perylene-d12	274000		25.026		



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	16.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054987.D	1	09/17/22 09:18	09/20/22 15:21	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 168<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-18-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-16	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7440-39-3	Barium	889		1	77.9	500	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7440-47-3	Chromium	18.3	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7439-97-6	Mercury	0.90	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 13:02	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/21/22 17:01	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 169 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	22.4
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010587.D	1		09/20/22 19:54	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.10	U	1.10	6.40	ug/Kg
74-87-3	Chloromethane	1.30	U	1.30	6.40	ug/Kg
75-01-4	Vinyl Chloride	1.20	U	1.20	6.40	ug/Kg
74-83-9	Bromomethane	1.50	U	1.50	6.40	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	6.40	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	6.40	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.92	U	0.92	6.40	ug/Kg
75-35-4	1,1-Dichloroethene	1.10	U	1.10	6.40	ug/Kg
67-64-1	Acetone	15.5	U	15.5	31.8	ug/Kg
75-15-0	Carbon Disulfide	0.95	U	0.95	6.40	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.20	U	1.20	6.40	ug/Kg
79-20-9	Methyl Acetate	1.60	U	1.60	6.40	ug/Kg
75-09-2	Methylene Chloride	7.60	U	7.60	12.7	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.86	U	0.86	6.40	ug/Kg
75-34-3	1,1-Dichloroethane	0.89	U	0.89	6.40	ug/Kg
110-82-7	Cyclohexane	1.10	U	1.10	6.40	ug/Kg
78-93-3	2-Butanone	9.30	U	9.30	31.8	ug/Kg
56-23-5	Carbon Tetrachloride	1.00	U	1.00	6.40	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.86	U	0.86	6.40	ug/Kg
74-97-5	Bromochloromethane	1.00	U	1.00	6.40	ug/Kg
67-66-3	Chloroform	0.85	U	0.85	6.40	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.95	U	0.95	6.40	ug/Kg
108-87-2	Methylcyclohexane	1.00	U	1.00	6.40	ug/Kg
71-43-2	Benzene	0.84	U	0.84	6.40	ug/Kg
107-06-2	1,2-Dichloroethane	1.10	U	1.10	6.40	ug/Kg
79-01-6	Trichloroethene	0.93	U	0.93	6.40	ug/Kg
78-87-5	1,2-Dichloropropane	0.83	U	0.83	6.40	ug/Kg
75-27-4	Bromodichloromethane	0.89	U	0.89	6.40	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.80	U	5.80	31.8	ug/Kg
108-88-3	Toluene	0.80	U	0.80	6.40	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.94	U	0.94	6.40	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.90	U	0.90	6.40	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	22.4
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010587.D	1		09/20/22 19:54	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.10	U	1.10	6.40	ug/Kg
591-78-6	2-Hexanone	5.90	U	5.90	31.8	ug/Kg
124-48-1	Dibromochloromethane	0.95	U	0.95	6.40	ug/Kg
106-93-4	1,2-Dibromoethane	0.95	U	0.95	6.40	ug/Kg
127-18-4	Tetrachloroethene	0.97	U	0.97	6.40	ug/Kg
108-90-7	Chlorobenzene	0.83	U	0.83	6.40	ug/Kg
100-41-4	Ethyl Benzene	0.89	U	0.89	6.40	ug/Kg
179601-23-1	m/p-Xylenes	1.90	U	1.90	12.7	ug/Kg
95-47-6	o-Xylene	1.00	U	1.00	6.40	ug/Kg
100-42-5	Styrene	1.00	U	1.00	6.40	ug/Kg
75-25-2	Bromoform	1.00	U	1.00	6.40	ug/Kg
98-82-8	Isopropylbenzene	0.92	U	0.92	6.40	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.40	U	1.40	6.40	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.85	U	0.85	6.40	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.80	U	0.80	6.40	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.81	U	0.81	6.40	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.60	U	1.60	6.40	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.20	U	1.20	6.40	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.30	U	1.30	6.40	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	39.8		50 - 163	80%	SPK: 50
1868-53-7	Dibromofluoromethane	43.1		54 - 147	86%	SPK: 50
2037-26-5	Toluene-d8	50.1		78 - 125	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	36.9		50 - 146	74%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	179000	7.783			
540-36-3	1,4-Difluorobenzene	297000	8.685			
3114-55-4	Chlorobenzene-d5	252000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	104000	13.422			

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	22.4
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010587.D	1		09/20/22 19:54	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements  
 J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 12:20
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-18	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.10	H	1	0	0	pH		09/16/22 17:48	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:42	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:38	9034

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-25-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-18	Matrix:	SOIL			
Analytical Method:	8015D DRO	% Moisture:	18.4	Decanted:		
Sample Wt/Vol:	30.09	Units:	g	Final Vol:	1	mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010608.D	1	09/17/22 09:42	09/19/22 13:32	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	2100		268	2040	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	18.0		37 - 130	90%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-25-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-18	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	18.4	Decanted:		
Sample Wt/Vol:	5	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028349.D	1	09/21/22 8:35	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	33.0	J	4.00	55.0	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	17.8		50 - 150	89%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-18	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	18.4      Decanted:
Sample Wt/Vol:	30.06      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056807.D	1	09/17/22 08:56	09/19/22 16:06	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.70	U	3.70	20.8	ug/kg
11104-28-2	Aroclor-1221	5.70	U	5.70	20.8	ug/kg
11141-16-5	Aroclor-1232	4.80	U	4.80	20.8	ug/kg
53469-21-9	Aroclor-1242	3.00	U	3.00	20.8	ug/kg
12672-29-6	Aroclor-1248	3.60	U	3.60	20.8	ug/kg
11097-69-1	Aroclor-1254	5.10	U	5.10	20.8	ug/kg
37324-23-5	Aroclor-1262	4.10	U	4.10	20.8	ug/kg
11100-14-4	Aroclor-1268	7.00	U	7.00	20.8	ug/kg
11096-82-5	Aroclor-1260	4.00	U	4.00	20.8	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.2		40 - 162	96%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.4		32 - 176	87%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-18	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	18.4
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054990.D	1	09/17/22 09:18	09/20/22 17:28	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	90.4	U	90.4	210	ug/Kg
208-96-8	Acenaphthylene	84.0	U	84.0	210	ug/Kg
83-32-9	Acenaphthene	96.5	U	96.5	210	ug/Kg
86-73-7	Fluorene	96.4	U	96.4	210	ug/Kg
85-01-8	Phenanthrene	100	U	100	210	ug/Kg
120-12-7	Anthracene	100	U	100	210	ug/Kg
206-44-0	Fluoranthene	97.6	U	97.6	210	ug/Kg
129-00-0	Pyrene	90.7	U	90.7	210	ug/Kg
56-55-3	Benzo(a)anthracene	110	U	110	210	ug/Kg
218-01-9	Chrysene	100	U	100	210	ug/Kg
205-99-2	Benzo(b)fluoranthene	84.4	U	84.4	210	ug/Kg
207-08-9	Benzo(k)fluoranthene	90.0	U	90.0	210	ug/Kg
50-32-8	Benzo(a)pyrene	82.8	U	82.8	210	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	210	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	210	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	210	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	69.6		27 - 109	70%	SPK: 100
321-60-8	2-Fluorobiphenyl	70.5		30 - 103	71%	SPK: 100
1718-51-0	Terphenyl-d14	70.0		21 - 107	70%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	39600	8.061			
1146-65-2	Naphthalene-d8	159000	10.887			
15067-26-2	Acenaphthene-d10	112000	14.7			
1517-22-2	Phenanthrene-d10	275000	17.45			
1719-03-5	Chrysene-d12	279000	21.721			
1520-96-3	Perylene-d12	294000	25.029			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-18	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	18.4
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054990.D	1	09/17/22 09:18	09/20/22 17:28	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 178<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-25-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-18	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7440-39-3	Barium	1330		1	77.9	500	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7440-47-3	Chromium	10.9	J	1	10.4	50.0	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7439-97-6	Mercury	0.80	J	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 13:04	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 11:23	09/21/22 17:05	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 179 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.4
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010588.D	1		09/20/22 20:17	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	5.90	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.90	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	5.90	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	5.90	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	5.90	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	5.90	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.85	U	0.85	5.90	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	5.90	ug/Kg
67-64-1	Acetone	14.5	U	14.5	29.7	ug/Kg
75-15-0	Carbon Disulfide	0.89	U	0.89	5.90	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.90	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	5.90	ug/Kg
75-09-2	Methylene Chloride	7.10	U	7.10	11.9	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.81	U	0.81	5.90	ug/Kg
75-34-3	1,1-Dichloroethane	0.83	U	0.83	5.90	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	5.90	ug/Kg
78-93-3	2-Butanone	8.60	U	8.60	29.7	ug/Kg
56-23-5	Carbon Tetrachloride	0.94	U	0.94	5.90	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.81	U	0.81	5.90	ug/Kg
74-97-5	Bromochloromethane	0.96	U	0.96	5.90	ug/Kg
67-66-3	Chloroform	0.80	U	0.80	5.90	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.89	U	0.89	5.90	ug/Kg
108-87-2	Methylcyclohexane	0.95	U	0.95	5.90	ug/Kg
71-43-2	Benzene	0.78	U	0.78	5.90	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	5.90	ug/Kg
79-01-6	Trichloroethene	0.87	U	0.87	5.90	ug/Kg
78-87-5	1,2-Dichloropropane	0.77	U	0.77	5.90	ug/Kg
75-27-4	Bromodichloromethane	0.83	U	0.83	5.90	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.40	U	5.40	29.7	ug/Kg
108-88-3	Toluene	0.75	U	0.75	5.90	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.88	U	0.88	5.90	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.84	U	0.84	5.90	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.4
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010588.D	1		09/20/22 20:17	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	5.90	ug/Kg
591-78-6	2-Hexanone	5.60	U	5.60	29.7	ug/Kg
124-48-1	Dibromochloromethane	0.89	U	0.89	5.90	ug/Kg
106-93-4	1,2-Dibromoethane	0.89	U	0.89	5.90	ug/Kg
127-18-4	Tetrachloroethene	0.90	U	0.90	5.90	ug/Kg
108-90-7	Chlorobenzene	0.77	U	0.77	5.90	ug/Kg
100-41-4	Ethyl Benzene	0.83	U	0.83	5.90	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	11.9	ug/Kg
95-47-6	o-Xylene	0.94	U	0.94	5.90	ug/Kg
100-42-5	Styrene	0.94	U	0.94	5.90	ug/Kg
75-25-2	Bromoform	0.96	U	0.96	5.90	ug/Kg
98-82-8	Isopropylbenzene	0.85	U	0.85	5.90	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.90	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.80	U	0.80	5.90	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.75	U	0.75	5.90	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.76	U	0.76	5.90	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	5.90	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.90	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.90	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.2		50 - 163	104%	SPK: 50
1868-53-7	Dibromofluoromethane	48.5		54 - 147	97%	SPK: 50
2037-26-5	Toluene-d8	50.3		78 - 125	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	43.1		50 - 146	86%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	176000	7.783			
540-36-3	1,4-Difluorobenzene	304000	8.685			
3114-55-4	Chlorobenzene-d5	282000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	123000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-6.5-7.0	SDG No.:	N4697
Lab Sample ID:	N4697-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.4
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010588.D	1		09/20/22 20:17	VY092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22 12:50
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.12	H	1	0	0	pH		09/16/22 17:49	9045D
Ignitability	NO		1	0	0	oC		09/19/22 16:50	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/19/22 11:20	09/20/22 10:36	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 09:00	09/21/22 11:40	9034

Comments: pH result reported at temperature 22.9 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	14.6      Decanted:
Sample Wt/Vol:	30.04      Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010609.D	1	09/17/22 09:42	09/19/22 14:02	PB147725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1810	J	256	1950	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	20.1		37 - 130	101%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	14.6      Decanted:
Sample Wt/Vol:	5.07      Units:    g	Final Vol:	5              mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028366.D	50	09/21/22 20:25	FB092022

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	767	J	209	2600	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	24.1		50 - 150	120%	SPK: 20

## Comments:

U = Not Detected  
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 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22			
Client Sample ID:	SB-17-COMP	SDG No.:	N4697			
Lab Sample ID:	N4697-20	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	14.6	Decanted:		
Sample Wt/Vol:	30.08	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056808.D	1	09/17/22 08:56	09/19/22 16:22	PB147723

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.60	U	3.60	19.9	ug/kg
11104-28-2	Aroclor-1221	5.50	U	5.50	19.9	ug/kg
11141-16-5	Aroclor-1232	4.60	U	4.60	19.9	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.9	ug/kg
12672-29-6	Aroclor-1248	3.50	U	3.50	19.9	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	19.9	ug/kg
37324-23-5	Aroclor-1262	3.90	U	3.90	19.9	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	19.9	ug/kg
11096-82-5	Aroclor-1260	3.80	U	3.80	19.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.1		40 - 162	101%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.9		32 - 176	89%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.6
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054988.D	1	09/17/22 09:18	09/20/22 16:04	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	86.3	U	86.3	200	ug/Kg
208-96-8	Acenaphthylene	80.2	U	80.2	200	ug/Kg
83-32-9	Acenaphthene	92.1	U	92.1	200	ug/Kg
86-73-7	Fluorene	92.0	U	92.0	200	ug/Kg
85-01-8	Phenanthrene	97.6	U	97.6	200	ug/Kg
120-12-7	Anthracene	98.1	U	98.1	200	ug/Kg
206-44-0	Fluoranthene	93.2	U	93.2	200	ug/Kg
129-00-0	Pyrene	86.6	U	86.6	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	99.8	U	99.8	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.6	U	80.6	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	85.9	U	85.9	200	ug/Kg
50-32-8	Benzo(a)pyrene	79.0	U	79.0	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	80.1		27 - 109	80%	SPK: 100
321-60-8	2-Fluorobiphenyl	81.5		30 - 103	81%	SPK: 100
1718-51-0	Terphenyl-d14	78.9		21 - 107	79%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	36900		8.058		
1146-65-2	Naphthalene-d8	149000		10.884		
15067-26-2	Acenaphthene-d10	104000		14.703		
1517-22-2	Phenanthrene-d10	253000		17.447		
1719-03-5	Chrysene-d12	263000		21.724		
1520-96-3	Perylene-d12	276000		25.026		

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.6
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054988.D	1	09/17/22 09:18	09/20/22 16:04	PB147724

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 188A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/16/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/16/22
Client Sample ID:	SB-17-COMP	SDG No.:	N4697
Lab Sample ID:	N4697-20	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7440-39-3	Barium	1040		1	77.9	500	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7440-47-3	Chromium	18.1	J	1	10.4	50.0	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7439-92-1	Lead	19.4	U	1	19.4	60.0	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/20/22 08:35	09/20/22 13:11	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/20/22 12:22	09/22/22 15:03	SW6010

---

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

---

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 189 Spiked sample recovery not within control limits

**DATA FOR**  
**VOLATILE ORGANICS**  
**SEMI-VOLATILE ORGANICS**  
**GC SEMI-VOLATILES**  
**METALS**  
**GENERAL CHEMISTRY**

**PROJECT NAME : DDC OEGS - RECONSTRUCTION OF ROSEDALE AREA**

**LIRO ENGINEERS, INC.**

**690 Delaware Ave.**

**Buffalo, NY - 14209**

**Phone No: 716-882-5476**

**ORDER ID : N4723**

**ATTENTION : Steve Frank**



Date : 09/27/2022

Dear Steve Frank,

**20** soil samples for the **DDC OEGS - Reconstruction of Rosedale Area** project were received on **09/20/2022**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns regarding this

Regards,

Samantha Beazley

[Samantha@chemtech.net](mailto:Samantha@chemtech.net)



**CLIENT INFORMATION**

REPORT TO BE SENT TO:

COMPANY: Uro Engineers, Inc.  
 ADDRESS: 703 Lorimer Str.  
 CITY: Brooklyn STATE: NY ZIP: 11211  
 ATTENTION: Steve Frank  
 PHONE: 716 882-5478 FAX: \_\_\_\_\_

**CLIENT PROJECT INFORMATION**

PROJECT NAME: Reconstruction of Rosedale Area  
 PROJECT NO.: 19-294-0265.01 LOCATION: Queens  
 PROJECT MANAGER: Steve Frank  
 e-mail: hewsona@lin.com / franks@lin.com  
 PHONE: 716 882-5476 FAX: \_\_\_\_\_

**CLIENT BILLING INFORMATION**

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_  
 ADDRESS: same  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

**ANALYSIS**

**DATA TURNAROUND INFORMATION**

FAX (RUSH) \_\_\_\_\_ DAYS\*  
 HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
 EDD: Sday TAT DAYS\*  
 \*TO BE APPROVED BY CHEMTECH  
 STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

**DATA DELIVERABLE INFORMATION**

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)  
 Level 2 (Results + QC)  NJ Reduced  US EPA CLP  
 Level 3 (Results + QC)  NYS ASP A  NYS ASP B  
 + Raw Data  Other \_\_\_\_\_  
 EDD FORMAT \_\_\_\_\_

*TCL LOG PAHs PCBs DBO/GRO PCB Characteristics TCLP PCB Metals*

**PRESERVATIVES**

**COMMENTS**

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER				
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9					
1.	SB-13-7.5-8.0'	S		X	9/19/22	0900	1	X													
2.	SB-13-COMP	S	X		9/19/22	0905	2		X	X	X	X	X								
3.	SB-14-6.5-7.0'	S		X	9/19/22	0830	1	X													
4.	SB-14-COMP	S	X		9/19/22	0835	2		X	X	X	X	X								
5.	SB-16-6.5-7.0'	S		X	9/19/22	0920	1	X													
6.	SB-16-COMP	S	X		9/19/22	0925	2		X	X	X	X	X								
7.	SB-12-6.5-7.0'	S		X	9/19/22	0940	1	X													
8.	SB-12-COMP	S	X		9/19/22	0945	2		X	X	X	X	X								
9.	SB-15-6.5-7.0'	S		X	9/20/22	1000	1	X													
10.	SB-15-COMP	S	X		9/20/22	1005	2		X	X	X	X	X								

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY**

RELINQUISHED BY SAMPLER: <u>Eva</u>	DATE/TIME: <u>9/20/22</u>	RECEIVED BY: <u>[Signature]</u>	CONDITIONS OF BOTTLES OR COOLERS AT RECEIPT: <input checked="" type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP: <u>5.5</u> °C
1. <u>[Signature]</u>		1. <u>[Signature]</u>	Comments: _____
RELINQUISHED BY SAMPLER: _____	DATE/TIME: _____	RECEIVED BY: _____	_____
2. _____		2. _____	_____
RELINQUISHED BY SAMPLER: <u>[Signature]</u>	DATE/TIME: <u>1620 9-20-22</u>	RECEIVED BY: <u>SB</u>	_____
3. <u>[Signature]</u>		3. <u>[Signature]</u>	_____

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Uro Engineers, Inc.  
 ADDRESS: 703 Lorimer street  
 CITY: Brooklyn STATE: Ny ZIP: 11211  
 ATTENTION: Steve Frank  
 PHONE: 716 882-5476 FAX: \_\_\_\_\_

PROJECT NAME: same as pg #1  
 PROJECT NO.: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 PROJECT MANAGER: \_\_\_\_\_  
 e-mail: \_\_\_\_\_  
 PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_  
 ADDRESS: same  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
 HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
 EDD: 5 day TAT DAYS\*  
 \*TO BE APPROVED BY CHEMTECH  
 STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)  
 Level 2 (Results + QC)  NJ Reduced  US EPA CLP  
 Level 3 (Results + QC)  NYS ASP A  NYS ASP B  
 + Raw Data  Other \_\_\_\_\_  
 EDD FORMAT \_\_\_\_\_

*ICL VOCs PAHs PCBs DPO/GEO PCRA Characteristic TCLP PCRA Metals*

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER			
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9				
1.	SB-11-8.5-9.0'	S		X	9/19/22	1100	1	X												
2.	SB-11-COMP	S	X			1105	2		X	X	X	X	X							
3.	SB-26-8.5-9.0'	S		X		1310	1	X												
4.	SB-26-COMP	S	X			1315	2		X	X	X	X	X							
5.	SB-27-6.5-7.0'	S		X		1210	1	X												
6.	SB-27-COMP	S	X			1215	2		X	X	X	X	X							
7.	SB-28-6.5-7.0'			X		1145	1	X												
8.	SB-28-COMP		X			1150	2		X	X	X	X	X							
9.	SB-29-6.5-7.0'			X		1125	1	X												
10.	SB-29-COMP		X			1130	2		X	X	X	X	X							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>ela</u>	DATE/TIME: <u>9/20/22</u>	RECEIVED BY: <u>[Signature]</u>
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: <u>9-20-22</u>	RECEIVED BY: <u>[Signature]</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>9-20-22</u>	RECEIVED BY: <u>SB</u>

Conditions of bottles or coolers at receipt:  COMPLIANT  NON COMPLIANT  COOLER TEMP 5.5 °C  
 Comments: \_\_\_\_\_

Page 2 of 4 CLIENT:  Hand Delivered  Other \_\_\_\_\_  
 CHEMTECH:  Picked Up  Field Sampling Shipment Complete  
 YES  NO

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-7.5-8.0	SDG No.:	N4723
Lab Sample ID:	N4723-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010620.D	1		09/22/22 14:19	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.89	U	0.89	5.20	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.20	ug/Kg
75-01-4	Vinyl Chloride	0.95	U	0.95	5.20	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.20	ug/Kg
75-00-3	Chloroethane	0.92	U	0.92	5.20	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.20	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.75	U	0.75	5.20	ug/Kg
75-35-4	1,1-Dichloroethene	0.89	U	0.89	5.20	ug/Kg
67-64-1	Acetone	12.7	U	12.7	26.0	ug/Kg
75-15-0	Carbon Disulfide	0.78	U	0.78	5.20	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.97	U	0.97	5.20	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.20	ug/Kg
75-09-2	Methylene Chloride	6.20	U	6.20	10.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.71	U	0.71	5.20	ug/Kg
75-34-3	1,1-Dichloroethane	0.73	U	0.73	5.20	ug/Kg
110-82-7	Cyclohexane	0.87	U	0.87	5.20	ug/Kg
78-93-3	2-Butanone	7.60	U	7.60	26.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.82	U	0.82	5.20	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.71	U	0.71	5.20	ug/Kg
74-97-5	Bromochloromethane	0.84	U	0.84	5.20	ug/Kg
67-66-3	Chloroform	0.70	U	0.70	5.20	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.78	U	0.78	5.20	ug/Kg
108-87-2	Methylcyclohexane	0.83	U	0.83	5.20	ug/Kg
71-43-2	Benzene	0.69	U	0.69	5.20	ug/Kg
107-06-2	1,2-Dichloroethane	0.87	U	0.87	5.20	ug/Kg
79-01-6	Trichloroethene	0.76	U	0.76	5.20	ug/Kg
78-87-5	1,2-Dichloropropane	0.68	U	0.68	5.20	ug/Kg
75-27-4	Bromodichloromethane	0.73	U	0.73	5.20	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.80	U	4.80	26.0	ug/Kg
108-88-3	Toluene	0.65	U	0.65	5.20	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.77	U	0.77	5.20	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.74	U	0.74	5.20	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-7.5-8.0	SDG No.:	N4723
Lab Sample ID:	N4723-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010620.D	1		09/22/22 14:19	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.89	U	0.89	5.20	ug/Kg
591-78-6	2-Hexanone	4.90	U	4.90	26.0	ug/Kg
124-48-1	Dibromochloromethane	0.78	U	0.78	5.20	ug/Kg
106-93-4	1,2-Dibromoethane	0.78	U	0.78	5.20	ug/Kg
127-18-4	Tetrachloroethene	0.79	U	0.79	5.20	ug/Kg
108-90-7	Chlorobenzene	0.68	U	0.68	5.20	ug/Kg
100-41-4	Ethyl Benzene	0.73	U	0.73	5.20	ug/Kg
179601-23-1	m/p-Xylenes	1.50	U	1.50	10.4	ug/Kg
95-47-6	o-Xylene	0.82	U	0.82	5.20	ug/Kg
100-42-5	Styrene	0.82	U	0.82	5.20	ug/Kg
75-25-2	Bromoform	0.84	U	0.84	5.20	ug/Kg
98-82-8	Isopropylbenzene	0.75	U	0.75	5.20	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.20	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.70	U	0.70	5.20	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.65	U	0.65	5.20	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.66	U	0.66	5.20	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.20	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.98	U	0.98	5.20	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.00	U	1.00	5.20	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	54.2		50 - 163	108%	SPK: 50
1868-53-7	Dibromofluoromethane	39.2		54 - 147	78%	SPK: 50
2037-26-5	Toluene-d8	40.8		78 - 125	82%	SPK: 50
460-00-4	4-Bromofluorobenzene	35.0		50 - 146	70%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	188000	7.783			
540-36-3	1,4-Difluorobenzene	358000	8.685			
3114-55-4	Chlorobenzene-d5	364000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	170000	13.422			

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-7.5-8.0	SDG No.:	N4723
Lab Sample ID:	N4723-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.02      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624          ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010620.D	1		09/22/22 14:19	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
------------	-----------	-------	-----------	-----	------------	-------

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 09:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.23	H	1	0	0	pH		09/21/22 10:47	9045D
Ignitability	NO		1	0	0	oC		09/21/22 09:48	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/22/22 09:45	09/23/22 10:56	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:32	9034

Comments: pH result reported at temperature 22.4 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22		
Client Sample ID:	SB-13-COMP	SDG No.:	N4723		
Lab Sample ID:	N4723-02	Matrix:	SOIL		
Analytical Method:	8015D DRO	% Moisture:	5.8	Decanted:	
Sample Wt/Vol:	30.07	Units:	g	Final Vol:	1 mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010640.D	1	09/21/22 12:25	09/22/22 12:33	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	914	J	232	1770	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	18.4		37 - 130	92%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-02	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	5.8      Decanted:
Sample Wt/Vol:	5.15      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028416.D	50	09/23/22 19:57	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	880	J	187	2320	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto 23.1			50 - 150	115%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-13-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-02	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	5.8	Decanted:		
Sample Wt/Vol:	30.03	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056890.D	1	09/21/22 09:53	09/21/22 13:54	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.20	U	3.20	18.0	ug/kg
11104-28-2	Aroclor-1221	5.00	U	5.00	18.0	ug/kg
11141-16-5	Aroclor-1232	4.20	U	4.20	18.0	ug/kg
53469-21-9	Aroclor-1242	2.60	U	2.60	18.0	ug/kg
12672-29-6	Aroclor-1248	3.20	U	3.20	18.0	ug/kg
11097-69-1	Aroclor-1254	4.50	U	4.50	18.0	ug/kg
37324-23-5	Aroclor-1262	3.50	U	3.50	18.0	ug/kg
11100-14-4	Aroclor-1268	6.10	U	6.10	18.0	ug/kg
11096-82-5	Aroclor-1260	3.40	U	3.40	18.0	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.1		40 - 162	95%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.6		32 - 176	103%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	5.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054995.D	1	09/21/22 11:05	09/21/22 15:52	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	78.3	U	78.3	180	ug/Kg
208-96-8	Acenaphthylene	72.8	U	72.8	180	ug/Kg
83-32-9	Acenaphthene	83.6	U	83.6	180	ug/Kg
86-73-7	Fluorene	83.5	U	83.5	180	ug/Kg
85-01-8	Phenanthrene	88.6	U	88.6	180	ug/Kg
120-12-7	Anthracene	89.1	U	89.1	180	ug/Kg
206-44-0	Fluoranthene	84.6	U	84.6	180	ug/Kg
129-00-0	Pyrene	78.7	U	78.7	180	ug/Kg
56-55-3	Benzo(a)anthracene	92.0	U	92.0	180	ug/Kg
218-01-9	Chrysene	90.6	U	90.6	180	ug/Kg
205-99-2	Benzo(b)fluoranthene	73.2	U	73.2	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	78.0	U	78.0	180	ug/Kg
50-32-8	Benzo(a)pyrene	71.8	U	71.8	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	180	ug/Kg
191-24-2	Benzo(g,h,i)perylene	100	U	100	180	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	67.9		27 - 109	68%	SPK: 100
321-60-8	2-Fluorobiphenyl	72.8		30 - 103	73%	SPK: 100
1718-51-0	Terphenyl-d14	72.1		21 - 107	72%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	41000		8.053		
1146-65-2	Naphthalene-d8	160000		10.879		
15067-26-2	Acenaphthene-d10	109000		14.698		
1517-22-2	Phenanthrene-d10	265000		17.448		
1719-03-5	Chrysene-d12	282000		21.725		
1520-96-3	Perylene-d12	296000		25.033		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	5.8
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054995.D	1	09/21/22 11:05	09/21/22 15:52	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 202<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-13-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7440-39-3	Barium	1160	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:44	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:20	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - ~~203~~ Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	13
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010629.D	1		09/22/22 17:49	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.97	U	0.97	5.70	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.70	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.70	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.70	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.70	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.70	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.70	ug/Kg
75-35-4	1,1-Dichloroethene	0.97	U	0.97	5.70	ug/Kg
67-64-1	Acetone	16.8	J	13.8	28.3	ug/Kg
75-15-0	Carbon Disulfide	0.85	U	0.85	5.70	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.70	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.70	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
75-34-3	1,1-Dichloroethane	0.79	U	0.79	5.70	ug/Kg
110-82-7	Cyclohexane	0.95	U	0.95	5.70	ug/Kg
78-93-3	2-Butanone	8.20	U	8.20	28.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.89	U	0.89	5.70	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.77	U	0.77	5.70	ug/Kg
74-97-5	Bromochloromethane	0.92	U	0.92	5.70	ug/Kg
67-66-3	Chloroform	0.76	U	0.76	5.70	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.85	U	0.85	5.70	ug/Kg
108-87-2	Methylcyclohexane	0.91	U	0.91	5.70	ug/Kg
71-43-2	Benzene	0.75	U	0.75	5.70	ug/Kg
107-06-2	1,2-Dichloroethane	0.95	U	0.95	5.70	ug/Kg
79-01-6	Trichloroethene	0.83	U	0.83	5.70	ug/Kg
78-87-5	1,2-Dichloropropane	0.74	U	0.74	5.70	ug/Kg
75-27-4	Bromodichloromethane	0.79	U	0.79	5.70	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.20	U	5.20	28.3	ug/Kg
108-88-3	Toluene	0.71	U	0.71	5.70	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.84	U	0.84	5.70	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.80	U	0.80	5.70	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	13
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010629.D	1		09/22/22 17:49	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.97	U	0.97	5.70	ug/Kg
591-78-6	2-Hexanone	5.30	U	5.30	28.3	ug/Kg
124-48-1	Dibromochloromethane	0.85	U	0.85	5.70	ug/Kg
106-93-4	1,2-Dibromoethane	0.85	U	0.85	5.70	ug/Kg
127-18-4	Tetrachloroethene	0.86	U	0.86	5.70	ug/Kg
108-90-7	Chlorobenzene	0.74	U	0.74	5.70	ug/Kg
100-41-4	Ethyl Benzene	0.79	U	0.79	5.70	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.3	ug/Kg
95-47-6	o-Xylene	0.89	U	0.89	5.70	ug/Kg
100-42-5	Styrene	0.89	U	0.89	5.70	ug/Kg
75-25-2	Bromoform	0.92	U	0.92	5.70	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.70	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.70	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.76	U	0.76	5.70	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.71	U	0.71	5.70	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.70	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.70	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.70	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	54.3		50 - 163	109%	SPK: 50
1868-53-7	Dibromofluoromethane	38.6		54 - 147	77%	SPK: 50
2037-26-5	Toluene-d8	40.4		78 - 125	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.8		50 - 146	70%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	183000	7.789			
540-36-3	1,4-Difluorobenzene	348000	8.685			
3114-55-4	Chlorobenzene-d5	361000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	169000	13.422			

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	13
Sample Wt/Vol:	5.08 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010629.D	1		09/22/22 17:49	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements  
 J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 08:35
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.98	H	1	0	0	pH		09/21/22 10:49	9045D
Ignitability	NO		1	0	0	oC		09/21/22 09:55	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:38	9034

Comments: pH result reported at temperature 21.4 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	15.1
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
		PH :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010641.D	1	09/21/22 12:25	09/22/22 13:03	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	839	J	258	1960	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	13.7		37 - 130	68%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	15.1      Decanted:
Sample Wt/Vol:	5.15      Units:    g	Final Vol:	5              mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028417.D	50	09/23/22 20:34	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	836	J	207	2570	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.5		50 - 150	113%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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J = Estimated Value

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N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	15.1      Decanted:
Sample Wt/Vol:	30.1      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056893.D	1	09/21/22 09:53	09/21/22 14:42	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.60	U	3.60	20.0	ug/kg
11104-28-2	Aroclor-1221	5.50	U	5.50	20.0	ug/kg
11141-16-5	Aroclor-1232	4.60	U	4.60	20.0	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	20.0	ug/kg
12672-29-6	Aroclor-1248	3.50	U	3.50	20.0	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	20.0	ug/kg
37324-23-5	Aroclor-1262	3.90	U	3.90	20.0	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	20.0	ug/kg
11096-82-5	Aroclor-1260	3.80	U	3.80	20.0	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	17.9		40 - 162	89%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.2		32 - 176	86%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	15.1
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130364.D	1	09/21/22 11:05	09/21/22 16:34	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	86.8	U	86.8	200	ug/Kg
208-96-8	Acenaphthylene	80.7	U	80.7	200	ug/Kg
83-32-9	Acenaphthene	92.7	U	92.7	200	ug/Kg
86-73-7	Fluorene	92.5	U	92.5	200	ug/Kg
85-01-8	Phenanthrene	98.2	U	98.2	200	ug/Kg
120-12-7	Anthracene	98.6	U	98.6	200	ug/Kg
206-44-0	Fluoranthene	93.7	U	93.7	200	ug/Kg
129-00-0	Pyrene	87.1	U	87.1	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	81.0	U	81.0	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	86.4	U	86.4	200	ug/Kg
50-32-8	Benzo(a)pyrene	79.5	U	79.5	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	64.3		27 - 109	64%	SPK: 100
321-60-8	2-Fluorobiphenyl	66.4		30 - 103	66%	SPK: 100
1718-51-0	Terphenyl-d14	57.0		21 - 107	57%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	122000	6.657			
1146-65-2	Naphthalene-d8	468000	7.939			
15067-26-2	Acenaphthene-d10	233000	9.686			
1517-22-2	Phenanthrene-d10	331000	11.169			
1719-03-5	Chrysene-d12	221000	13.798			
1520-96-3	Perylene-d12	233000	15.192			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	15.1
Sample Wt/Vol:	30.09	Units:	g
Soil Aliquot Vol:		Final Vol:	1000 uL
Extraction Type :		Test:	SVOC-PAH
	Decanted :	Level :	LOW
Injection Volume :	GPC Factor :	1.0	GPC Cleanup :
			N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130364.D	1	09/21/22 11:05	09/21/22 16:34	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 212<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-14-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-04	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7440-39-3	Barium	998	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:46	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:24	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 213 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.2
Sample Wt/Vol:	5.06      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010635.D	1		09/22/22 20:10	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	6.00	ug/Kg
74-87-3	Chloromethane	1.30	U	1.30	6.00	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	6.00	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	6.00	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	6.00	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	6.00	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.87	U	0.87	6.00	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	6.00	ug/Kg
67-64-1	Acetone	20.5	J	14.7	30.2	ug/Kg
75-15-0	Carbon Disulfide	0.91	U	0.91	6.00	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	6.00	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	6.00	ug/Kg
75-09-2	Methylene Chloride	7.20	U	7.20	12.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.82	U	0.82	6.00	ug/Kg
75-34-3	1,1-Dichloroethane	0.85	U	0.85	6.00	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	6.00	ug/Kg
78-93-3	2-Butanone	8.80	U	8.80	30.2	ug/Kg
56-23-5	Carbon Tetrachloride	0.95	U	0.95	6.00	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.82	U	0.82	6.00	ug/Kg
74-97-5	Bromochloromethane	0.98	U	0.98	6.00	ug/Kg
67-66-3	Chloroform	0.81	U	0.81	6.00	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.91	U	0.91	6.00	ug/Kg
108-87-2	Methylcyclohexane	0.97	U	0.97	6.00	ug/Kg
71-43-2	Benzene	0.80	U	0.80	6.00	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	6.00	ug/Kg
79-01-6	Trichloroethene	0.88	U	0.88	6.00	ug/Kg
78-87-5	1,2-Dichloropropane	0.79	U	0.79	6.00	ug/Kg
75-27-4	Bromodichloromethane	0.85	U	0.85	6.00	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.50	U	5.50	30.2	ug/Kg
108-88-3	Toluene	0.76	U	0.76	6.00	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.89	U	0.89	6.00	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.86	U	0.86	6.00	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.2
Sample Wt/Vol:	5.06      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010635.D	1		09/22/22 20:10	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	6.00	ug/Kg
591-78-6	2-Hexanone	5.70	U	5.70	30.2	ug/Kg
124-48-1	Dibromochloromethane	0.91	U	0.91	6.00	ug/Kg
106-93-4	1,2-Dibromoethane	0.91	U	0.91	6.00	ug/Kg
127-18-4	Tetrachloroethene	0.92	U	0.92	6.00	ug/Kg
108-90-7	Chlorobenzene	0.79	U	0.79	6.00	ug/Kg
100-41-4	Ethyl Benzene	0.85	U	0.85	6.00	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	12.1	ug/Kg
95-47-6	o-Xylene	0.95	U	0.95	6.00	ug/Kg
100-42-5	Styrene	0.95	U	0.95	6.00	ug/Kg
75-25-2	Bromoform	0.98	U	0.98	6.00	ug/Kg
98-82-8	Isopropylbenzene	0.87	U	0.87	6.00	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.40	U	1.40	6.00	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.81	U	0.81	6.00	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.76	U	0.76	6.00	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.77	U	0.77	6.00	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	6.00	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	6.00	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	6.00	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	49.8		50 - 163	100%	SPK: 50
1868-53-7	Dibromofluoromethane	38.0		54 - 147	76%	SPK: 50
2037-26-5	Toluene-d8	39.9		78 - 125	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	32.8		50 - 146	66%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	196000	7.789			
540-36-3	1,4-Difluorobenzene	371000	8.685			
3114-55-4	Chlorobenzene-d5	376000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	173000	13.428			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown10.947	7.00	J		10.9	ug/Kg



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.2
Sample Wt/Vol:	5.06      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010635.D	1		09/22/22 20:10	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 09:25
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.19	H	1	0	0	pH		09/21/22 10:50	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:02	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:40	9034

Comments: pH result reported at temperature 21.5 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	19                      Decanted:
Sample Wt/Vol:	30.05              Units:    g	Final Vol:	1                              mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010646.D	1	09/21/22 12:25	09/22/22 16:35	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1010	J	270	2050	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	17.7		37 - 130	89%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	19
Sample Wt/Vol:	5.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	5
GPC Factor :		PH :	

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028418.D	50	09/23/22 21:11	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	996	J	221	2750	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	20.0		50 - 150	100%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

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J = Estimated Value

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N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	19      Decanted:
Sample Wt/Vol:	30.01      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056894.D	1	09/21/22 09:53	09/21/22 14:57	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.80	U	3.80	21.0	ug/kg
11104-28-2	Aroclor-1221	5.80	U	5.80	21.0	ug/kg
11141-16-5	Aroclor-1232	4.90	U	4.90	21.0	ug/kg
53469-21-9	Aroclor-1242	3.00	U	3.00	21.0	ug/kg
12672-29-6	Aroclor-1248	3.70	U	3.70	21.0	ug/kg
11097-69-1	Aroclor-1254	5.20	U	5.20	21.0	ug/kg
37324-23-5	Aroclor-1262	4.10	U	4.10	21.0	ug/kg
11100-14-4	Aroclor-1268	7.10	U	7.10	21.0	ug/kg
11096-82-5	Aroclor-1260	4.00	U	4.00	21.0	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	17.2		40 - 162	86%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.1		32 - 176	91%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	19
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130365.D	1	09/21/22 11:05	09/21/22 17:08	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	91.1	U	91.1	210	ug/Kg
208-96-8	Acenaphthylene	84.6	U	84.6	210	ug/Kg
83-32-9	Acenaphthene	97.2	U	97.2	210	ug/Kg
86-73-7	Fluorene	97.1	U	97.1	210	ug/Kg
85-01-8	Phenanthrene	100	U	100	210	ug/Kg
120-12-7	Anthracene	100	U	100	210	ug/Kg
206-44-0	Fluoranthene	98.3	U	98.3	210	ug/Kg
129-00-0	Pyrene	91.4	U	91.4	210	ug/Kg
56-55-3	Benzo(a)anthracene	110	U	110	210	ug/Kg
218-01-9	Chrysene	110	U	110	210	ug/Kg
205-99-2	Benzo(b)fluoranthene	85.0	U	85.0	210	ug/Kg
207-08-9	Benzo(k)fluoranthene	90.7	U	90.7	210	ug/Kg
50-32-8	Benzo(a)pyrene	83.4	U	83.4	210	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	210	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	130	U	130	210	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	210	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	69.3		27 - 109	69%	SPK: 100
321-60-8	2-Fluorobiphenyl	72.0		30 - 103	72%	SPK: 100
1718-51-0	Terphenyl-d14	62.6		21 - 107	63%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	119000	6.657			
1146-65-2	Naphthalene-d8	460000	7.939			
15067-26-2	Acenaphthene-d10	228000	9.686			
1517-22-2	Phenanthrene-d10	321000	11.168			
1719-03-5	Chrysene-d12	215000	13.798			
1520-96-3	Perylene-d12	227000	15.192			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	19
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:		Final Vol:	1000 uL
Extraction Type :		Test:	SVOC-PAH
	Decanted :	Level :	LOW
Injection Volume :	GPC Factor :	1.0	GPC Cleanup :
			N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130365.D	1	09/21/22 11:05	09/21/22 17:08	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 222<sub>A</sub> = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-16-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-06	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7440-39-3	Barium	1200	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:53	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:36	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - ~~N~~ Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	5.5
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010634.D	1		09/22/22 19:46	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.89	U	0.89	5.20	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.20	ug/Kg
75-01-4	Vinyl Chloride	0.94	U	0.94	5.20	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.20	ug/Kg
75-00-3	Chloroethane	0.92	U	0.92	5.20	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.20	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.75	U	0.75	5.20	ug/Kg
75-35-4	1,1-Dichloroethene	0.89	U	0.89	5.20	ug/Kg
67-64-1	Acetone	12.7	U	12.7	25.9	ug/Kg
75-15-0	Carbon Disulfide	0.78	U	0.78	5.20	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.96	U	0.96	5.20	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.20	ug/Kg
75-09-2	Methylene Chloride	6.20	U	6.20	10.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.71	U	0.71	5.20	ug/Kg
75-34-3	1,1-Dichloroethane	0.73	U	0.73	5.20	ug/Kg
110-82-7	Cyclohexane	0.87	U	0.87	5.20	ug/Kg
78-93-3	2-Butanone	7.60	U	7.60	25.9	ug/Kg
56-23-5	Carbon Tetrachloride	0.82	U	0.82	5.20	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.71	U	0.71	5.20	ug/Kg
74-97-5	Bromochloromethane	0.84	U	0.84	5.20	ug/Kg
67-66-3	Chloroform	0.70	U	0.70	5.20	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.78	U	0.78	5.20	ug/Kg
108-87-2	Methylcyclohexane	0.83	U	0.83	5.20	ug/Kg
71-43-2	Benzene	0.68	U	0.68	5.20	ug/Kg
107-06-2	1,2-Dichloroethane	0.87	U	0.87	5.20	ug/Kg
79-01-6	Trichloroethene	0.76	U	0.76	5.20	ug/Kg
78-87-5	1,2-Dichloropropane	0.67	U	0.67	5.20	ug/Kg
75-27-4	Bromodichloromethane	0.73	U	0.73	5.20	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.80	U	4.80	25.9	ug/Kg
108-88-3	Toluene	0.65	U	0.65	5.20	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.77	U	0.77	5.20	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.74	U	0.74	5.20	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	5.5
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010634.D	1		09/22/22 19:46	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.89	U	0.89	5.20	ug/Kg
591-78-6	2-Hexanone	4.90	U	4.90	25.9	ug/Kg
124-48-1	Dibromochloromethane	0.78	U	0.78	5.20	ug/Kg
106-93-4	1,2-Dibromoethane	0.78	U	0.78	5.20	ug/Kg
127-18-4	Tetrachloroethene	0.79	U	0.79	5.20	ug/Kg
108-90-7	Chlorobenzene	0.67	U	0.67	5.20	ug/Kg
100-41-4	Ethyl Benzene	0.73	U	0.73	5.20	ug/Kg
179601-23-1	m/p-Xylenes	1.50	U	1.50	10.4	ug/Kg
95-47-6	o-Xylene	0.82	U	0.82	5.20	ug/Kg
100-42-5	Styrene	0.82	U	0.82	5.20	ug/Kg
75-25-2	Bromoform	0.84	U	0.84	5.20	ug/Kg
98-82-8	Isopropylbenzene	0.75	U	0.75	5.20	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.20	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.70	U	0.70	5.20	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.65	U	0.65	5.20	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.66	U	0.66	5.20	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.20	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.98	U	0.98	5.20	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.00	U	1.00	5.20	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.3		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	38.1		54 - 147	76%	SPK: 50
2037-26-5	Toluene-d8	39.9		78 - 125	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.1		50 - 146	68%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	186000	7.789			
540-36-3	1,4-Difluorobenzene	358000	8.685			
3114-55-4	Chlorobenzene-d5	369000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	173000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	5.5
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010634.D	1		09/22/22 19:46	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 09:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-08	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.18	H	1	0	0	pH		09/21/22 11:00	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:10	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:43	9034

Comments: pH result reported at temperature 22.6 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-08	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	8.9      Decanted:
Sample Wt/Vol:	30.03      Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010647.D	1	09/21/22 12:25	09/22/22 17:05	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	905	J	240	1830	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	10.0		37 - 130	50%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-12-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-08	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	8.9	Decanted:		
Sample Wt/Vol:	5.09	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028419.D	50	09/23/22 21:49	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	752	J	195	2430	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.6		50 - 150	98%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-12-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-08	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	8.9	Decanted:		
Sample Wt/Vol:	30.03	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0			PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056895.D	1	09/21/22 09:53	09/21/22 15:13	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.30	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	5.20	U	5.20	18.6	ug/kg
11141-16-5	Aroclor-1232	4.30	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	2.70	U	2.70	18.6	ug/kg
12672-29-6	Aroclor-1248	3.30	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	4.60	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	3.70	U	3.70	18.6	ug/kg
11100-14-4	Aroclor-1268	6.30	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	3.60	U	3.60	18.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.2		40 - 162	101%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.2		32 - 176	106%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130366.D	1	09/21/22 11:05	09/21/22 17:40	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	81.1	U	81.1	190	ug/Kg
208-96-8	Acenaphthylene	75.4	U	75.4	190	ug/Kg
83-32-9	Acenaphthene	86.6	U	86.6	190	ug/Kg
86-73-7	Fluorene	86.5	U	86.5	190	ug/Kg
85-01-8	Phenanthrene	91.7	U	91.7	190	ug/Kg
120-12-7	Anthracene	92.2	U	92.2	190	ug/Kg
206-44-0	Fluoranthene	87.6	U	87.6	190	ug/Kg
129-00-0	Pyrene	81.4	U	81.4	190	ug/Kg
56-55-3	Benzo(a)anthracene	95.2	U	95.2	190	ug/Kg
218-01-9	Chrysene	93.8	U	93.8	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	75.7	U	75.7	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	80.8	U	80.8	190	ug/Kg
50-32-8	Benzo(a)pyrene	74.3	U	74.3	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	190	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	67.1		27 - 109	67%	SPK: 100
321-60-8	2-Fluorobiphenyl	70.7		30 - 103	71%	SPK: 100
1718-51-0	Terphenyl-d14	57.1		21 - 107	57%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	118000	6.657			
1146-65-2	Naphthalene-d8	453000	7.94			
15067-26-2	Acenaphthene-d10	223000	9.686			
1517-22-2	Phenanthrene-d10	310000	11.169			
1719-03-5	Chrysene-d12	223000	13.798			
1520-96-3	Perylene-d12	242000	15.192			



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130366.D	1	09/21/22 11:05	09/21/22 17:40	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 232<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-12-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-08	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7440-39-3	Barium	1120	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:55	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:40	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - ~~Spiked~~ Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.8
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010630.D	1		09/22/22 18:13	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.96	U	0.96	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.96	U	0.96	5.60	ug/Kg
67-64-1	Acetone	13.6	U	13.6	28.0	ug/Kg
75-15-0	Carbon Disulfide	0.84	U	0.84	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.60	ug/Kg
110-82-7	Cyclohexane	0.94	U	0.94	5.60	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	28.0	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
74-97-5	Bromochloromethane	0.91	U	0.91	5.60	ug/Kg
67-66-3	Chloroform	0.75	U	0.75	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.84	U	0.84	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.90	U	0.90	5.60	ug/Kg
71-43-2	Benzene	0.74	U	0.74	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.94	U	0.94	5.60	ug/Kg
79-01-6	Trichloroethene	0.82	U	0.82	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.73	U	0.73	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	28.0	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.83	U	0.83	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.60	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.8
Sample Wt/Vol:	5.01      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010630.D	1		09/22/22 18:13	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.96	U	0.96	5.60	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	28.0	ug/Kg
124-48-1	Dibromochloromethane	0.84	U	0.84	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.84	U	0.84	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.85	U	0.85	5.60	ug/Kg
108-90-7	Chlorobenzene	0.73	U	0.73	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.2	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.60	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.60	ug/Kg
75-25-2	Bromoform	0.91	U	0.91	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.75	U	0.75	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	54.3		50 - 163	109%	SPK: 50
1868-53-7	Dibromofluoromethane	38.8		54 - 147	78%	SPK: 50
2037-26-5	Toluene-d8	40.5		78 - 125	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.5		50 - 146	69%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	185000	7.789			
540-36-3	1,4-Difluorobenzene	354000	8.685			
3114-55-4	Chlorobenzene-d5	367000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	171000	13.422			



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.8
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010630.D	1		09/22/22 18:13	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 10:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-10	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.40	H	1	0	0	pH		09/21/22 11:02	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:18	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:45	9034

Comments: pH result reported at temperature 22.4 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-15-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-10	Matrix:	SOIL			
Analytical Method:	8015D DRO	% Moisture:	17.2	Decanted:		
Sample Wt/Vol:	30.1	Units:	g	Final Vol:	1	mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010648.D	1	09/21/22 12:25	09/22/22 17:35	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	943	J	264	2010	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	14.3		37 - 130	72%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-15-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-10	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	17.2	Decanted:		
Sample Wt/Vol:	5.02	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028422.D	50	09/24/22 0:17	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	983	J	218	2710	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.0		50 - 150	95%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
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D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-10	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	17.2      Decanted:
Sample Wt/Vol:	30.09      Units:    g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0                      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056896.D	1	09/21/22 09:53	09/21/22 15:29	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.70	U	3.70	20.5	ug/kg
11104-28-2	Aroclor-1221	5.70	U	5.70	20.5	ug/kg
11141-16-5	Aroclor-1232	4.70	U	4.70	20.5	ug/kg
53469-21-9	Aroclor-1242	2.90	U	2.90	20.5	ug/kg
12672-29-6	Aroclor-1248	3.60	U	3.60	20.5	ug/kg
11097-69-1	Aroclor-1254	5.10	U	5.10	20.5	ug/kg
37324-23-5	Aroclor-1262	4.00	U	4.00	20.5	ug/kg
11100-14-4	Aroclor-1268	6.90	U	6.90	20.5	ug/kg
11096-82-5	Aroclor-1260	3.90	U	3.90	20.5	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.4		40 - 162	97%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.2		32 - 176	101%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.2
Sample Wt/Vol:	30.05      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054999.D	1	09/21/22 11:05	09/21/22 18:41	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	89.1	U	89.1	200	ug/Kg
208-96-8	Acenaphthylene	82.8	U	82.8	200	ug/Kg
83-32-9	Acenaphthene	95.1	U	95.1	200	ug/Kg
86-73-7	Fluorene	95.0	U	95.0	200	ug/Kg
85-01-8	Phenanthrene	100	U	100	200	ug/Kg
120-12-7	Anthracene	100	U	100	200	ug/Kg
206-44-0	Fluoranthene	96.2	U	96.2	200	ug/Kg
129-00-0	Pyrene	89.5	U	89.5	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	100	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	83.2	U	83.2	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	88.7	U	88.7	200	ug/Kg
50-32-8	Benzo(a)pyrene	81.6	U	81.6	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	67.7		27 - 109	68%	SPK: 100
321-60-8	2-Fluorobiphenyl	71.8		30 - 103	72%	SPK: 100
1718-51-0	Terphenyl-d14	70.8		21 - 107	71%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	42100		8.058		
1146-65-2	Naphthalene-d8	163000		10.884		
15067-26-2	Acenaphthene-d10	110000		14.703		
1517-22-2	Phenanthrene-d10	265000		17.447		
1719-03-5	Chrysene-d12	284000		21.724		
1520-96-3	Perylene-d12	296000		25.026		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.2
Sample Wt/Vol:	30.05      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054999.D	1	09/21/22 11:05	09/21/22 18:41	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 242<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-15-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-10	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7440-39-3	Barium	1330	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:57	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:44	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 243 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	11.2
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010633.D	1		09/22/22 19:23	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.96	U	0.96	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	0.99	U	0.99	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.80	U	0.80	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.96	U	0.96	5.60	ug/Kg
67-64-1	Acetone	13.6	U	13.6	27.9	ug/Kg
75-15-0	Carbon Disulfide	0.84	U	0.84	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	6.60	U	6.60	11.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.78	U	0.78	5.60	ug/Kg
110-82-7	Cyclohexane	0.94	U	0.94	5.60	ug/Kg
78-93-3	2-Butanone	8.10	U	8.10	27.9	ug/Kg
56-23-5	Carbon Tetrachloride	0.88	U	0.88	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.76	U	0.76	5.60	ug/Kg
74-97-5	Bromochloromethane	0.90	U	0.90	5.60	ug/Kg
67-66-3	Chloroform	0.75	U	0.75	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.84	U	0.84	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.89	U	0.89	5.60	ug/Kg
71-43-2	Benzene	0.74	U	0.74	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.94	U	0.94	5.60	ug/Kg
79-01-6	Trichloroethene	0.81	U	0.81	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.72	U	0.72	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.78	U	0.78	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	27.9	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.83	U	0.83	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.79	U	0.79	5.60	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	11.2
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010633.D	1		09/22/22 19:23	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.96	U	0.96	5.60	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	27.9	ug/Kg
124-48-1	Dibromochloromethane	0.84	U	0.84	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.84	U	0.84	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.85	U	0.85	5.60	ug/Kg
108-90-7	Chlorobenzene	0.72	U	0.72	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.78	U	0.78	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.1	ug/Kg
95-47-6	o-Xylene	0.88	U	0.88	5.60	ug/Kg
100-42-5	Styrene	0.88	U	0.88	5.60	ug/Kg
75-25-2	Bromoform	0.90	U	0.90	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.80	U	0.80	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.75	U	0.75	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.71	U	0.71	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.7		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	38.4		54 - 147	77%	SPK: 50
2037-26-5	Toluene-d8	39.9		78 - 125	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	33.2		50 - 146	66%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	182000	7.783			
540-36-3	1,4-Difluorobenzene	354000	8.685			
3114-55-4	Chlorobenzene-d5	366000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	168000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	11.2
Sample Wt/Vol:	5.05      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010633.D	1		09/22/22 19:23	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 11:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-12	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.02	H	1	0	0	pH		09/21/22 11:09	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:25	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:48	9034

Comments: pH result reported at temperature 22.6 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-11-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-12	Matrix:	SOIL			
Analytical Method:	8015D DRO	% Moisture:	4.4	Decanted:		
Sample Wt/Vol:	30.07	Units:	g	Final Vol:	1	mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :			PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010649.D	1	09/21/22 12:25	09/22/22 18:06	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1090	J	229	1740	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	16.8		37 - 130	84%	SPK: 20

## Comments:

U = Not Detected  
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MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-12	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	4.4      Decanted:
Sample Wt/Vol:	5.08      Units:    g	Final Vol:	5              mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028423.D	50	09/24/22 0:54	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	726	J	186	2320	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	20.0		50 - 150	100%	SPK: 20

Comments:

U = Not Detected  
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### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-11-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-12	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	4.4	Decanted:		
Sample Wt/Vol:	30.04	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056897.D	1	09/21/22 09:53	09/21/22 15:45	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.20	U	3.20	17.8	ug/kg
11104-28-2	Aroclor-1221	4.90	U	4.90	17.8	ug/kg
11141-16-5	Aroclor-1232	4.10	U	4.10	17.8	ug/kg
53469-21-9	Aroclor-1242	2.50	U	2.50	17.8	ug/kg
12672-29-6	Aroclor-1248	3.10	U	3.10	17.8	ug/kg
11097-69-1	Aroclor-1254	4.40	U	4.40	17.8	ug/kg
37324-23-5	Aroclor-1262	3.50	U	3.50	17.8	ug/kg
11100-14-4	Aroclor-1268	6.00	U	6.00	17.8	ug/kg
11096-82-5	Aroclor-1260	3.40	U	3.40	17.8	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.2		40 - 162	101%	SPK: 20
2051-24-3	Decachlorobiphenyl	22.4		32 - 176	112%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	4.4
Sample Wt/Vol:	30.1      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055000.D	1	09/21/22 11:05	09/21/22 19:23	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	77.0	U	77.0	180	ug/Kg
208-96-8	Acenaphthylene	71.6	U	71.6	180	ug/Kg
83-32-9	Acenaphthene	82.3	U	82.3	180	ug/Kg
86-73-7	Fluorene	82.2	U	82.2	180	ug/Kg
85-01-8	Phenanthrene	87.2	U	87.2	180	ug/Kg
120-12-7	Anthracene	87.6	U	87.6	180	ug/Kg
206-44-0	Fluoranthene	83.2	U	83.2	180	ug/Kg
129-00-0	Pyrene	77.4	U	77.4	180	ug/Kg
56-55-3	Benzo(a)anthracene	90.5	U	90.5	180	ug/Kg
218-01-9	Chrysene	89.1	U	89.1	180	ug/Kg
205-99-2	Benzo(b)fluoranthene	71.9	U	71.9	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	76.7	U	76.7	180	ug/Kg
50-32-8	Benzo(a)pyrene	70.6	U	70.6	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	110	U	110	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	180	ug/Kg
191-24-2	Benzo(g,h,i)perylene	100	U	100	180	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	99.3		27 - 109	99%	SPK: 100
321-60-8	2-Fluorobiphenyl	105	*	30 - 103	105%	SPK: 100
1718-51-0	Terphenyl-d14	105		21 - 107	105%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	40500		8.059		
1146-65-2	Naphthalene-d8	158000		10.886		
15067-26-2	Acenaphthene-d10	110000		14.699		
1517-22-2	Phenanthrene-d10	265000		17.448		
1719-03-5	Chrysene-d12	274000		21.726		
1520-96-3	Perylene-d12	285000		25.028		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	4.4
Sample Wt/Vol:	30.1      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055000.D	1	09/21/22 11:05	09/21/22 19:23	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

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LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 252<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-11-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-12	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7440-39-3	Barium	1140	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 11:59	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:47	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - ~~N~~ Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	6.6
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010625.D	1		09/22/22 16:16	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.91	U	0.91	5.30	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.30	ug/Kg
75-01-4	Vinyl Chloride	0.96	U	0.96	5.30	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.30	ug/Kg
75-00-3	Chloroethane	0.94	U	0.94	5.30	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.30	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.76	U	0.76	5.30	ug/Kg
75-35-4	1,1-Dichloroethene	0.91	U	0.91	5.30	ug/Kg
67-64-1	Acetone	12.9	U	12.9	26.4	ug/Kg
75-15-0	Carbon Disulfide	0.79	U	0.79	5.30	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.98	U	0.98	5.30	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.30	ug/Kg
75-09-2	Methylene Chloride	6.30	U	6.30	10.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
75-34-3	1,1-Dichloroethane	0.74	U	0.74	5.30	ug/Kg
110-82-7	Cyclohexane	0.89	U	0.89	5.30	ug/Kg
78-93-3	2-Butanone	7.70	U	7.70	26.4	ug/Kg
56-23-5	Carbon Tetrachloride	0.83	U	0.83	5.30	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.72	U	0.72	5.30	ug/Kg
74-97-5	Bromochloromethane	0.86	U	0.86	5.30	ug/Kg
67-66-3	Chloroform	0.71	U	0.71	5.30	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.79	U	0.79	5.30	ug/Kg
108-87-2	Methylcyclohexane	0.84	U	0.84	5.30	ug/Kg
71-43-2	Benzene	0.70	U	0.70	5.30	ug/Kg
107-06-2	1,2-Dichloroethane	0.89	U	0.89	5.30	ug/Kg
79-01-6	Trichloroethene	0.77	U	0.77	5.30	ug/Kg
78-87-5	1,2-Dichloropropane	0.69	U	0.69	5.30	ug/Kg
75-27-4	Bromodichloromethane	0.74	U	0.74	5.30	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.80	U	4.80	26.4	ug/Kg
108-88-3	Toluene	0.67	U	0.67	5.30	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.78	U	0.78	5.30	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.75	U	0.75	5.30	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	6.6
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010625.D	1		09/22/22 16:16	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.91	U	0.91	5.30	ug/Kg
591-78-6	2-Hexanone	4.90	U	4.90	26.4	ug/Kg
124-48-1	Dibromochloromethane	0.79	U	0.79	5.30	ug/Kg
106-93-4	1,2-Dibromoethane	0.79	U	0.79	5.30	ug/Kg
127-18-4	Tetrachloroethene	0.80	U	0.80	5.30	ug/Kg
108-90-7	Chlorobenzene	0.69	U	0.69	5.30	ug/Kg
100-41-4	Ethyl Benzene	0.74	U	0.74	5.30	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.6	ug/Kg
95-47-6	o-Xylene	0.83	U	0.83	5.30	ug/Kg
100-42-5	Styrene	0.83	U	0.83	5.30	ug/Kg
75-25-2	Bromoform	0.86	U	0.86	5.30	ug/Kg
98-82-8	Isopropylbenzene	0.76	U	0.76	5.30	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.30	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.71	U	0.71	5.30	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.67	U	0.67	5.30	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.68	U	0.68	5.30	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.30	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.99	U	0.99	5.30	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.30	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	56.5		50 - 163	113%	SPK: 50
1868-53-7	Dibromofluoromethane	39.1		54 - 147	78%	SPK: 50
2037-26-5	Toluene-d8	40.7		78 - 125	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.8		50 - 146	70%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	185000	7.783			
540-36-3	1,4-Difluorobenzene	353000	8.685			
3114-55-4	Chlorobenzene-d5	365000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	170000	13.428			



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-8.5-9.0	SDG No.:	N4723
Lab Sample ID:	N4723-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	6.6
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010625.D	1		09/22/22 16:16	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 13:15
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.59	H	1	0	0	pH		09/21/22 11:10	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:32	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:50	9034

Comments: pH result reported at temperature 22.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	3.4          Decanted:
Sample Wt/Vol:	30.09          Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010650.D	1	09/21/22 12:25	09/22/22 18:36	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	833	J	226	1720	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	9.44		37 - 130	47%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-26-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-14	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	3.4	Decanted:		
Sample Wt/Vol:	5.02	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028424.D	50	09/24/22 1:31	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	761	J	187	2320	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.5		50 - 150	98%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
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 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	3.4
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
Decanted:		Injection Volume :	
Final Vol:			10000
GPC Factor :	1.0	PH :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056898.D	1	09/21/22 09:53	09/21/22 16:00	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.20	U	3.20	17.6	ug/kg
11104-28-2	Aroclor-1221	4.90	U	4.90	17.6	ug/kg
11141-16-5	Aroclor-1232	4.10	U	4.10	17.6	ug/kg
53469-21-9	Aroclor-1242	2.50	U	2.50	17.6	ug/kg
12672-29-6	Aroclor-1248	3.10	U	3.10	17.6	ug/kg
11097-69-1	Aroclor-1254	4.30	U	4.30	17.6	ug/kg
37324-23-5	Aroclor-1262	3.40	U	3.40	17.6	ug/kg
11100-14-4	Aroclor-1268	5.90	U	5.90	17.6	ug/kg
11096-82-5	Aroclor-1260	3.30	U	3.30	17.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.3		40 - 162	102%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.3		32 - 176	107%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	3.4
Sample Wt/Vol:	30.01     Units: g	Final Vol:	1000     uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N     PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055001.D	1	09/21/22 11:05	09/21/22 20:04	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	76.5	U	76.5	180	ug/Kg
208-96-8	Acenaphthylene	71.1	U	71.1	180	ug/Kg
83-32-9	Acenaphthene	81.6	U	81.6	180	ug/Kg
86-73-7	Fluorene	81.5	U	81.5	180	ug/Kg
85-01-8	Phenanthrene	86.5	U	86.5	180	ug/Kg
120-12-7	Anthracene	86.9	U	86.9	180	ug/Kg
206-44-0	Fluoranthene	82.6	U	82.6	180	ug/Kg
129-00-0	Pyrene	76.8	U	76.8	180	ug/Kg
56-55-3	Benzo(a)anthracene	89.8	U	89.8	180	ug/Kg
218-01-9	Chrysene	88.5	U	88.5	180	ug/Kg
205-99-2	Benzo(b)fluoranthene	71.4	U	71.4	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	76.2	U	76.2	180	ug/Kg
50-32-8	Benzo(a)pyrene	70.1	U	70.1	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	100	U	100	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	110	U	110	180	ug/Kg
191-24-2	Benzo(g,h,i)perylene	100	U	100	180	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	55.1		27 - 109	55%	SPK: 100
321-60-8	2-Fluorobiphenyl	60.2		30 - 103	60%	SPK: 100
1718-51-0	Terphenyl-d14	62.1		21 - 107	62%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	37800		8.056		
1146-65-2	Naphthalene-d8	152000		10.882		
15067-26-2	Acenaphthene-d10	107000		14.701		
1517-22-2	Phenanthrene-d10	260000		17.445		
1719-03-5	Chrysene-d12	270000		21.723		
1520-96-3	Perylene-d12	284000		25.025		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	3.4
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055001.D	1	09/21/22 11:05	09/21/22 20:04	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 262<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-26-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-14	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7440-39-3	Barium	1220	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 12:02	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:51	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 263 Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	12.7
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010626.D	1		09/22/22 16:39	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.97	U	0.97	5.60	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.60	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.60	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.60	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.60	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.60	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.81	U	0.81	5.60	ug/Kg
75-35-4	1,1-Dichloroethene	0.97	U	0.97	5.60	ug/Kg
67-64-1	Acetone	13.8	U	13.8	28.2	ug/Kg
75-15-0	Carbon Disulfide	0.85	U	0.85	5.60	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.60	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.60	ug/Kg
75-09-2	Methylene Chloride	6.70	U	6.70	11.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.77	U	0.77	5.60	ug/Kg
75-34-3	1,1-Dichloroethane	0.79	U	0.79	5.60	ug/Kg
110-82-7	Cyclohexane	0.95	U	0.95	5.60	ug/Kg
78-93-3	2-Butanone	8.20	U	8.20	28.2	ug/Kg
56-23-5	Carbon Tetrachloride	0.89	U	0.89	5.60	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.77	U	0.77	5.60	ug/Kg
74-97-5	Bromochloromethane	0.91	U	0.91	5.60	ug/Kg
67-66-3	Chloroform	0.76	U	0.76	5.60	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.85	U	0.85	5.60	ug/Kg
108-87-2	Methylcyclohexane	0.90	U	0.90	5.60	ug/Kg
71-43-2	Benzene	0.74	U	0.74	5.60	ug/Kg
107-06-2	1,2-Dichloroethane	0.95	U	0.95	5.60	ug/Kg
79-01-6	Trichloroethene	0.82	U	0.82	5.60	ug/Kg
78-87-5	1,2-Dichloropropane	0.73	U	0.73	5.60	ug/Kg
75-27-4	Bromodichloromethane	0.79	U	0.79	5.60	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.20	U	5.20	28.2	ug/Kg
108-88-3	Toluene	0.71	U	0.71	5.60	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.83	U	0.83	5.60	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.80	U	0.80	5.60	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	12.7
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010626.D	1		09/22/22 16:39	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.97	U	0.97	5.60	ug/Kg
591-78-6	2-Hexanone	5.30	U	5.30	28.2	ug/Kg
124-48-1	Dibromochloromethane	0.85	U	0.85	5.60	ug/Kg
106-93-4	1,2-Dibromoethane	0.85	U	0.85	5.60	ug/Kg
127-18-4	Tetrachloroethene	0.86	U	0.86	5.60	ug/Kg
108-90-7	Chlorobenzene	0.73	U	0.73	5.60	ug/Kg
100-41-4	Ethyl Benzene	0.79	U	0.79	5.60	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.3	ug/Kg
95-47-6	o-Xylene	0.89	U	0.89	5.60	ug/Kg
100-42-5	Styrene	0.89	U	0.89	5.60	ug/Kg
75-25-2	Bromoform	0.91	U	0.91	5.60	ug/Kg
98-82-8	Isopropylbenzene	0.81	U	0.81	5.60	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.60	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.76	U	0.76	5.60	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.71	U	0.71	5.60	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.72	U	0.72	5.60	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.60	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.60	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.6		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	38.4		54 - 147	77%	SPK: 50
2037-26-5	Toluene-d8	40.4		78 - 125	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.1		50 - 146	68%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	187000	7.783			
540-36-3	1,4-Difluorobenzene	356000	8.685			
3114-55-4	Chlorobenzene-d5	362000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	165000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	12.7
Sample Wt/Vol:	5.08      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010626.D	1		09/22/22 16:39	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

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LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 12:15
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.17	H	1	0	0	pH		09/21/22 11:13	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:40	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:04	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:53	9034

Comments: pH result reported at temperature 21.2 °C

U = Not Detected

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H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	17.8      Decanted:
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010651.D	1	09/21/22 12:25	09/22/22 19:06	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1120	J	266	2030	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	21.0		37 - 130	105%	SPK: 20

## Comments:

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 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	17.8      Decanted:
Sample Wt/Vol:	5.09      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028425.D	50	09/24/22 2:08	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	828	J	216	2690	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.2		50 - 150	96%	SPK: 20

Comments:

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**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-27-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-16	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	17.8	Decanted:		
Sample Wt/Vol:	30.02	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056899.D	1	09/21/22 09:53	09/21/22 16:16	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.70	U	3.70	20.7	ug/kg
11104-28-2	Aroclor-1221	5.70	U	5.70	20.7	ug/kg
11141-16-5	Aroclor-1232	4.80	U	4.80	20.7	ug/kg
53469-21-9	Aroclor-1242	2.90	U	2.90	20.7	ug/kg
12672-29-6	Aroclor-1248	3.60	U	3.60	20.7	ug/kg
11097-69-1	Aroclor-1254	5.10	U	5.10	20.7	ug/kg
37324-23-5	Aroclor-1262	4.00	U	4.00	20.7	ug/kg
11100-14-4	Aroclor-1268	7.00	U	7.00	20.7	ug/kg
11096-82-5	Aroclor-1260	3.90	U	3.90	20.7	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.9		40 - 162	99%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.7		32 - 176	108%	SPK: 20

## Comments:

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J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.8
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055002.D	1	09/21/22 11:05	09/21/22 20:46	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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**TARGETS**

91-20-3	Naphthalene	89.8	U	89.8	210	ug/Kg
208-96-8	Acenaphthylene	83.5	U	83.5	210	ug/Kg
83-32-9	Acenaphthene	95.9	U	95.9	210	ug/Kg
86-73-7	Fluorene	95.8	U	95.8	210	ug/Kg
85-01-8	Phenanthrene	100	U	100	210	ug/Kg
120-12-7	Anthracene	100	U	100	210	ug/Kg
206-44-0	Fluoranthene	97.0	U	97.0	210	ug/Kg
129-00-0	Pyrene	90.2	U	90.2	210	ug/Kg
56-55-3	Benzo(a)anthracene	110	U	110	210	ug/Kg
218-01-9	Chrysene	100	U	100	210	ug/Kg
205-99-2	Benzo(b)fluoranthene	83.9	U	83.9	210	ug/Kg
207-08-9	Benzo(k)fluoranthene	89.4	U	89.4	210	ug/Kg
50-32-8	Benzo(a)pyrene	82.3	U	82.3	210	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	210	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	210	ug/Kg
191-24-2	Benzo(g,h,i)perylene	120	U	120	210	ug/Kg

**SURROGATES**

4165-60-0	Nitrobenzene-d5	63.8		27 - 109	64%	SPK: 100
321-60-8	2-Fluorobiphenyl	67.4		30 - 103	67%	SPK: 100
1718-51-0	Terphenyl-d14	64.9		21 - 107	65%	SPK: 100

**INTERNAL STANDARDS**

3855-82-1	1,4-Dichlorobenzene-d4	36200	8.06			
1146-65-2	Naphthalene-d8	146000	10.886			
15067-26-2	Acenaphthene-d10	102000	14.699			
1517-22-2	Phenanthrene-d10	251000	17.449			
1719-03-5	Chrysene-d12	263000	21.72			
1520-96-3	Perylene-d12	277000	25.022			



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.8
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055002.D	1	09/21/22 11:05	09/21/22 20:46	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

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LOD = Limit of Detection

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 272<sub>A</sub> = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-27-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-16	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7440-39-3	Barium	1180	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 12:04	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:55	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - ~~273~~ Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.6
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010627.D	1		09/22/22 17:03	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.10	U	1.10	6.10	ug/Kg
74-87-3	Chloromethane	1.30	U	1.30	6.10	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	6.10	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	6.10	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	6.10	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	6.10	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.88	U	0.88	6.10	ug/Kg
75-35-4	1,1-Dichloroethene	1.10	U	1.10	6.10	ug/Kg
67-64-1	Acetone	14.9	U	14.9	30.6	ug/Kg
75-15-0	Carbon Disulfide	0.92	U	0.92	6.10	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	6.10	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	6.10	ug/Kg
75-09-2	Methylene Chloride	7.30	U	7.30	12.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.83	U	0.83	6.10	ug/Kg
75-34-3	1,1-Dichloroethane	0.86	U	0.86	6.10	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	6.10	ug/Kg
78-93-3	2-Butanone	8.90	U	8.90	30.6	ug/Kg
56-23-5	Carbon Tetrachloride	0.97	U	0.97	6.10	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.83	U	0.83	6.10	ug/Kg
74-97-5	Bromochloromethane	0.99	U	0.99	6.10	ug/Kg
67-66-3	Chloroform	0.82	U	0.82	6.10	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.92	U	0.92	6.10	ug/Kg
108-87-2	Methylcyclohexane	0.98	U	0.98	6.10	ug/Kg
71-43-2	Benzene	0.81	U	0.81	6.10	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	6.10	ug/Kg
79-01-6	Trichloroethene	0.89	U	0.89	6.10	ug/Kg
78-87-5	1,2-Dichloropropane	0.80	U	0.80	6.10	ug/Kg
75-27-4	Bromodichloromethane	0.86	U	0.86	6.10	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.60	U	5.60	30.6	ug/Kg
108-88-3	Toluene	0.77	U	0.77	6.10	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.91	U	0.91	6.10	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.87	U	0.87	6.10	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.6
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010627.D	1		09/22/22 17:03	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.10	U	1.10	6.10	ug/Kg
591-78-6	2-Hexanone	5.70	U	5.70	30.6	ug/Kg
124-48-1	Dibromochloromethane	0.92	U	0.92	6.10	ug/Kg
106-93-4	1,2-Dibromoethane	0.92	U	0.92	6.10	ug/Kg
127-18-4	Tetrachloroethene	0.93	U	0.93	6.10	ug/Kg
108-90-7	Chlorobenzene	0.80	U	0.80	6.10	ug/Kg
100-41-4	Ethyl Benzene	0.86	U	0.86	6.10	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	12.2	ug/Kg
95-47-6	o-Xylene	0.97	U	0.97	6.10	ug/Kg
100-42-5	Styrene	0.97	U	0.97	6.10	ug/Kg
75-25-2	Bromoform	0.99	U	0.99	6.10	ug/Kg
98-82-8	Isopropylbenzene	0.88	U	0.88	6.10	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.40	U	1.40	6.10	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.82	U	0.82	6.10	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.77	U	0.77	6.10	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.78	U	0.78	6.10	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	6.10	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.20	U	1.20	6.10	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	6.10	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.5		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	38.3		54 - 147	77%	SPK: 50
2037-26-5	Toluene-d8	40.2		78 - 125	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.0		50 - 146	68%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	185000	7.783			
540-36-3	1,4-Difluorobenzene	354000	8.685			
3114-55-4	Chlorobenzene-d5	361000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	165000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-17	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.6
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010627.D	1		09/22/22 17:03	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 () = Laboratory InHouse Limit  
 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 11:50
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-18	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.83	H	1	0	0	pH		09/21/22 11:15	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:48	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:55	9034

Comments: pH result reported at temperature 21.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22		
Client Sample ID:	SB-28-COMP	SDG No.:	N4723		
Lab Sample ID:	N4723-18	Matrix:	SOIL		
Analytical Method:	8015D DRO	% Moisture:	14.5	Decanted:	
Sample Wt/Vol:	30.06	Units:	g	Final Vol:	1 mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010652.D	1	09/21/22 12:25	09/22/22 19:37	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	4270		256	1950	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	15.7		37 - 130	79%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-28-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-18	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	14.5	Decanted:		
Sample Wt/Vol:	5.04	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028426.D	50	09/24/22 2:45	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	1050	J	210	2610	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	21.4		50 - 150	107%	SPK: 20

Comments:

U = Not Detected  
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 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-18	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	14.5      Decanted:
Sample Wt/Vol:	30.07      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056900.D	1	09/21/22 09:53	09/21/22 16:32	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.60	U	3.60	19.8	ug/kg
11104-28-2	Aroclor-1221	5.50	U	5.50	19.8	ug/kg
11141-16-5	Aroclor-1232	4.60	U	4.60	19.8	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.8	ug/kg
12672-29-6	Aroclor-1248	3.50	U	3.50	19.8	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	19.8	ug/kg
37324-23-5	Aroclor-1262	3.90	U	3.90	19.8	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	19.8	ug/kg
11096-82-5	Aroclor-1260	3.80	U	3.80	19.8	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	18.3		40 - 162	91%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.9		32 - 176	95%	SPK: 20

**Comments:**

U = Not Detected  
 LOQ = Limit of Quantitation  
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 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-18	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.5
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055003.D	1	09/21/22 11:05	09/21/22 21:28	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	86.2	U	86.2	200	ug/Kg
208-96-8	Acenaphthylene	80.1	U	80.1	200	ug/Kg
83-32-9	Acenaphthene	92.0	U	92.0	200	ug/Kg
86-73-7	Fluorene	91.9	U	91.9	200	ug/Kg
85-01-8	Phenanthrene	97.5	U	97.5	200	ug/Kg
120-12-7	Anthracene	98.0	U	98.0	200	ug/Kg
206-44-0	Fluoranthene	93.1	U	93.1	200	ug/Kg
129-00-0	Pyrene	86.5	U	86.5	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	99.7	U	99.7	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.5	U	80.5	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	85.8	U	85.8	200	ug/Kg
50-32-8	Benzo(a)pyrene	78.9	U	78.9	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	72.8		27 - 109	73%	SPK: 100
321-60-8	2-Fluorobiphenyl	77.5		30 - 103	78%	SPK: 100
1718-51-0	Terphenyl-d14	80.4		21 - 107	80%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	38800		8.058		
1146-65-2	Naphthalene-d8	155000		10.885		
15067-26-2	Acenaphthene-d10	107000		14.704		
1517-22-2	Phenanthrene-d10	258000		17.447		
1719-03-5	Chrysene-d12	264000		21.725		
1520-96-3	Perylene-d12	277000		25.021		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-18	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.5
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055003.D	1	09/21/22 11:05	09/21/22 21:28	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 282<sub>A</sub> = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-28-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-18	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7440-39-3	Barium	895	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7439-97-6	Mercury	0.70	U	1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 12:06	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 20:59	SW6010

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Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

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U = Not Detected  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 283 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010628.D	1		09/22/22 17:26	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.92	U	0.92	5.30	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.30	ug/Kg
75-01-4	Vinyl Chloride	0.97	U	0.97	5.30	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.30	ug/Kg
75-00-3	Chloroethane	0.95	U	0.95	5.30	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.30	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.77	U	0.77	5.30	ug/Kg
75-35-4	1,1-Dichloroethene	0.92	U	0.92	5.30	ug/Kg
67-64-1	Acetone	13.0	U	13.0	26.7	ug/Kg
75-15-0	Carbon Disulfide	0.80	U	0.80	5.30	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.99	U	0.99	5.30	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.30	ug/Kg
75-09-2	Methylene Chloride	6.40	U	6.40	10.7	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.73	U	0.73	5.30	ug/Kg
75-34-3	1,1-Dichloroethane	0.75	U	0.75	5.30	ug/Kg
110-82-7	Cyclohexane	0.90	U	0.90	5.30	ug/Kg
78-93-3	2-Butanone	7.80	U	7.80	26.7	ug/Kg
56-23-5	Carbon Tetrachloride	0.85	U	0.85	5.30	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.73	U	0.73	5.30	ug/Kg
74-97-5	Bromochloromethane	0.87	U	0.87	5.30	ug/Kg
67-66-3	Chloroform	0.72	U	0.72	5.30	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.80	U	0.80	5.30	ug/Kg
108-87-2	Methylcyclohexane	0.86	U	0.86	5.30	ug/Kg
71-43-2	Benzene	0.71	U	0.71	5.30	ug/Kg
107-06-2	1,2-Dichloroethane	0.90	U	0.90	5.30	ug/Kg
79-01-6	Trichloroethene	0.78	U	0.78	5.30	ug/Kg
78-87-5	1,2-Dichloropropane	0.70	U	0.70	5.30	ug/Kg
75-27-4	Bromodichloromethane	0.75	U	0.75	5.30	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.90	U	4.90	26.7	ug/Kg
108-88-3	Toluene	0.67	U	0.67	5.30	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.79	U	0.79	5.30	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.76	U	0.76	5.30	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010628.D	1		09/22/22 17:26	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.92	U	0.92	5.30	ug/Kg
591-78-6	2-Hexanone	5.00	U	5.00	26.7	ug/Kg
124-48-1	Dibromochloromethane	0.80	U	0.80	5.30	ug/Kg
106-93-4	1,2-Dibromoethane	0.80	U	0.80	5.30	ug/Kg
127-18-4	Tetrachloroethene	0.81	U	0.81	5.30	ug/Kg
108-90-7	Chlorobenzene	0.70	U	0.70	5.30	ug/Kg
100-41-4	Ethyl Benzene	0.75	U	0.75	5.30	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.7	ug/Kg
95-47-6	o-Xylene	0.85	U	0.85	5.30	ug/Kg
100-42-5	Styrene	0.85	U	0.85	5.30	ug/Kg
75-25-2	Bromoform	0.87	U	0.87	5.30	ug/Kg
98-82-8	Isopropylbenzene	0.77	U	0.77	5.30	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.30	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.72	U	0.72	5.30	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.67	U	0.67	5.30	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.68	U	0.68	5.30	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.30	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.30	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.30	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	65.8		50 - 163	132%	SPK: 50
1868-53-7	Dibromofluoromethane	22.5	*	54 - 147	45%	SPK: 50
2037-26-5	Toluene-d8	38.1	*	78 - 125	76%	SPK: 50
460-00-4	4-Bromofluorobenzene	31.0		50 - 146	62%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	4910	7.783			
540-36-3	1,4-Difluorobenzene	9050	8.691			
3114-55-4	Chlorobenzene-d5	9520	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	3460	13.428			

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0	SDG No.:	N4723
Lab Sample ID:	N4723-19	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624          ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010628.D	1		09/22/22 17:26	VY092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0RE	SDG No.:	N4723
Lab Sample ID:	N4723-19RE	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010642.D	1		09/23/22 12:39	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.92	U	0.92	5.30	ug/Kg
74-87-3	Chloromethane	1.10	U	1.10	5.30	ug/Kg
75-01-4	Vinyl Chloride	0.97	U	0.97	5.30	ug/Kg
74-83-9	Bromomethane	1.20	U	1.20	5.30	ug/Kg
75-00-3	Chloroethane	0.95	U	0.95	5.30	ug/Kg
75-69-4	Trichlorofluoromethane	1.00	U	1.00	5.30	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.77	U	0.77	5.30	ug/Kg
75-35-4	1,1-Dichloroethene	0.92	U	0.92	5.30	ug/Kg
67-64-1	Acetone	13.0	U	13.0	26.7	ug/Kg
75-15-0	Carbon Disulfide	0.80	U	0.80	5.30	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.99	U	0.99	5.30	ug/Kg
79-20-9	Methyl Acetate	1.30	U	1.30	5.30	ug/Kg
75-09-2	Methylene Chloride	6.40	U	6.40	10.7	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.73	U	0.73	5.30	ug/Kg
75-34-3	1,1-Dichloroethane	0.75	U	0.75	5.30	ug/Kg
110-82-7	Cyclohexane	0.90	U	0.90	5.30	ug/Kg
78-93-3	2-Butanone	7.80	U	7.80	26.7	ug/Kg
56-23-5	Carbon Tetrachloride	0.85	U	0.85	5.30	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.73	U	0.73	5.30	ug/Kg
74-97-5	Bromochloromethane	0.87	U	0.87	5.30	ug/Kg
67-66-3	Chloroform	0.72	U	0.72	5.30	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.80	U	0.80	5.30	ug/Kg
108-87-2	Methylcyclohexane	0.86	U	0.86	5.30	ug/Kg
71-43-2	Benzene	0.71	U	0.71	5.30	ug/Kg
107-06-2	1,2-Dichloroethane	0.90	U	0.90	5.30	ug/Kg
79-01-6	Trichloroethene	0.78	U	0.78	5.30	ug/Kg
78-87-5	1,2-Dichloropropane	0.70	U	0.70	5.30	ug/Kg
75-27-4	Bromodichloromethane	0.75	U	0.75	5.30	ug/Kg
108-10-1	4-Methyl-2-Pentanone	4.90	U	4.90	26.7	ug/Kg
108-88-3	Toluene	0.67	U	0.67	5.30	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.79	U	0.79	5.30	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.76	U	0.76	5.30	ug/Kg



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0RE	SDG No.:	N4723
Lab Sample ID:	N4723-19RE	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010642.D	1		09/23/22 12:39	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.92	U	0.92	5.30	ug/Kg
591-78-6	2-Hexanone	5.00	U	5.00	26.7	ug/Kg
124-48-1	Dibromochloromethane	0.80	U	0.80	5.30	ug/Kg
106-93-4	1,2-Dibromoethane	0.80	U	0.80	5.30	ug/Kg
127-18-4	Tetrachloroethene	0.81	U	0.81	5.30	ug/Kg
108-90-7	Chlorobenzene	0.70	U	0.70	5.30	ug/Kg
100-41-4	Ethyl Benzene	0.75	U	0.75	5.30	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	10.7	ug/Kg
95-47-6	o-Xylene	0.85	U	0.85	5.30	ug/Kg
100-42-5	Styrene	0.85	U	0.85	5.30	ug/Kg
75-25-2	Bromoform	0.87	U	0.87	5.30	ug/Kg
98-82-8	Isopropylbenzene	0.77	U	0.77	5.30	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.30	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.72	U	0.72	5.30	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.67	U	0.67	5.30	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.68	U	0.68	5.30	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.30	U	1.30	5.30	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.30	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.30	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	75.8		50 - 163	152%	SPK: 50
1868-53-7	Dibromofluoromethane	21.8	*	54 - 147	44%	SPK: 50
2037-26-5	Toluene-d8	40.0		78 - 125	80%	SPK: 50
460-00-4	4-Bromofluorobenzene	30.1		50 - 146	60%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	3510	7.789			
540-36-3	1,4-Difluorobenzene	6710	8.685			
3114-55-4	Chlorobenzene-d5	7330	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	2130	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-6.5-7.0RE	SDG No.:	N4723
Lab Sample ID:	N4723-19RE	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.8
Sample Wt/Vol:	5.07      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010642.D	1		09/23/22 12:39	VY092322

<b>CAS Number</b>	<b>Parameter</b>	<b>Conc.</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LOQ / CRQL</b>	<b>Units</b>
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 11:30
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.53	H	1	0	0	pH		09/21/22 11:19	9045D
Ignitability	NO		1	0	0	oC		09/21/22 10:55	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 15:57	9034

Comments: pH result reported at temperature 21.8 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	14.1      Decanted:
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010653.D	1	09/21/22 12:25	09/22/22 20:07	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1560	J	255	1940	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	16.9		37 - 130	84%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-29-COMP	SDG No.:	N4723			
Lab Sample ID:	N4723-20	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	14.1	Decanted:		
Sample Wt/Vol:	5.04	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028427.D	50	09/24/22 3:22	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	887	J	209	2600	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	21.8		50 - 150	109%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	14.1      Decanted:
Sample Wt/Vol:	30.05      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056901.D	1	09/21/22 09:53	09/21/22 16:47	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	3.50	U	3.50	19.8	ug/kg
11104-28-2	Aroclor-1221	5.50	U	5.50	19.8	ug/kg
11141-16-5	Aroclor-1232	4.60	U	4.60	19.8	ug/kg
53469-21-9	Aroclor-1242	2.80	U	2.80	19.8	ug/kg
12672-29-6	Aroclor-1248	3.50	U	3.50	19.8	ug/kg
11097-69-1	Aroclor-1254	4.90	U	4.90	19.8	ug/kg
37324-23-5	Aroclor-1262	3.90	U	3.90	19.8	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	19.8	ug/kg
11096-82-5	Aroclor-1260	3.80	U	3.80	19.8	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	15.8		40 - 162	79%	SPK: 20
2051-24-3	Decachlorobiphenyl	14.9		32 - 176	74%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.1
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054996.D	1	09/21/22 11:05	09/21/22 16:34	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	85.9	U	85.9	200	ug/Kg
208-96-8	Acenaphthylene	79.9	U	79.9	200	ug/Kg
83-32-9	Acenaphthene	91.7	U	91.7	200	ug/Kg
86-73-7	Fluorene	91.6	U	91.6	200	ug/Kg
85-01-8	Phenanthrene	97.2	U	97.2	200	ug/Kg
120-12-7	Anthracene	97.7	U	97.7	200	ug/Kg
206-44-0	Fluoranthene	92.8	U	92.8	200	ug/Kg
129-00-0	Pyrene	86.3	U	86.3	200	ug/Kg
56-55-3	Benzo(a)anthracene	100	U	100	200	ug/Kg
218-01-9	Chrysene	99.4	U	99.4	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	80.2	U	80.2	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	85.6	U	85.6	200	ug/Kg
50-32-8	Benzo(a)pyrene	78.7	U	78.7	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	120	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	120	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	110	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	74.1		27 - 109	74%	SPK: 100
321-60-8	2-Fluorobiphenyl	78.0		30 - 103	78%	SPK: 100
1718-51-0	Terphenyl-d14	79.0		21 - 107	79%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	35600		8.058		
1146-65-2	Naphthalene-d8	144000		10.884		
15067-26-2	Acenaphthene-d10	101000		14.703		
1517-22-2	Phenanthrene-d10	253000		17.453		
1719-03-5	Chrysene-d12	265000		21.724		
1520-96-3	Perylene-d12	277000		25.032		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.1
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG054996.D	1	09/21/22 11:05	09/21/22 16:34	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 295A = Aldol-Condensation Reaction Products



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-29-COMP	SDG No.:	N4723
Lab Sample ID:	N4723-20	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	30.8	U	1	30.8	100	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7440-39-3	Barium	1310	N	1	77.9	500	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7440-43-9	Cadmium	2.60	U	1	2.60	30.0	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7440-47-3	Chromium	10.4	U	1	10.4	50.0	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7439-92-1	Lead	16.4	U	1	16.4	60.0	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7439-97-6	Mercury	6.60		1	0.70	2.00	ug/L	09/22/22 15:10	09/23/22 12:09	SW7470A
7782-49-2	Selenium	35.3	U	1	35.3	100	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010
7440-22-4	Silver	8.20	U	1	8.20	50.0	ug/L	09/22/22 12:29	09/23/22 21:03	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP METALS			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - Spiked sample recovery not within control limits

**DATA FOR**  
**VOLATILE ORGANICS**  
**SEMI-VOLATILE ORGANICS**  
**GC SEMI-VOLATILES**  
**METALS**  
**GENERAL CHEMISTRY**

**PROJECT NAME : DDC OEGS - RECONSTRUCTION OF ROSEDALE AREA**

**LIRO ENGINEERS, INC.**

**690 Delaware Ave.**

**Buffalo, NY - 14209**

**Phone No: 716-882-5476**

**ORDER ID : N4724**

**ATTENTION : Steve Frank**



Date : 09/27/2022

Dear Steve Frank,

**16** soil samples for the **DDC OEGS - Reconstruction of Rosedale Area** project were received on **09/20/2022**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns regarding this

Regards,

Samantha Beazley

[Samantha@chemtech.net](mailto:Samantha@chemtech.net)

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: **Liro Engineers, Inc.**  
 ADDRESS: **703 Rurimer street**  
 CITY: **Brooklyn** STATE: **NJ** ZIP: **11211**  
 ATTENTION: **Steve Frank**  
 PHONE: **716 882-5476** FAX: \_\_\_\_\_

CLIENT PROJECT INFORMATION

PROJECT NAME: **Reconstruction of Rosedale Area**  
 PROJECT NO.: \_\_\_\_\_ LOCATION: **Queens**  
 PROJECT MANAGER: **Steve Frank**  
 e-mail: **hewson@liro.com**  
 PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

CLIENT BILLING INFORMATION

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_  
 ADDRESS: **same**  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
 HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
 EDD: **5 day TAT** DAYS\*  
 \*TO BE APPROVED BY CHEMTECH  
 STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)  
 Level 2 (Results + QC)  NJ Reduced  US EPA CLP  
 Level 3 (Results + QC)  NYS ASP A  NYS ASP B  
 + Raw Data  Other \_\_\_\_\_  
 EDD FORMAT \_\_\_\_\_

*TCL VOCs*  
*PAHs*  
*PCBs*  
*DRO/GRO*  
*ROA Characterization*  
*TCL ROA metals*

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER			
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9				
1.	SB-30-6.5-7.0'	S		X	9/19/22	1240	1	X												
2.	SB-30-comp	S	X		-11	1245	2		X	X	X	X	X							
3.	SB-10-8.5-9.0'	S		X	9/20/22	0840	1	X												
4.	SB-10-comp	S	X			0845	2		X	X	X	X	X							
5.	SB-09-11.5-12.0'	S		X		1020	1	X												
6.	SB-09-comp		X			1025	2		X	X	X	X	X							
7.	SB-01-8.5-9.0'			X		0920	1	X												
8.	SB-01-comp		X			0925	2		X	X	X	X	X							
9.	SB-02-10.5-11.0'			X		1000	1	X												
10.	SB-02-comp		X			1005	2		X	X	X	X	X							

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <b>Eva Jim</b>	DATE/TIME: <b>9/20/22</b>	RECEIVED BY: <b>[Signature]</b> <b>1325</b>	Conditions of bottles or coolers at receipt: <input checked="" type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>5.5</b> °C
RELINQUISHED BY SAMPLER: 2. _____	DATE/TIME:	RECEIVED BY:	Comments:
RELINQUISHED BY SAMPLER: 3. <b>[Signature]</b>	DATE/TIME: <b>1620</b> <b>9-20-22</b>	RECEIVED BY: <b>SB</b>	CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other _____ CHEMTECH: <input checked="" type="checkbox"/> Picked Up <input type="checkbox"/> Field Sampling

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Uro Engineers, Inc.  
 ADDRESS: 703 Lorimer street  
 CITY: Brooklyn STATE: NY ZIP: 11211  
 ATTENTION: Steve Frank  
 PHONE: 716 882-5476 FAX: \_\_\_\_\_

CLIENT PROJECT INFORMATION

PROJECT NAME: same as pg # 1  
 PROJECT NO.: \_\_\_\_\_ LOCATION: Queens  
 PROJECT MANAGER: \_\_\_\_\_  
 e-mail: newsone@uro.com  
 PHONE: 716 882-5476 FAX: \_\_\_\_\_

CLIENT BILLING INFORMATION

BILL TO: \_\_\_\_\_ PO#: \_\_\_\_\_  
 ADDRESS: same  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 ATTENTION: \_\_\_\_\_ PHONE: \_\_\_\_\_

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
 HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
 EDD: 5 day TAT DAYS\*  
 \*TO BE APPROVED BY CHEMTECH  
 STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

Level 1 (Results Only)  Level 4 (QC + Full Raw Data)  
 Level 2 (Results + QC)  NJ Reduced  US EPA CLP  
 Level 3 (Results + QC)  NYS ASP A  NYS ASP B  
 + Raw Data  Other \_\_\_\_\_  
 EDD FORMAT \_\_\_\_\_

*TCL VOCs PAHs PCBs GRO/DRO PCB Characterization TCLP RCRA Metals*

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER		
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9			
1.	SB-03-11.5-12.0'	S		X	9/20/22	0750	1	X											
2.	SB-03-COMP	S	X			0755	2		X	X	X	X	X						
3.	SB-04-12.5-13.0'	S		X		1240	1	X											
4.	SB-04-COMP	S	X			1245	2		X	X	X	X	X						
5.	<del>SB-05-</del>	S		X			1												
6.	<del>SB-05-COMP</del>	S	X				2												
7.	SB-07-7.5-8.0'	S		X		1310	1	X											
8.	SB-07-COMP	S	X			1315	2		X	X	X	X	X						
9.																			
10.																			

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>Eva</u>	DATE/TIME: <u>9/20/22</u>	RECEIVED BY: <u>[Signature]</u> <b>1325</b>
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 2. <u>[Signature]</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>9-20-22</u>	RECEIVED BY: 3. <u>SB</u>

Conditions of bottles or coolers at receipt:  COMPLIANT  NON COMPLIANT  COOLER TEMP 5.5 °C

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Page 4 of 4 HAZ - 300  
 CLIENT:  Hand Delivered  Other \_\_\_\_\_  
 CHEMTECH:  Picked Up  Field Sampling  
 Shipment Complete  YES  NO

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-6.5-7.0	SDG No.:	N4724
Lab Sample ID:	N4724-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010651.D	1		09/23/22 16:10	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0059	U	0.0010	0.0059	mg/Kg
74-87-3	Chloromethane	0.0059	U	0.0012	0.0059	mg/Kg
75-01-4	Vinyl Chloride	0.0059	U	0.0011	0.0059	mg/Kg
74-83-9	Bromomethane	0.0059	U	0.0014	0.0059	mg/Kg
75-00-3	Chloroethane	0.0059	U	0.0010	0.0059	mg/Kg
75-69-4	Trichlorofluoromethane	0.0059	U	0.0011	0.0059	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0059	U	0.00084	0.0059	mg/Kg
75-35-4	1,1-Dichloroethene	0.0059	U	0.0010	0.0059	mg/Kg
67-64-1	Acetone	0.029	U	0.014	0.029	mg/Kg
75-15-0	Carbon Disulfide	0.0059	U	0.00088	0.0059	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0059	U	0.0011	0.0059	mg/Kg
79-20-9	Methyl Acetate	0.0059	U	0.0015	0.0059	mg/Kg
75-09-2	Methylene Chloride	0.012	U	0.0070	0.012	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0059	U	0.00080	0.0059	mg/Kg
75-34-3	1,1-Dichloroethane	0.0059	U	0.00082	0.0059	mg/Kg
110-82-7	Cyclohexane	0.0059	U	0.00098	0.0059	mg/Kg
78-93-3	2-Butanone	0.029	U	0.0085	0.029	mg/Kg
56-23-5	Carbon Tetrachloride	0.0059	U	0.00093	0.0059	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0059	U	0.00080	0.0059	mg/Kg
74-97-5	Bromochloromethane	0.0059	U	0.00095	0.0059	mg/Kg
67-66-3	Chloroform	0.0059	U	0.00078	0.0059	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0059	U	0.00088	0.0059	mg/Kg
108-87-2	Methylcyclohexane	0.0059	U	0.00094	0.0059	mg/Kg
71-43-2	Benzene	0.0059	U	0.00077	0.0059	mg/Kg
107-06-2	1,2-Dichloroethane	0.0059	U	0.00098	0.0059	mg/Kg
79-01-6	Trichloroethene	0.0059	U	0.00085	0.0059	mg/Kg
78-87-5	1,2-Dichloropropane	0.0059	U	0.00076	0.0059	mg/Kg
75-27-4	Bromodichloromethane	0.0059	U	0.00082	0.0059	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.029	U	0.0054	0.029	mg/Kg
108-88-3	Toluene	0.0059	U	0.00074	0.0059	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0059	U	0.00087	0.0059	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0059	U	0.00083	0.0059	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-6.5-7.0	SDG No.:	N4724
Lab Sample ID:	N4724-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010651.D	1		09/23/22 16:10	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0059	U	0.0010	0.0059	mg/Kg
591-78-6	2-Hexanone	0.029	U	0.0055	0.029	mg/Kg
124-48-1	Dibromochloromethane	0.0059	U	0.00088	0.0059	mg/Kg
106-93-4	1,2-Dibromoethane	0.0059	U	0.00088	0.0059	mg/Kg
127-18-4	Tetrachloroethene	0.0059	U	0.00089	0.0059	mg/Kg
108-90-7	Chlorobenzene	0.0059	U	0.00076	0.0059	mg/Kg
100-41-4	Ethyl Benzene	0.0059	U	0.00082	0.0059	mg/Kg
179601-23-1	m/p-Xylenes	0.012	U	0.0017	0.012	mg/Kg
95-47-6	o-Xylene	0.0059	U	0.00093	0.0059	mg/Kg
100-42-5	Styrene	0.0059	U	0.00093	0.0059	mg/Kg
75-25-2	Bromoform	0.0059	U	0.00095	0.0059	mg/Kg
98-82-8	Isopropylbenzene	0.0059	U	0.00084	0.0059	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0059	U	0.0013	0.0059	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0059	U	0.00078	0.0059	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0059	U	0.00074	0.0059	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0059	U	0.00075	0.0059	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0059	U	0.0015	0.0059	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0059	U	0.0011	0.0059	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0059	U	0.0012	0.0059	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	50.0		50 - 163	100%	SPK: 50
1868-53-7	Dibromofluoromethane	36.3		54 - 147	73%	SPK: 50
2037-26-5	Toluene-d8	38.8		78 - 125	78%	SPK: 50
460-00-4	4-Bromofluorobenzene	32.6		50 - 146	65%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	200000	7.789			
540-36-3	1,4-Difluorobenzene	388000	8.691			
3114-55-4	Chlorobenzene-d5	405000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	190000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-6.5-7.0	SDG No.:	N4724
Lab Sample ID:	N4724-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	14.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010651.D	1		09/23/22 16:10	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22 12:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.39	H	1	0	0	pH		09/21/22 11:20	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:03	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:00	9034

Comments: pH result reported at temperature 22.0 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	14.9      Decanted:
Sample Wt/Vol:	30.07      Units:    g	Final Vol:	1              mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010654.D	1	09/21/22 12:25	09/22/22 20:37	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1150	J	257	1950	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	12.6		37 - 130	63%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22		
Client Sample ID:	SB-30-COMP	SDG No.:	N4724		
Lab Sample ID:	N4724-02	Matrix:	SOIL		
Analytical Method:	8015D GRO	% Moisture:	14.9	Decanted:	
Sample Wt/Vol:	5.04	Units:	g	Final Vol:	5 mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028394.D	50	09/23/22 4:14	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	877	J	211	2620	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	21.5		50 - 150	107%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
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D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	14.9      Decanted:
Sample Wt/Vol:	30.06      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056902.D	1	09/21/22 09:53	09/21/22 17:03	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	19.9	U	3.60	19.9	ug/kg
11104-28-2	Aroclor-1221	19.9	U	5.50	19.9	ug/kg
11141-16-5	Aroclor-1232	19.9	U	4.60	19.9	ug/kg
53469-21-9	Aroclor-1242	19.9	U	2.80	19.9	ug/kg
12672-29-6	Aroclor-1248	19.9	U	3.50	19.9	ug/kg
11097-69-1	Aroclor-1254	19.9	U	4.90	19.9	ug/kg
37324-23-5	Aroclor-1262	19.9	U	3.90	19.9	ug/kg
11100-14-4	Aroclor-1268	19.9	U	6.70	19.9	ug/kg
11096-82-5	Aroclor-1260	19.9	U	3.80	19.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.0		40 - 162	100%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.0		32 - 176	105%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.9
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055004.D	1	09/21/22 11:05	09/21/22 22:10	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	200	U	86.6	200	ug/Kg
208-96-8	Acenaphthylene	200	U	80.5	200	ug/Kg
83-32-9	Acenaphthene	200	U	92.5	200	ug/Kg
86-73-7	Fluorene	200	U	92.4	200	ug/Kg
85-01-8	Phenanthrene	200	U	98.0	200	ug/Kg
120-12-7	Anthracene	200	U	98.5	200	ug/Kg
206-44-0	Fluoranthene	200	U	93.6	200	ug/Kg
129-00-0	Pyrene	200	U	87.0	200	ug/Kg
56-55-3	Benzo(a)anthracene	200	U	100	200	ug/Kg
218-01-9	Chrysene	200	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	200	U	80.9	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	200	U	86.3	200	ug/Kg
50-32-8	Benzo(a)pyrene	200	U	79.4	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	200	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	200	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	87.9		27 - 109	88%	SPK: 100
321-60-8	2-Fluorobiphenyl	93.2		30 - 103	93%	SPK: 100
1718-51-0	Terphenyl-d14	93.8		21 - 107	94%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	34500		8.059		
1146-65-2	Naphthalene-d8	136000		10.885		
15067-26-2	Acenaphthene-d10	95500		14.698		
1517-22-2	Phenanthrene-d10	233000		17.448		
1719-03-5	Chrysene-d12	241000		21.719		
1520-96-3	Perylene-d12	251000		25.021		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.9
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055004.D	1	09/21/22 11:05	09/21/22 22:10	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 309 A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/19/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-30-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7440-39-3	Barium	784		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:27	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:31	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

 HAZ - ~~310~~ Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.01      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010673.D	1		09/26/22 16:05	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0052	U	0.00089	0.0052	mg/Kg
74-87-3	Chloromethane	0.0052	U	0.0011	0.0052	mg/Kg
75-01-4	Vinyl Chloride	0.0052	U	0.00095	0.0052	mg/Kg
74-83-9	Bromomethane	0.0052	U	0.0012	0.0052	mg/Kg
75-00-3	Chloroethane	0.0052	U	0.00093	0.0052	mg/Kg
75-69-4	Trichlorofluoromethane	0.0052	U	0.0010	0.0052	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0052	U	0.00075	0.0052	mg/Kg
75-35-4	1,1-Dichloroethene	0.0052	U	0.00089	0.0052	mg/Kg
67-64-1	Acetone	0.026	U	0.013	0.026	mg/Kg
75-15-0	Carbon Disulfide	0.0052	U	0.00078	0.0052	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0052	U	0.00097	0.0052	mg/Kg
79-20-9	Methyl Acetate	0.0052	U	0.0013	0.0052	mg/Kg
75-09-2	Methylene Chloride	0.010	U	0.0062	0.010	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0052	U	0.00071	0.0052	mg/Kg
75-34-3	1,1-Dichloroethane	0.0052	U	0.00073	0.0052	mg/Kg
110-82-7	Cyclohexane	0.0052	U	0.00087	0.0052	mg/Kg
78-93-3	2-Butanone	0.026	U	0.0076	0.026	mg/Kg
56-23-5	Carbon Tetrachloride	0.0052	U	0.00082	0.0052	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0052	U	0.00071	0.0052	mg/Kg
74-97-5	Bromochloromethane	0.0052	U	0.00084	0.0052	mg/Kg
67-66-3	Chloroform	0.0052	U	0.00070	0.0052	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0052	U	0.00078	0.0052	mg/Kg
108-87-2	Methylcyclohexane	0.0052	U	0.00083	0.0052	mg/Kg
71-43-2	Benzene	0.0052	U	0.00069	0.0052	mg/Kg
107-06-2	1,2-Dichloroethane	0.0052	U	0.00087	0.0052	mg/Kg
79-01-6	Trichloroethene	0.0052	U	0.00076	0.0052	mg/Kg
78-87-5	1,2-Dichloropropane	0.0052	U	0.00068	0.0052	mg/Kg
75-27-4	Bromodichloromethane	0.0052	U	0.00073	0.0052	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.026	U	0.0048	0.026	mg/Kg
108-88-3	Toluene	0.0052	U	0.00066	0.0052	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0052	U	0.00077	0.0052	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0052	U	0.00074	0.0052	mg/Kg



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.01      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010673.D	1		09/26/22 16:05	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0052	U	0.00089	0.0052	mg/Kg
591-78-6	2-Hexanone	0.026	U	0.0049	0.026	mg/Kg
124-48-1	Dibromochloromethane	0.0052	U	0.00078	0.0052	mg/Kg
106-93-4	1,2-Dibromoethane	0.0052	U	0.00078	0.0052	mg/Kg
127-18-4	Tetrachloroethene	0.0052	U	0.00079	0.0052	mg/Kg
108-90-7	Chlorobenzene	0.0052	U	0.00068	0.0052	mg/Kg
100-41-4	Ethyl Benzene	0.0052	U	0.00073	0.0052	mg/Kg
179601-23-1	m/p-Xylenes	0.010	U	0.0015	0.010	mg/Kg
95-47-6	o-Xylene	0.0052	U	0.00082	0.0052	mg/Kg
100-42-5	Styrene	0.0052	U	0.00082	0.0052	mg/Kg
75-25-2	Bromoform	0.0052	U	0.00084	0.0052	mg/Kg
98-82-8	Isopropylbenzene	0.0052	U	0.00075	0.0052	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0052	U	0.0012	0.0052	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0052	U	0.00070	0.0052	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0052	U	0.00066	0.0052	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0052	U	0.00067	0.0052	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0052	U	0.0013	0.0052	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0052	U	0.00098	0.0052	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0052	U	0.0011	0.0052	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	50.7		50 - 163	101%	SPK: 50
1868-53-7	Dibromofluoromethane	45.5		54 - 147	91%	SPK: 50
2037-26-5	Toluene-d8	42.2		78 - 125	84%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.6		50 - 146	79%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	214000	7.789			
540-36-3	1,4-Difluorobenzene	356000	8.685			
3114-55-4	Chlorobenzene-d5	335000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	165000	13.428			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown10.941	6.90	J		10.9	ug/Kg

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	4.1
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010673.D	1		09/26/22 16:05	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 08:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.55	H	1	0	0	pH		09/21/22 11:23	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:10	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:03	9034

Comments: pH result reported at temperature 21.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	10.1      Decanted:
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010655.D	1	09/21/22 12:25	09/22/22 21:07	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	938	J	243	1850	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	9.58		37 - 130	48%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	10.1      Decanted:
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028395.D	50	09/23/22 4:51	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	1250	J	199	2470	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	18.5		50 - 150	93%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	10.1      Decanted:
Sample Wt/Vol:	30.04      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056903.D	1	09/21/22 09:53	09/21/22 17:19	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	18.9	U	3.40	18.9	ug/kg
11104-28-2	Aroclor-1221	18.9	U	5.20	18.9	ug/kg
11141-16-5	Aroclor-1232	18.9	U	4.40	18.9	ug/kg
53469-21-9	Aroclor-1242	18.9	U	2.70	18.9	ug/kg
12672-29-6	Aroclor-1248	18.9	U	3.30	18.9	ug/kg
11097-69-1	Aroclor-1254	18.9	U	4.70	18.9	ug/kg
37324-23-5	Aroclor-1262	18.9	U	3.70	18.9	ug/kg
11100-14-4	Aroclor-1268	18.9	U	6.40	18.9	ug/kg
11096-82-5	Aroclor-1260	18.9	U	3.60	18.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.9		40 - 162	99%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.8		32 - 176	104%	SPK: 20

Comments:

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 MDL = Method Detection Limit  
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 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
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 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	10.1
Sample Wt/Vol:	30.02      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055005.D	1	09/21/22 11:05	09/21/22 22:52	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	190	U	82.1	190	ug/Kg
208-96-8	Acenaphthylene	190	U	76.4	190	ug/Kg
83-32-9	Acenaphthene	190	U	87.7	190	ug/Kg
86-73-7	Fluorene	190	U	87.6	190	ug/Kg
85-01-8	Phenanthrene	190	U	92.9	190	ug/Kg
120-12-7	Anthracene	190	U	93.4	190	ug/Kg
206-44-0	Fluoranthene	190	U	88.7	190	ug/Kg
129-00-0	Pyrene	190	U	82.5	190	ug/Kg
56-55-3	Benzo(a)anthracene	190	U	96.5	190	ug/Kg
218-01-9	Chrysene	190	U	95.0	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	190	U	76.7	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	190	U	81.8	190	ug/Kg
50-32-8	Benzo(a)pyrene	190	U	75.3	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	190	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	190	U	110	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	190	U	110	190	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	73.0		27 - 109	73%	SPK: 100
321-60-8	2-Fluorobiphenyl	77.8		30 - 103	78%	SPK: 100
1718-51-0	Terphenyl-d14	77.7		21 - 107	78%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	35100		8.058		
1146-65-2	Naphthalene-d8	140000		10.884		
15067-26-2	Acenaphthene-d10	97000		14.703		
1517-22-2	Phenanthrene-d10	237000		17.447		
1719-03-5	Chrysene-d12	245000		21.724		
1520-96-3	Perylene-d12	255000		25.02		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	10.1
Sample Wt/Vol:	30.02      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055005.D	1	09/21/22 11:05	09/21/22 22:52	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 319 A = Aldol-Condensation Reaction Products



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-10-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-04	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7440-39-3	Barium	1210		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:29	SW7470A
7782-49-2	Selenium	44.0	J	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:35	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ - 320 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.2
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010653.D	1		09/23/22 16:56	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0053	U	0.00092	0.0053	mg/Kg
74-87-3	Chloromethane	0.0053	U	0.0011	0.0053	mg/Kg
75-01-4	Vinyl Chloride	0.0053	U	0.00097	0.0053	mg/Kg
74-83-9	Bromomethane	0.0053	U	0.0012	0.0053	mg/Kg
75-00-3	Chloroethane	0.0053	U	0.00095	0.0053	mg/Kg
75-69-4	Trichlorofluoromethane	0.0053	U	0.0010	0.0053	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0053	U	0.00077	0.0053	mg/Kg
75-35-4	1,1-Dichloroethene	0.0053	U	0.00092	0.0053	mg/Kg
67-64-1	Acetone	0.027	U	0.013	0.027	mg/Kg
75-15-0	Carbon Disulfide	0.0053	U	0.00080	0.0053	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0053	U	0.00099	0.0053	mg/Kg
79-20-9	Methyl Acetate	0.0053	U	0.0013	0.0053	mg/Kg
75-09-2	Methylene Chloride	0.011	U	0.0064	0.011	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0053	U	0.00073	0.0053	mg/Kg
75-34-3	1,1-Dichloroethane	0.0053	U	0.00075	0.0053	mg/Kg
110-82-7	Cyclohexane	0.0053	U	0.00090	0.0053	mg/Kg
78-93-3	2-Butanone	0.027	U	0.0078	0.027	mg/Kg
56-23-5	Carbon Tetrachloride	0.0053	U	0.00084	0.0053	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0053	U	0.00073	0.0053	mg/Kg
74-97-5	Bromochloromethane	0.0053	U	0.00087	0.0053	mg/Kg
67-66-3	Chloroform	0.0053	U	0.00072	0.0053	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0053	U	0.00080	0.0053	mg/Kg
108-87-2	Methylcyclohexane	0.0053	U	0.00086	0.0053	mg/Kg
71-43-2	Benzene	0.0053	U	0.00071	0.0053	mg/Kg
107-06-2	1,2-Dichloroethane	0.0053	U	0.00090	0.0053	mg/Kg
79-01-6	Trichloroethene	0.0053	U	0.00078	0.0053	mg/Kg
78-87-5	1,2-Dichloropropane	0.0053	U	0.00069	0.0053	mg/Kg
75-27-4	Bromodichloromethane	0.0053	U	0.00075	0.0053	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.027	U	0.0049	0.027	mg/Kg
108-88-3	Toluene	0.0053	U	0.00067	0.0053	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0053	U	0.00079	0.0053	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0053	U	0.00076	0.0053	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.2
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010653.D	1		09/23/22 16:56	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0053	U	0.00092	0.0053	mg/Kg
591-78-6	2-Hexanone	0.027	U	0.0050	0.027	mg/Kg
124-48-1	Dibromochloromethane	0.0053	U	0.00080	0.0053	mg/Kg
106-93-4	1,2-Dibromoethane	0.0053	U	0.00080	0.0053	mg/Kg
127-18-4	Tetrachloroethene	0.0053	U	0.00081	0.0053	mg/Kg
108-90-7	Chlorobenzene	0.0053	U	0.00069	0.0053	mg/Kg
100-41-4	Ethyl Benzene	0.0053	U	0.00075	0.0053	mg/Kg
179601-23-1	m/p-Xylenes	0.011	U	0.0016	0.011	mg/Kg
95-47-6	o-Xylene	0.0053	U	0.00084	0.0053	mg/Kg
100-42-5	Styrene	0.0053	U	0.00084	0.0053	mg/Kg
75-25-2	Bromoform	0.0053	U	0.00087	0.0053	mg/Kg
98-82-8	Isopropylbenzene	0.0053	U	0.00077	0.0053	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0053	U	0.0012	0.0053	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0053	U	0.00072	0.0053	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0053	U	0.00067	0.0053	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0053	U	0.00068	0.0053	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0053	U	0.0013	0.0053	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0053	U	0.0010	0.0053	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0053	U	0.0011	0.0053	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	50.0		50 - 163	100%	SPK: 50
1868-53-7	Dibromofluoromethane	36.6		54 - 147	73%	SPK: 50
2037-26-5	Toluene-d8	38.8		78 - 125	78%	SPK: 50
460-00-4	4-Bromofluorobenzene	32.5		50 - 146	65%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	195000	7.789			
540-36-3	1,4-Difluorobenzene	381000	8.691			
3114-55-4	Chlorobenzene-d5	404000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	188000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.2
Sample Wt/Vol:	5.04     Units:    g	Final Vol:	5000             uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624             ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010653.D	1		09/23/22 16:56	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 10:25
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.81	H	1	0	0	pH		09/21/22 11:25	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:18	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:05	9034

Comments: pH result reported at temperature 21.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	2.3      Decanted:
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF011513.D	1	09/21/22 12:25	09/23/22 11:57	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	758	J	224	1700	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	7.65		37 - 130	38%	SPK: 20

Comments:

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 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	2.3          Decanted:
Sample Wt/Vol:	4.99          Units:    g	Final Vol:	5                  mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028396.D	50	09/23/22 5:28	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	568	J	186	2310	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.3		50 - 150	97%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
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 LOD = Limit of Detection  
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 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	2.3 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056919.D	1	09/21/22 09:53	09/21/22 21:59	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	17.4	U	3.10	17.4	ug/kg
11104-28-2	Aroclor-1221	17.4	U	4.80	17.4	ug/kg
11141-16-5	Aroclor-1232	17.4	U	4.00	17.4	ug/kg
53469-21-9	Aroclor-1242	17.4	U	2.50	17.4	ug/kg
12672-29-6	Aroclor-1248	17.4	U	3.00	17.4	ug/kg
11097-69-1	Aroclor-1254	17.4	U	4.30	17.4	ug/kg
37324-23-5	Aroclor-1262	17.4	U	3.40	17.4	ug/kg
11100-14-4	Aroclor-1268	17.4	U	5.80	17.4	ug/kg
11096-82-5	Aroclor-1260	17.4	U	3.30	17.4	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	18.5		40 - 162	92%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.1		32 - 176	101%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	2.3
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130367.D	1	09/21/22 11:05	09/21/22 18:14	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	170	U	75.6	170	ug/Kg
208-96-8	Acenaphthylene	170	U	70.3	170	ug/Kg
83-32-9	Acenaphthene	170	U	80.7	170	ug/Kg
86-73-7	Fluorene	170	U	80.6	170	ug/Kg
85-01-8	Phenanthrene	170	U	85.5	170	ug/Kg
120-12-7	Anthracene	170	U	85.9	170	ug/Kg
206-44-0	Fluoranthene	170	U	81.7	170	ug/Kg
129-00-0	Pyrene	170	U	75.9	170	ug/Kg
56-55-3	Benzo(a)anthracene	170	U	88.8	170	ug/Kg
218-01-9	Chrysene	170	U	87.5	170	ug/Kg
205-99-2	Benzo(b)fluoranthene	170	U	70.6	170	ug/Kg
207-08-9	Benzo(k)fluoranthene	170	U	75.3	170	ug/Kg
50-32-8	Benzo(a)pyrene	170	U	69.3	170	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	170	U	100	170	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	170	U	100	170	ug/Kg
191-24-2	Benzo(g,h,i)perylene	170	U	99.1	170	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	53.9		27 - 109	54%	SPK: 100
321-60-8	2-Fluorobiphenyl	57.7		30 - 103	58%	SPK: 100
1718-51-0	Terphenyl-d14	50.0		21 - 107	50%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	110000		6.651		
1146-65-2	Naphthalene-d8	434000		7.934		
15067-26-2	Acenaphthene-d10	217000		9.686		
1517-22-2	Phenanthrene-d10	310000		11.169		
1719-03-5	Chrysene-d12	216000		13.798		
1520-96-3	Perylene-d12	227000		15.192		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	2.3
Sample Wt/Vol:	30.01      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130367.D	1	09/21/22 11:05	09/21/22 18:14	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 329<sub>A</sub> = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-09-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-06	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7440-39-3	Barium	991		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:31	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:39	SW6010

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture: \_\_\_\_\_  
 Color After: \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_  
 Comments: TCLP METALS

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.4
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010674.D	1		09/26/22 16:28	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0060	U	0.0010	0.0060	mg/Kg
74-87-3	Chloromethane	0.0060	U	0.0013	0.0060	mg/Kg
75-01-4	Vinyl Chloride	0.0060	U	0.0011	0.0060	mg/Kg
74-83-9	Bromomethane	0.0060	U	0.0014	0.0060	mg/Kg
75-00-3	Chloroethane	0.0060	U	0.0011	0.0060	mg/Kg
75-69-4	Trichlorofluoromethane	0.0060	U	0.0012	0.0060	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0060	U	0.00086	0.0060	mg/Kg
75-35-4	1,1-Dichloroethene	0.0060	U	0.0010	0.0060	mg/Kg
67-64-1	Acetone	0.017	J	0.015	0.030	mg/Kg
75-15-0	Carbon Disulfide	0.0060	U	0.00090	0.0060	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0060	U	0.0011	0.0060	mg/Kg
79-20-9	Methyl Acetate	0.0060	U	0.0015	0.0060	mg/Kg
75-09-2	Methylene Chloride	0.012	U	0.0071	0.012	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0060	U	0.00081	0.0060	mg/Kg
75-34-3	1,1-Dichloroethane	0.0060	U	0.00084	0.0060	mg/Kg
110-82-7	Cyclohexane	0.0060	U	0.0010	0.0060	mg/Kg
78-93-3	2-Butanone	0.030	U	0.0087	0.030	mg/Kg
56-23-5	Carbon Tetrachloride	0.0060	U	0.00094	0.0060	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0060	U	0.00081	0.0060	mg/Kg
74-97-5	Bromochloromethane	0.0060	U	0.00097	0.0060	mg/Kg
67-66-3	Chloroform	0.0060	U	0.00080	0.0060	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0060	U	0.00090	0.0060	mg/Kg
108-87-2	Methylcyclohexane	0.0060	U	0.00096	0.0060	mg/Kg
71-43-2	Benzene	0.0060	U	0.00079	0.0060	mg/Kg
107-06-2	1,2-Dichloroethane	0.0060	U	0.0010	0.0060	mg/Kg
79-01-6	Trichloroethene	0.0060	U	0.00087	0.0060	mg/Kg
78-87-5	1,2-Dichloropropane	0.0060	U	0.00078	0.0060	mg/Kg
75-27-4	Bromodichloromethane	0.0060	U	0.00084	0.0060	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.030	U	0.0055	0.030	mg/Kg
108-88-3	Toluene	0.0060	U	0.00075	0.0060	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0060	U	0.00088	0.0060	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0060	U	0.00085	0.0060	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.4
Sample Wt/Vol:	5.07      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010674.D	1		09/26/22 16:28	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0060	U	0.0010	0.0060	mg/Kg
591-78-6	2-Hexanone	0.030	U	0.0056	0.030	mg/Kg
124-48-1	Dibromochloromethane	0.0060	U	0.00090	0.0060	mg/Kg
106-93-4	1,2-Dibromoethane	0.0060	U	0.00090	0.0060	mg/Kg
127-18-4	Tetrachloroethene	0.0060	U	0.00091	0.0060	mg/Kg
108-90-7	Chlorobenzene	0.0060	U	0.00078	0.0060	mg/Kg
100-41-4	Ethyl Benzene	0.0060	U	0.00084	0.0060	mg/Kg
179601-23-1	m/p-Xylenes	0.012	U	0.0018	0.012	mg/Kg
95-47-6	o-Xylene	0.0060	U	0.00094	0.0060	mg/Kg
100-42-5	Styrene	0.0060	U	0.00094	0.0060	mg/Kg
75-25-2	Bromoform	0.0060	U	0.00097	0.0060	mg/Kg
98-82-8	Isopropylbenzene	0.0060	U	0.00086	0.0060	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0060	U	0.0013	0.0060	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0060	U	0.00080	0.0060	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0060	U	0.00075	0.0060	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0060	U	0.00076	0.0060	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0060	U	0.0015	0.0060	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0060	U	0.0011	0.0060	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0060	U	0.0012	0.0060	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	45.9		50 - 163	92%	SPK: 50
1868-53-7	Dibromofluoromethane	44.6		54 - 147	89%	SPK: 50
2037-26-5	Toluene-d8	42.3		78 - 125	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.2		50 - 146	76%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	217000	7.789			
540-36-3	1,4-Difluorobenzene	350000	8.685			
3114-55-4	Chlorobenzene-d5	321000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	152000	13.428			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-8.5-9.0	SDG No.:	N4724
Lab Sample ID:	N4724-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.4
Sample Wt/Vol:	5.07 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010674.D	1		09/26/22 16:28	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 09:25
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.44	H	1	0	0	pH		09/21/22 11:26	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:25	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:08	9034

Comments: pH result reported at temperature 21.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	8.9      Decanted:
Sample Wt/Vol:	30.05      Units:    g	Final Vol:	1              mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010659.D	1	09/21/22 12:25	09/23/22 0:07	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	888	J	240	1830	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	10.9		37 - 130	54%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22			
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-01-COMP	SDG No.:	N4724			
Lab Sample ID:	N4724-08	Matrix:	SOIL			
Analytical Method:	8015D GRO	% Moisture:	8.9	Decanted:		
Sample Wt/Vol:	5.05	Units:	g	Final Vol:	5	mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics	
Extraction Type:				Injection Volume :		
GPC Factor :		PH :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028397.D	50	09/23/22 6:05	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	528	J	197	2450	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	20.3		50 - 150	101%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	8.9
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056904.D	1	09/21/22 09:53	09/21/22 17:35	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	18.6	U	3.30	18.6	ug/kg
11104-28-2	Aroclor-1221	18.6	U	5.20	18.6	ug/kg
11141-16-5	Aroclor-1232	18.6	U	4.30	18.6	ug/kg
53469-21-9	Aroclor-1242	18.6	U	2.70	18.6	ug/kg
12672-29-6	Aroclor-1248	18.6	U	3.30	18.6	ug/kg
11097-69-1	Aroclor-1254	18.6	U	4.60	18.6	ug/kg
37324-23-5	Aroclor-1262	18.6	U	3.70	18.6	ug/kg
11100-14-4	Aroclor-1268	18.6	U	6.30	18.6	ug/kg
11096-82-5	Aroclor-1260	18.6	U	3.60	18.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.5		40 - 162	97%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.9		32 - 176	109%	SPK: 20

**Comments:**

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.05      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130368.D	1	09/21/22 11:05	09/21/22 18:47	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	190	U	81.0	190	ug/Kg
208-96-8	Acenaphthylene	190	U	75.3	190	ug/Kg
83-32-9	Acenaphthene	190	U	86.5	190	ug/Kg
86-73-7	Fluorene	190	U	86.4	190	ug/Kg
85-01-8	Phenanthrene	190	U	91.6	190	ug/Kg
120-12-7	Anthracene	190	U	92.1	190	ug/Kg
206-44-0	Fluoranthene	190	U	87.5	190	ug/Kg
129-00-0	Pyrene	190	U	81.3	190	ug/Kg
56-55-3	Benzo(a)anthracene	190	U	95.1	190	ug/Kg
218-01-9	Chrysene	190	U	93.7	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	190	U	75.6	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	190	U	80.7	190	ug/Kg
50-32-8	Benzo(a)pyrene	190	U	74.2	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	190	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	190	U	110	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	190	U	110	190	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	84.4		27 - 109	84%	SPK: 100
321-60-8	2-Fluorobiphenyl	89.6		30 - 103	90%	SPK: 100
1718-51-0	Terphenyl-d14	79.0		21 - 107	79%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	109000	6.651			
1146-65-2	Naphthalene-d8	436000	7.933			
15067-26-2	Acenaphthene-d10	215000	9.686			
1517-22-2	Phenanthrene-d10	308000	11.163			
1719-03-5	Chrysene-d12	207000	13.798			
1520-96-3	Perylene-d12	218000	15.192			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.9
Sample Wt/Vol:	30.05      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130368.D	1	09/21/22 11:05	09/21/22 18:47	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 339 A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-01-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-08	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7440-39-3	Barium	1060		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:34	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:43	SW6010

Color Before:	Clarity Before:	Texture:
Color After:	Clarity After:	Artifacts:
Comments: TCLP METALS		

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 340 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-10.5-11.0	SDG No.:	N4724
Lab Sample ID:	N4724-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.5
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010675.D	1		09/26/22 16:50	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0056	U	0.00096	0.0056	mg/Kg
74-87-3	Chloromethane	0.0056	U	0.0012	0.0056	mg/Kg
75-01-4	Vinyl Chloride	0.0056	U	0.0010	0.0056	mg/Kg
74-83-9	Bromomethane	0.0056	U	0.0013	0.0056	mg/Kg
75-00-3	Chloroethane	0.0056	U	0.00099	0.0056	mg/Kg
75-69-4	Trichlorofluoromethane	0.0056	U	0.0011	0.0056	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0056	U	0.00080	0.0056	mg/Kg
75-35-4	1,1-Dichloroethene	0.0056	U	0.00096	0.0056	mg/Kg
67-64-1	Acetone	0.028	U	0.014	0.028	mg/Kg
75-15-0	Carbon Disulfide	0.0056	U	0.00084	0.0056	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0056	U	0.0010	0.0056	mg/Kg
79-20-9	Methyl Acetate	0.0056	U	0.0014	0.0056	mg/Kg
75-09-2	Methylene Chloride	0.011	U	0.0067	0.011	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0056	U	0.00076	0.0056	mg/Kg
75-34-3	1,1-Dichloroethane	0.0056	U	0.00078	0.0056	mg/Kg
110-82-7	Cyclohexane	0.0056	U	0.00094	0.0056	mg/Kg
78-93-3	2-Butanone	0.028	U	0.0081	0.028	mg/Kg
56-23-5	Carbon Tetrachloride	0.0056	U	0.00088	0.0056	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0056	U	0.00076	0.0056	mg/Kg
74-97-5	Bromochloromethane	0.0056	U	0.00091	0.0056	mg/Kg
67-66-3	Chloroform	0.0056	U	0.00075	0.0056	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0056	U	0.00084	0.0056	mg/Kg
108-87-2	Methylcyclohexane	0.0056	U	0.00089	0.0056	mg/Kg
71-43-2	Benzene	0.0056	U	0.00074	0.0056	mg/Kg
107-06-2	1,2-Dichloroethane	0.0056	U	0.00094	0.0056	mg/Kg
79-01-6	Trichloroethene	0.0056	U	0.00082	0.0056	mg/Kg
78-87-5	1,2-Dichloropropane	0.0056	U	0.00073	0.0056	mg/Kg
75-27-4	Bromodichloromethane	0.0056	U	0.00078	0.0056	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.028	U	0.0051	0.028	mg/Kg
108-88-3	Toluene	0.0056	U	0.00070	0.0056	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0056	U	0.00083	0.0056	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0056	U	0.00079	0.0056	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-10.5-11.0	SDG No.:	N4724
Lab Sample ID:	N4724-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.5
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010675.D	1		09/26/22 16:50	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0056	U	0.00096	0.0056	mg/Kg
591-78-6	2-Hexanone	0.028	U	0.0052	0.028	mg/Kg
124-48-1	Dibromochloromethane	0.0056	U	0.00084	0.0056	mg/Kg
106-93-4	1,2-Dibromoethane	0.0056	U	0.00084	0.0056	mg/Kg
127-18-4	Tetrachloroethene	0.0056	U	0.00085	0.0056	mg/Kg
108-90-7	Chlorobenzene	0.0056	U	0.00073	0.0056	mg/Kg
100-41-4	Ethyl Benzene	0.0056	U	0.00078	0.0056	mg/Kg
179601-23-1	m/p-Xylenes	0.011	U	0.0017	0.011	mg/Kg
95-47-6	o-Xylene	0.0056	U	0.00088	0.0056	mg/Kg
100-42-5	Styrene	0.0056	U	0.00088	0.0056	mg/Kg
75-25-2	Bromoform	0.0056	U	0.00091	0.0056	mg/Kg
98-82-8	Isopropylbenzene	0.0056	U	0.00080	0.0056	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0056	U	0.0013	0.0056	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0056	U	0.00075	0.0056	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0056	U	0.00070	0.0056	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0056	U	0.00072	0.0056	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0056	U	0.0014	0.0056	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0056	U	0.0011	0.0056	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0056	U	0.0011	0.0056	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	53.2		50 - 163	106%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		54 - 147	95%	SPK: 50
2037-26-5	Toluene-d8	43.3		78 - 125	87%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.2		50 - 146	78%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	216000	7.789			
540-36-3	1,4-Difluorobenzene	360000	8.685			
3114-55-4	Chlorobenzene-d5	330000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	146000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-10.5-11.0	SDG No.:	N4724
Lab Sample ID:	N4724-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.5
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010675.D	1		09/26/22 16:50	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 10:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.45	H	1	0	0	pH		09/21/22 11:30	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:32	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:11	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:10	9034

Comments: pH result reported at temperature 21.3 °C

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	14.7      Decanted:
Sample Wt/Vol:	30.08      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010660.D	1	09/21/22 12:25	09/23/22 0:37	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	827	J	256	1950	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	9.77		37 - 130	49%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	14.7      Decanted:
Sample Wt/Vol:	5.08      Units:    g	Final Vol:	5              mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028398.D	50	09/23/22 6:42	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	599	J	209	2600	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	19.3		50 - 150	96%	SPK: 20

## Comments:

U = Not Detected  
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 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22			
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-02-COMP	SDG No.:	N4724			
Lab Sample ID:	N4724-10	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	14.7	Decanted:		
Sample Wt/Vol:	30.05	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056905.D	1	09/21/22 09:53	09/21/22 17:50	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	19.9	U	3.60	19.9	ug/kg
11104-28-2	Aroclor-1221	19.9	U	5.50	19.9	ug/kg
11141-16-5	Aroclor-1232	19.9	U	4.60	19.9	ug/kg
53469-21-9	Aroclor-1242	19.9	U	2.80	19.9	ug/kg
12672-29-6	Aroclor-1248	19.9	U	3.50	19.9	ug/kg
11097-69-1	Aroclor-1254	19.9	U	4.90	19.9	ug/kg
37324-23-5	Aroclor-1262	19.9	U	3.90	19.9	ug/kg
11100-14-4	Aroclor-1268	19.9	U	6.70	19.9	ug/kg
11096-82-5	Aroclor-1260	19.9	U	3.80	19.9	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	17.2		40 - 162	86%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.9		32 - 176	95%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.7
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130369.D	1	09/21/22 11:05	09/21/22 19:20	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	200	U	86.4	200	ug/Kg
208-96-8	Acenaphthylene	200	U	80.3	200	ug/Kg
83-32-9	Acenaphthene	200	U	92.2	200	ug/Kg
86-73-7	Fluorene	200	U	92.1	200	ug/Kg
85-01-8	Phenanthrene	200	U	97.7	200	ug/Kg
120-12-7	Anthracene	200	U	98.2	200	ug/Kg
206-44-0	Fluoranthene	200	U	93.3	200	ug/Kg
129-00-0	Pyrene	200	U	86.7	200	ug/Kg
56-55-3	Benzo(a)anthracene	200	U	100	200	ug/Kg
218-01-9	Chrysene	200	U	99.9	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	200	U	80.6	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	200	U	86.0	200	ug/Kg
50-32-8	Benzo(a)pyrene	200	U	79.1	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	200	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	200	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	77.2		27 - 109	77%	SPK: 100
321-60-8	2-Fluorobiphenyl	82.2		30 - 103	82%	SPK: 100
1718-51-0	Terphenyl-d14	73.4		21 - 107	73%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	106000	6.651			
1146-65-2	Naphthalene-d8	423000	7.934			
15067-26-2	Acenaphthene-d10	211000	9.686			
1517-22-2	Phenanthrene-d10	312000	11.163			
1719-03-5	Chrysene-d12	204000	13.798			
1520-96-3	Perylene-d12	213000	15.186			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	14.7
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130369.D	1	09/21/22 11:05	09/21/22 19:20	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 349 A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-02-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-10	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7440-39-3	Barium	843		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:36	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:54	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ - 350 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010676.D	1		09/26/22 17:13	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0053	U	0.00091	0.0053	mg/Kg
74-87-3	Chloromethane	0.0053	U	0.0011	0.0053	mg/Kg
75-01-4	Vinyl Chloride	0.0053	U	0.00096	0.0053	mg/Kg
74-83-9	Bromomethane	0.0053	U	0.0012	0.0053	mg/Kg
75-00-3	Chloroethane	0.0053	U	0.00094	0.0053	mg/Kg
75-69-4	Trichlorofluoromethane	0.0053	U	0.0010	0.0053	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0053	U	0.00076	0.0053	mg/Kg
75-35-4	1,1-Dichloroethene	0.0053	U	0.00091	0.0053	mg/Kg
67-64-1	Acetone	0.027	U	0.013	0.027	mg/Kg
75-15-0	Carbon Disulfide	0.0053	U	0.00079	0.0053	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0053	U	0.00098	0.0053	mg/Kg
79-20-9	Methyl Acetate	0.0053	U	0.0013	0.0053	mg/Kg
75-09-2	Methylene Chloride	0.011	U	0.0063	0.011	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0053	U	0.00072	0.0053	mg/Kg
75-34-3	1,1-Dichloroethane	0.0053	U	0.00074	0.0053	mg/Kg
110-82-7	Cyclohexane	0.0053	U	0.00089	0.0053	mg/Kg
78-93-3	2-Butanone	0.027	U	0.0077	0.027	mg/Kg
56-23-5	Carbon Tetrachloride	0.0053	U	0.00084	0.0053	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0053	U	0.00072	0.0053	mg/Kg
74-97-5	Bromochloromethane	0.0053	U	0.00086	0.0053	mg/Kg
67-66-3	Chloroform	0.0053	U	0.00071	0.0053	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0053	U	0.00079	0.0053	mg/Kg
108-87-2	Methylcyclohexane	0.0053	U	0.00085	0.0053	mg/Kg
71-43-2	Benzene	0.0053	U	0.00070	0.0053	mg/Kg
107-06-2	1,2-Dichloroethane	0.0053	U	0.00089	0.0053	mg/Kg
79-01-6	Trichloroethene	0.0053	U	0.00077	0.0053	mg/Kg
78-87-5	1,2-Dichloropropane	0.0053	U	0.00069	0.0053	mg/Kg
75-27-4	Bromodichloromethane	0.0053	U	0.00074	0.0053	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.027	U	0.0048	0.027	mg/Kg
108-88-3	Toluene	0.0053	U	0.00067	0.0053	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0053	U	0.00078	0.0053	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0053	U	0.00075	0.0053	mg/Kg



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010676.D	1		09/26/22 17:13	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0053	U	0.00091	0.0053	mg/Kg
591-78-6	2-Hexanone	0.027	U	0.0050	0.027	mg/Kg
124-48-1	Dibromochloromethane	0.0053	U	0.00079	0.0053	mg/Kg
106-93-4	1,2-Dibromoethane	0.0053	U	0.00079	0.0053	mg/Kg
127-18-4	Tetrachloroethene	0.0053	U	0.00080	0.0053	mg/Kg
108-90-7	Chlorobenzene	0.0053	U	0.00069	0.0053	mg/Kg
100-41-4	Ethyl Benzene	0.0053	U	0.00074	0.0053	mg/Kg
179601-23-1	m/p-Xylenes	0.011	U	0.0016	0.011	mg/Kg
95-47-6	o-Xylene	0.0053	U	0.00084	0.0053	mg/Kg
100-42-5	Styrene	0.0053	U	0.00084	0.0053	mg/Kg
75-25-2	Bromoform	0.0053	U	0.00086	0.0053	mg/Kg
98-82-8	Isopropylbenzene	0.0053	U	0.00076	0.0053	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0053	U	0.0012	0.0053	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0053	U	0.00071	0.0053	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0053	U	0.00067	0.0053	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0053	U	0.00068	0.0053	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0053	U	0.0013	0.0053	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0053	U	0.00099	0.0053	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0053	U	0.0011	0.0053	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	49.5		50 - 163	99%	SPK: 50
1868-53-7	Dibromofluoromethane	46.9		54 - 147	94%	SPK: 50
2037-26-5	Toluene-d8	44.3		78 - 125	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.7		50 - 146	83%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	226000	7.789			
540-36-3	1,4-Difluorobenzene	374000	8.685			
3114-55-4	Chlorobenzene-d5	347000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	169000	13.422			

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-11.5-12.0	SDG No.:	N4724
Lab Sample ID:	N4724-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7
Sample Wt/Vol:	5.08      Units:    g	Final Vol:	5000              uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010676.D	1		09/26/22 17:13	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 07:55
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.70	H	1	0	0	pH		09/21/22 11:35	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:40	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:12	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:13	9034

Comments: pH result reported at temperature 21.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	13.5      Decanted:
Sample Wt/Vol:	30.04      Units:    g	Final Vol:	1                  mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010661.D	1	09/21/22 12:25	09/23/22 1:07	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1150	J	253	1920	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	16.0		37 - 130	80%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	13.5      Decanted:
Sample Wt/Vol:	5          Units:    g	Final Vol:	5          mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028405.D	50	09/23/22 12:27	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	685	J	209	2600	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	18.6		50 - 150	93%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22			
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-03-COMP	SDG No.:	N4724			
Lab Sample ID:	N4724-12	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	13.5	Decanted:		
Sample Wt/Vol:	30.09	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0	PH :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056906.D	1	09/21/22 09:53	09/21/22 18:06	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	19.6	U	3.50	19.6	ug/kg
11104-28-2	Aroclor-1221	19.6	U	5.40	19.6	ug/kg
11141-16-5	Aroclor-1232	19.6	U	4.50	19.6	ug/kg
53469-21-9	Aroclor-1242	19.6	U	2.80	19.6	ug/kg
12672-29-6	Aroclor-1248	19.6	U	3.40	19.6	ug/kg
11097-69-1	Aroclor-1254	19.6	U	4.90	19.6	ug/kg
37324-23-5	Aroclor-1262	19.6	U	3.80	19.6	ug/kg
11100-14-4	Aroclor-1268	19.6	U	6.60	19.6	ug/kg
11096-82-5	Aroclor-1260	19.6	U	3.70	19.6	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	17.8		40 - 162	89%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.5		32 - 176	102%	SPK: 20

**Comments:**

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.5
Sample Wt/Vol:	30.06 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130370.D	1	09/21/22 11:05	09/21/22 19:53	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	200	U	85.3	200	ug/Kg
208-96-8	Acenaphthylene	200	U	79.3	200	ug/Kg
83-32-9	Acenaphthene	200	U	91.0	200	ug/Kg
86-73-7	Fluorene	200	U	90.9	200	ug/Kg
85-01-8	Phenanthrene	200	U	96.5	200	ug/Kg
120-12-7	Anthracene	200	U	96.9	200	ug/Kg
206-44-0	Fluoranthene	200	U	92.1	200	ug/Kg
129-00-0	Pyrene	200	U	85.6	200	ug/Kg
56-55-3	Benzo(a)anthracene	200	U	100	200	ug/Kg
218-01-9	Chrysene	200	U	98.6	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	200	U	79.6	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	200	U	84.9	200	ug/Kg
50-32-8	Benzo(a)pyrene	200	U	78.1	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	200	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	200	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	81.6		27 - 109	82%	SPK: 100
321-60-8	2-Fluorobiphenyl	87.1		30 - 103	87%	SPK: 100
1718-51-0	Terphenyl-d14	81.0		21 - 107	81%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	106000		6.651		
1146-65-2	Naphthalene-d8	422000		7.934		
15067-26-2	Acenaphthene-d10	214000		9.686		
1517-22-2	Phenanthrene-d10	319000		11.169		
1719-03-5	Chrysene-d12	217000		13.798		
1520-96-3	Perylene-d12	215000		15.186		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.5
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:		Final Vol:	1000 uL
Extraction Type :		Test:	SVOC-PAH
	Decanted :	Level :	LOW
Injection Volume :	GPC Factor :	1.0	GPC Cleanup :
			N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130370.D	1	09/21/22 11:05	09/21/22 19:53	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 359 A = Aldol-Condensation Reaction Products



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-03-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-12	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7440-39-3	Barium	938		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:43	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 22:58	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ - 360 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-12.5-13.0	SDG No.:	N4724
Lab Sample ID:	N4724-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010677.D	1		09/26/22 17:36	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0055	U	0.00095	0.0055	mg/Kg
74-87-3	Chloromethane	0.0055	U	0.0012	0.0055	mg/Kg
75-01-4	Vinyl Chloride	0.0055	U	0.0010	0.0055	mg/Kg
74-83-9	Bromomethane	0.0055	U	0.0013	0.0055	mg/Kg
75-00-3	Chloroethane	0.0055	U	0.00098	0.0055	mg/Kg
75-69-4	Trichlorofluoromethane	0.0055	U	0.0011	0.0055	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0055	U	0.00079	0.0055	mg/Kg
75-35-4	1,1-Dichloroethene	0.0055	U	0.00095	0.0055	mg/Kg
67-64-1	Acetone	0.018	J	0.013	0.028	mg/Kg
75-15-0	Carbon Disulfide	0.0055	U	0.00083	0.0055	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0055	U	0.0010	0.0055	mg/Kg
79-20-9	Methyl Acetate	0.0055	U	0.0014	0.0055	mg/Kg
75-09-2	Methylene Chloride	0.011	U	0.0066	0.011	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0055	U	0.00075	0.0055	mg/Kg
75-34-3	1,1-Dichloroethane	0.0055	U	0.00077	0.0055	mg/Kg
110-82-7	Cyclohexane	0.0055	U	0.00092	0.0055	mg/Kg
78-93-3	2-Butanone	0.0090	J	0.0080	0.028	mg/Kg
56-23-5	Carbon Tetrachloride	0.0055	U	0.00087	0.0055	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0055	U	0.00075	0.0055	mg/Kg
74-97-5	Bromochloromethane	0.0055	U	0.00089	0.0055	mg/Kg
67-66-3	Chloroform	0.0055	U	0.00074	0.0055	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0055	U	0.00083	0.0055	mg/Kg
108-87-2	Methylcyclohexane	0.0055	U	0.00088	0.0055	mg/Kg
71-43-2	Benzene	0.0055	U	0.00073	0.0055	mg/Kg
107-06-2	1,2-Dichloroethane	0.0055	U	0.00092	0.0055	mg/Kg
79-01-6	Trichloroethene	0.0055	U	0.00080	0.0055	mg/Kg
78-87-5	1,2-Dichloropropane	0.0055	U	0.00072	0.0055	mg/Kg
75-27-4	Bromodichloromethane	0.0055	U	0.00077	0.0055	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.028	U	0.0050	0.028	mg/Kg
108-88-3	Toluene	0.0055	U	0.00069	0.0055	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0055	U	0.00081	0.0055	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0055	U	0.00078	0.0055	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-12.5-13.0	SDG No.:	N4724
Lab Sample ID:	N4724-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010677.D	1		09/26/22 17:36	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0055	U	0.00095	0.0055	mg/Kg
591-78-6	2-Hexanone	0.028	U	0.0051	0.028	mg/Kg
124-48-1	Dibromochloromethane	0.0055	U	0.00083	0.0055	mg/Kg
106-93-4	1,2-Dibromoethane	0.0055	U	0.00083	0.0055	mg/Kg
127-18-4	Tetrachloroethene	0.0055	U	0.00084	0.0055	mg/Kg
108-90-7	Chlorobenzene	0.0055	U	0.00072	0.0055	mg/Kg
100-41-4	Ethyl Benzene	0.0055	U	0.00077	0.0055	mg/Kg
179601-23-1	m/p-Xylenes	0.011	U	0.0016	0.011	mg/Kg
95-47-6	o-Xylene	0.0055	U	0.00087	0.0055	mg/Kg
100-42-5	Styrene	0.0055	U	0.00087	0.0055	mg/Kg
75-25-2	Bromoform	0.0055	U	0.00089	0.0055	mg/Kg
98-82-8	Isopropylbenzene	0.0055	U	0.00079	0.0055	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0055	U	0.0012	0.0055	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0055	U	0.00074	0.0055	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0055	U	0.00069	0.0055	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0055	U	0.00070	0.0055	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0055	U	0.0014	0.0055	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0055	U	0.0010	0.0055	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0055	U	0.0011	0.0055	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	53.7		50 - 163	107%	SPK: 50
1868-53-7	Dibromofluoromethane	48.0		54 - 147	96%	SPK: 50
2037-26-5	Toluene-d8	44.0		78 - 125	88%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.0		50 - 146	84%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	202000	7.783			
540-36-3	1,4-Difluorobenzene	335000	8.685			
3114-55-4	Chlorobenzene-d5	314000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	153000	13.422			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown10.941	8.80	J		10.9	ug/Kg

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-12.5-13.0	SDG No.:	N4724
Lab Sample ID:	N4724-13	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.1 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010677.D	1		09/26/22 17:36	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 12:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.70	H	1	0	0	pH		09/21/22 11:30	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:48	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/22/22 09:45	09/23/22 11:12	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:15	9034

Comments: pH result reported at temperature 21.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	7.9                  Decanted:
Sample Wt/Vol:	30.07                  Units:    g	Final Vol:	1                          mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010662.D	1	09/21/22 12:25	09/23/22 1:37	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1420	J	237	1810	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	12.0		37 - 130	60%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	7.9      Decanted:
Sample Wt/Vol:	5.1      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028407.D	50	09/23/22 13:41	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	785	J	193	2400	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	20.6		50 - 150	103%	SPK: 20

## Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22			
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22			
Client Sample ID:	SB-04-COMP	SDG No.:	N4724			
Lab Sample ID:	N4724-14	Matrix:	SOIL			
Analytical Method:	SW8082A	% Moisture:	7.9	Decanted:		
Sample Wt/Vol:	30.06	Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:			uL	Test:	PCB	
Extraction Type:				Injection Volume :		
GPC Factor :	1.0		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056907.D	1	09/21/22 09:53	09/21/22 18:22	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	18.4	U	3.30	18.4	ug/kg
11104-28-2	Aroclor-1221	18.4	U	5.10	18.4	ug/kg
11141-16-5	Aroclor-1232	18.4	U	4.30	18.4	ug/kg
53469-21-9	Aroclor-1242	18.4	U	2.60	18.4	ug/kg
12672-29-6	Aroclor-1248	18.4	U	3.20	18.4	ug/kg
11097-69-1	Aroclor-1254	18.4	U	4.60	18.4	ug/kg
37324-23-5	Aroclor-1262	18.4	U	3.60	18.4	ug/kg
11100-14-4	Aroclor-1268	18.4	U	6.20	18.4	ug/kg
11096-82-5	Aroclor-1260	18.4	U	3.50	18.4	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.2		40 - 162	96%	SPK: 20
2051-24-3	Decachlorobiphenyl	22.2		32 - 176	111%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.9
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130363.D	1	09/21/22 11:05	09/21/22 16:01	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	180	U	80.1	180	ug/Kg
208-96-8	Acenaphthylene	180	U	74.5	180	ug/Kg
83-32-9	Acenaphthene	180	U	85.6	180	ug/Kg
86-73-7	Fluorene	180	U	85.4	180	ug/Kg
85-01-8	Phenanthrene	180	U	90.7	180	ug/Kg
120-12-7	Anthracene	180	U	91.1	180	ug/Kg
206-44-0	Fluoranthene	180	U	86.5	180	ug/Kg
129-00-0	Pyrene	180	U	80.5	180	ug/Kg
56-55-3	Benzo(a)anthracene	180	U	94.1	180	ug/Kg
218-01-9	Chrysene	180	U	92.7	180	ug/Kg
205-99-2	Benzo(b)fluoranthene	180	U	74.8	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	180	U	79.8	180	ug/Kg
50-32-8	Benzo(a)pyrene	180	U	73.4	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	180	U	110	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	180	U	110	180	ug/Kg
191-24-2	Benzo(g,h,i)perylene	180	U	110	180	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	74.4		27 - 109	74%	SPK: 100
321-60-8	2-Fluorobiphenyl	78.2		30 - 103	78%	SPK: 100
1718-51-0	Terphenyl-d14	76.8		21 - 107	77%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	123000		6.657		
1146-65-2	Naphthalene-d8	490000		7.94		
15067-26-2	Acenaphthene-d10	249000		9.687		
1517-22-2	Phenanthrene-d10	374000		11.169		
1719-03-5	Chrysene-d12	236000		13.798		
1520-96-3	Perylene-d12	236000		15.192		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.9
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130363.D	1	09/21/22 11:05	09/21/22 16:01	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 369 A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-04-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-14	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7440-39-3	Barium	828		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:45	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 23:02	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 370 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-7.5-8.0	SDG No.:	N4724
Lab Sample ID:	N4724-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.5
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010678.D	1		09/26/22 17:58	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.0056	U	0.00096	0.0056	mg/Kg
74-87-3	Chloromethane	0.0056	U	0.0012	0.0056	mg/Kg
75-01-4	Vinyl Chloride	0.0056	U	0.0010	0.0056	mg/Kg
74-83-9	Bromomethane	0.0056	U	0.0013	0.0056	mg/Kg
75-00-3	Chloroethane	0.0056	U	0.00099	0.0056	mg/Kg
75-69-4	Trichlorofluoromethane	0.0056	U	0.0011	0.0056	mg/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.0056	U	0.00080	0.0056	mg/Kg
75-35-4	1,1-Dichloroethene	0.0056	U	0.00096	0.0056	mg/Kg
67-64-1	Acetone	0.028	U	0.014	0.028	mg/Kg
75-15-0	Carbon Disulfide	0.0056	U	0.00083	0.0056	mg/Kg
1634-04-4	Methyl tert-butyl Ether	0.0056	U	0.0010	0.0056	mg/Kg
79-20-9	Methyl Acetate	0.0056	U	0.0014	0.0056	mg/Kg
75-09-2	Methylene Chloride	0.011	U	0.0066	0.011	mg/Kg
156-60-5	trans-1,2-Dichloroethene	0.0056	U	0.00076	0.0056	mg/Kg
75-34-3	1,1-Dichloroethane	0.0056	U	0.00078	0.0056	mg/Kg
110-82-7	Cyclohexane	0.0056	U	0.00093	0.0056	mg/Kg
78-93-3	2-Butanone	0.028	U	0.0081	0.028	mg/Kg
56-23-5	Carbon Tetrachloride	0.0056	U	0.00088	0.0056	mg/Kg
156-59-2	cis-1,2-Dichloroethene	0.0056	U	0.00076	0.0056	mg/Kg
74-97-5	Bromochloromethane	0.0056	U	0.00090	0.0056	mg/Kg
67-66-3	Chloroform	0.0056	U	0.00075	0.0056	mg/Kg
71-55-6	1,1,1-Trichloroethane	0.0056	U	0.00083	0.0056	mg/Kg
108-87-2	Methylcyclohexane	0.0056	U	0.00089	0.0056	mg/Kg
71-43-2	Benzene	0.0056	U	0.00073	0.0056	mg/Kg
107-06-2	1,2-Dichloroethane	0.0056	U	0.00093	0.0056	mg/Kg
79-01-6	Trichloroethene	0.0056	U	0.00081	0.0056	mg/Kg
78-87-5	1,2-Dichloropropane	0.0056	U	0.00072	0.0056	mg/Kg
75-27-4	Bromodichloromethane	0.0056	U	0.00078	0.0056	mg/Kg
108-10-1	4-Methyl-2-Pentanone	0.028	U	0.0051	0.028	mg/Kg
108-88-3	Toluene	0.0056	U	0.00070	0.0056	mg/Kg
10061-02-6	t-1,3-Dichloropropene	0.0056	U	0.00082	0.0056	mg/Kg
10061-01-5	cis-1,3-Dichloropropene	0.0056	U	0.00079	0.0056	mg/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-7.5-8.0	SDG No.:	N4724
Lab Sample ID:	N4724-15	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.5
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010678.D	1		09/26/22 17:58	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.0056	U	0.00096	0.0056	mg/Kg
591-78-6	2-Hexanone	0.028	U	0.0052	0.028	mg/Kg
124-48-1	Dibromochloromethane	0.0056	U	0.00083	0.0056	mg/Kg
106-93-4	1,2-Dibromoethane	0.0056	U	0.00083	0.0056	mg/Kg
127-18-4	Tetrachloroethene	0.0056	U	0.00085	0.0056	mg/Kg
108-90-7	Chlorobenzene	0.0056	U	0.00072	0.0056	mg/Kg
100-41-4	Ethyl Benzene	0.0056	U	0.00078	0.0056	mg/Kg
179601-23-1	m/p-Xylenes	0.011	U	0.0016	0.011	mg/Kg
95-47-6	o-Xylene	0.0056	U	0.00088	0.0056	mg/Kg
100-42-5	Styrene	0.0056	U	0.00088	0.0056	mg/Kg
75-25-2	Bromoform	0.0056	U	0.00090	0.0056	mg/Kg
98-82-8	Isopropylbenzene	0.0056	U	0.00080	0.0056	mg/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.0056	U	0.0013	0.0056	mg/Kg
541-73-1	1,3-Dichlorobenzene	0.0056	U	0.00075	0.0056	mg/Kg
106-46-7	1,4-Dichlorobenzene	0.0056	U	0.00070	0.0056	mg/Kg
95-50-1	1,2-Dichlorobenzene	0.0056	U	0.00071	0.0056	mg/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	0.0056	U	0.0014	0.0056	mg/Kg
120-82-1	1,2,4-Trichlorobenzene	0.0056	U	0.0010	0.0056	mg/Kg
87-61-6	1,2,3-Trichlorobenzene	0.0056	U	0.0011	0.0056	mg/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	52.4		50 - 163	105%	SPK: 50
1868-53-7	Dibromofluoromethane	46.9		54 - 147	94%	SPK: 50
2037-26-5	Toluene-d8	43.5		78 - 125	87%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.9		50 - 146	82%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	218000	7.783			
540-36-3	1,4-Difluorobenzene	365000	8.685			
3114-55-4	Chlorobenzene-d5	341000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	166000	13.422			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown10.941	7.30	J		10.9	ug/Kg



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 13:15
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.70	H	1	0	0	pH		09/21/22 11:33	9045D
Ignitability	NO		1	0	0	oC		09/21/22 11:55	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/22/22 09:45	09/23/22 11:12	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/21/22 11:15	09/21/22 16:18	9034

Comments: pH result reported at temperature 21.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22		
Client Sample ID:	SB-07-COMP	SDG No.:	N4724		
Lab Sample ID:	N4724-16	Matrix:	SOIL		
Analytical Method:	8015D DRO	% Moisture:	7.6	Decanted:	
Sample Wt/Vol:	30.09	Units:	g	Final Vol:	1 mL
Soil Aliquot Vol:			uL	Test:	Diesel Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG010663.D	1	09/21/22 12:25	09/23/22 2:06	PB147791

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1040	J	236	1800	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	12.2		37 - 130	61%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
( ) = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	7.6      Decanted:
Sample Wt/Vol:	5.04      Units: g	Final Vol:	5      mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028391.D	50	09/23/22 2:23	FB092222

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	812	J	194	2420	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.7		50 - 150	114%	SPK: 20

**Comments:**

U = Not Detected  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
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### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	7.6      Decanted:
Sample Wt/Vol:	30.08      Units: g	Final Vol:	10000      uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0      PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PR056913.D	1	09/21/22 09:53	09/21/22 20:25	PB147781

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	18.3	U	3.30	18.3	ug/kg
11104-28-2	Aroclor-1221	18.3	U	5.10	18.3	ug/kg
11141-16-5	Aroclor-1232	18.3	U	4.20	18.3	ug/kg
53469-21-9	Aroclor-1242	18.3	U	2.60	18.3	ug/kg
12672-29-6	Aroclor-1248	18.3	U	3.20	18.3	ug/kg
11097-69-1	Aroclor-1254	18.3	U	4.50	18.3	ug/kg
37324-23-5	Aroclor-1262	18.3	U	3.60	18.3	ug/kg
11100-14-4	Aroclor-1268	18.3	U	6.20	18.3	ug/kg
11096-82-5	Aroclor-1260	18.3	U	3.50	18.3	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	19.0		40 - 162	95%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.1		32 - 176	106%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.6
Sample Wt/Vol:	30.08 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130371.D	1	09/21/22 11:05	09/21/22 20:25	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	180	U	79.8	180	ug/Kg
208-96-8	Acenaphthylene	180	U	74.2	180	ug/Kg
83-32-9	Acenaphthene	180	U	85.2	180	ug/Kg
86-73-7	Fluorene	180	U	85.1	180	ug/Kg
85-01-8	Phenanthrene	180	U	90.2	180	ug/Kg
120-12-7	Anthracene	180	U	90.7	180	ug/Kg
206-44-0	Fluoranthene	180	U	86.1	180	ug/Kg
129-00-0	Pyrene	180	U	80.1	180	ug/Kg
56-55-3	Benzo(a)anthracene	180	U	93.7	180	ug/Kg
218-01-9	Chrysene	180	U	92.3	180	ug/Kg
205-99-2	Benzo(b)fluoranthene	180	U	74.5	180	ug/Kg
207-08-9	Benzo(k)fluoranthene	180	U	79.4	180	ug/Kg
50-32-8	Benzo(a)pyrene	180	U	73.1	180	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	180	U	110	180	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	180	U	110	180	ug/Kg
191-24-2	Benzo(g,h,i)perylene	180	U	100	180	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	70.4		27 - 109	70%	SPK: 100
321-60-8	2-Fluorobiphenyl	75.8		30 - 103	76%	SPK: 100
1718-51-0	Terphenyl-d14	69.0		21 - 107	69%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	105000		6.651		
1146-65-2	Naphthalene-d8	414000		7.934		
15067-26-2	Acenaphthene-d10	206000		9.687		
1517-22-2	Phenanthrene-d10	302000		11.163		
1719-03-5	Chrysene-d12	195000		13.798		
1520-96-3	Perylene-d12	206000		15.186		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.6
Sample Wt/Vol:	30.08      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130371.D	1	09/21/22 11:05	09/21/22 20:25	PB147786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

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LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 379 A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/20/22
Client Sample ID:	SB-07-COMP	SDG No.:	N4724
Lab Sample ID:	N4724-16	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7440-39-3	Barium	1010		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:47	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 23:06	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ - 380 Spiked sample recovery not within control limits

**DATA FOR**  
**VOLATILE ORGANICS**  
**SEMI-VOLATILE ORGANICS**  
**GC SEMI-VOLATILES**  
**METALS**  
**GENERAL CHEMISTRY**

**PROJECT NAME : DDC OEGS - RECONSTRUCTION OF ROSEDALE AREA**

**LIRO ENGINEERS, INC.**

**690 Delaware Ave.**

**Buffalo, NY - 14209**

**Phone No: 716-882-5476**

**ORDER ID : N4742**

**ATTENTION : Steve Frank**



Date : 09/28/2022

Dear Steve Frank,

**3** water and **6** soil samples for the **DDC OECS - Reconstruction of Rosedale Area** project were received on **09/21/2022**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns

Regards,

Samantha Beazley

[Samantha@chemtech.net](mailto:Samantha@chemtech.net)



284 Sheffield Street, Mountainside, NJ 07092  
 (908) 789-8900 Fax (908) 789-8922  
 www.chemtech.net

Chemtech Project Number **NY742**  
 COC Number **2025993**

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		PROJECT INFORMATION		BILLING INFORMATION	
Report to be sent to:		PROJECT NAME: <b>Reconstruction Rosedale</b>	Area	PO#	
COMPANY: <b>UEO Engineers, Inc.</b>		PROJECT #: <b>19-294.0265.00</b>	LOCATION: <b>Queens</b>	ADDRESS: <b>same</b>	
ADDRESS: <b>703 Korinther Str.</b>		PROJECT MANAGER: <b>Steve Frank</b>		CITY:	STATE: ZIP:
CITY: <b>Brooklyn</b> STATE: <b>NJ</b> ZIP: <b>11211</b>		E-MAIL: <b>hewsona@lino.com</b>		ATTENTION:	
ATTENTION: <b>Steve Frank</b>		PHONE: <b>716 882-5476</b> FAX: _____		PHONE:	
PHONE: <b>716 882-5476</b> FAX: _____					

DATA TURNAROUND INFORMATION		DATA DELIVERABLE INFORMATION		ANALYSIS	
FAX (RUSH) _____ DAYS*		<input checked="" type="checkbox"/> Level 1 (Results Only)	<input type="checkbox"/> Level 4 (QC + Full Raw Data)		
HARDCOPY (DATA PACKAGE): _____ DAYS*		<input type="checkbox"/> Level 2 (Results + QC)	<input type="checkbox"/> NJ Reduced <input type="checkbox"/> US EPA CLP		
EDD: <b>5 day TAT</b> _____ DAYS*		<input type="checkbox"/> Level 3 (Results + QC + Raw Data)	<input type="checkbox"/> NYS ASP A <input type="checkbox"/> NYS ASP B		
*TO BE APPROVED BY CHEMTECH		<input type="checkbox"/> EDD FORMAT _____	<input type="checkbox"/> Other _____		
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS					

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles	PRESERVATIVES									COMMENTS <- Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER		
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9			
			1. <b>SB-08-6.5-7.0'</b>	<b>soil</b>		X		9/20/22	1335	1	X								
2. <b>SB-08-COMP</b>	<b>soil</b>		X		1340	2		X	X	X	X	X							
3. <b>SB-06-6.5-7.0'</b>				X	1400	1	X												
4. <b>SB-06-COMP</b>			X		1405	2		X	X	X	X	X							
5. <b>SB-05-8.5-9.0'</b>				X	1440	1	X												
6. <b>SB-05-COMP</b>			X		1445	2		X	X	X	X	X							
7.																			
8.																			
9.																			
10.																			

**SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSESSION INCLUDING COURIER DELIVERY**

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	Conditions of bottles or collars at receipt: <input checked="" type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>54</b>
1. <b>eva</b>	<b>9/21/22</b>	<b>[Signature]</b> <b>1140</b>	Comments: _____
RELINQUISHED BY	DATE/TIME	RECEIVED BY	
2. _____			
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other: _____
3. <b>[Signature]</b>	<b>9-21-22</b>	<b>SB</b>	CHEMTECH: <input checked="" type="checkbox"/> Picked Up

Page 1 of 2      Shipment Complete  YES  NO

10/2018      **WHITE - CHEMTECH COPY FOR RETURN TO CLIENT**      **YELLOW - CHEMTECH COPY**      **PINK - SAMPLER COPY**





CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

Chemtech Project Number n4742
COC Number 2024571

CLIENT INFORMATION: Report to be sent to:
PROJECT INFORMATION: PROJECT NAME: Reconstruction of Rosada Area
BILL TO: Area
COMPANY: LIRD Engineers, Inc.
PROJECT #: 19-294-0265.01
LOCATION: Queens
ADDRESS: same
ADDRESS: 703 Korimer Str.
PROJECT MANAGER: Steve Frank
CITY: Brooklyn STATE: NY ZIP: 11211
E-MAIL: hewsona@lird.com
ATTENTION: Steve Frank
PHONE: 716 882-5476 FAX:
PHONE: 716 882-5476 FAX:

DATA TURNAROUND INFORMATION:
FAX (RUSH) DAYS\*
HARDCOPY (DATA PACKAGE): DAYS\*
EDD: 5 day TAT DAYS\*
\*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS
DATA DELIVERABLE INFORMATION:
Level 1 (Results Only)
Level 2 (Results + QC)
Level 3 (Results + QC + Raw Data)
EDD FORMAT
Level 4 (QC + Full Raw Data)
NJ Reduced
NYS ASP A
Other



Table with columns: CHEMTECH SAMPLE ID, PROJECT SAMPLE IDENTIFICATION, SAMPLE MATRIX, SAMPLE TYPE (COMP, GRAB), SAMPLE COLLECTION (DATE, TIME), # of Bottles, PRESERVATIVES (1-9), COMMENTS. Includes handwritten entries for samples 1, 2, and 3.

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSESSION INCLUDING COURIER DELIVERY
RELINQUISHED BY SAMPLER, DATE/TIME, RECEIVED BY, Conditions of bottles or collers at receipt: COMPLIANT, NON COMPLIANT, COOLER TEMP.
Handwritten signatures and dates for three custody transfers.

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	15.1
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010645.D	1		09/23/22 13:49	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	5.90	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.90	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	5.90	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	5.90	ug/Kg
75-00-3	Chloroethane	1.00	U	1.00	5.90	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.90	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.84	U	0.84	5.90	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	5.90	ug/Kg
67-64-1	Acetone	15.6	J	14.3	29.3	ug/Kg
75-15-0	Carbon Disulfide	0.88	U	0.88	5.90	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	5.90	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	5.90	ug/Kg
75-09-2	Methylene Chloride	7.00	U	7.00	11.7	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.80	U	0.80	5.90	ug/Kg
75-34-3	1,1-Dichloroethane	0.82	U	0.82	5.90	ug/Kg
110-82-7	Cyclohexane	0.99	U	0.99	5.90	ug/Kg
78-93-3	2-Butanone	8.50	U	8.50	29.3	ug/Kg
56-23-5	Carbon Tetrachloride	0.93	U	0.93	5.90	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.80	U	0.80	5.90	ug/Kg
74-97-5	Bromochloromethane	0.95	U	0.95	5.90	ug/Kg
67-66-3	Chloroform	0.79	U	0.79	5.90	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.88	U	0.88	5.90	ug/Kg
108-87-2	Methylcyclohexane	0.94	U	0.94	5.90	ug/Kg
71-43-2	Benzene	0.77	U	0.77	5.90	ug/Kg
107-06-2	1,2-Dichloroethane	0.99	U	0.99	5.90	ug/Kg
79-01-6	Trichloroethene	0.86	U	0.86	5.90	ug/Kg
78-87-5	1,2-Dichloropropane	0.76	U	0.76	5.90	ug/Kg
75-27-4	Bromodichloromethane	0.82	U	0.82	5.90	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.40	U	5.40	29.3	ug/Kg
108-88-3	Toluene	0.74	U	0.74	5.90	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.87	U	0.87	5.90	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.83	U	0.83	5.90	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	15.1
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010645.D	1		09/23/22 13:49	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	5.90	ug/Kg
591-78-6	2-Hexanone	5.50	U	5.50	29.3	ug/Kg
124-48-1	Dibromochloromethane	0.88	U	0.88	5.90	ug/Kg
106-93-4	1,2-Dibromoethane	0.88	U	0.88	5.90	ug/Kg
127-18-4	Tetrachloroethene	0.89	U	0.89	5.90	ug/Kg
108-90-7	Chlorobenzene	0.76	U	0.76	5.90	ug/Kg
100-41-4	Ethyl Benzene	0.82	U	0.82	5.90	ug/Kg
179601-23-1	m/p-Xylenes	1.70	U	1.70	11.7	ug/Kg
95-47-6	o-Xylene	0.93	U	0.93	5.90	ug/Kg
100-42-5	Styrene	0.93	U	0.93	5.90	ug/Kg
75-25-2	Bromoform	0.95	U	0.95	5.90	ug/Kg
98-82-8	Isopropylbenzene	0.84	U	0.84	5.90	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.30	U	1.30	5.90	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.79	U	0.79	5.90	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.74	U	0.74	5.90	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.75	U	0.75	5.90	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	5.90	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	5.90	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	5.90	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	47.5		50 - 163	95%	SPK: 50
1868-53-7	Dibromofluoromethane	37.3		54 - 147	75%	SPK: 50
2037-26-5	Toluene-d8	38.9		78 - 125	78%	SPK: 50
460-00-4	4-Bromofluorobenzene	29.7		50 - 146	59%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	115000	7.789			
540-36-3	1,4-Difluorobenzene	214000	8.691			
3114-55-4	Chlorobenzene-d5	211000	11.49			
3855-82-1	1,4-Dichlorobenzene-d4	91800	13.428			

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	15.1
Sample Wt/Vol:	5.02      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010645.D	1		09/23/22 13:49	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 13:40
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	SOIL
		% Solid:	84.7

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.43	H	1	0	0	pH		09/23/22 17:22	9045D
Ignitability	NO		1	0	0	oC		09/22/22 14:52	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/23/22 09:10	09/23/22 11:24	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/26/22 10:30	09/26/22 12:48	9034

Comments: pH result reported at temperature 22.8 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	15.3      Decanted:
Sample Wt/Vol:	30.04      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF011519.D	1	09/23/22 09:40	09/23/22 14:55	PB147864

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	785	J	258	1970	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	9.36		37 - 130	47%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22		
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22		
Client Sample ID:	SB-08-COMP	SDG No.:	N4742		
Lab Sample ID:	N4742-02	Matrix:	SOIL		
Analytical Method:	8015D GRO	% Moisture:	15.3	Decanted:	
Sample Wt/Vol:	5.03	Units:	g	Final Vol:	5 mL
Soil Aliquot Vol:			uL	Test:	Gasoline Range Organics
Extraction Type:				Injection Volume :	
GPC Factor :		PH :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028413.D	50	09/23/22 18:04	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	1060	J	212	2640	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	22.7		50 - 150	113%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	15.3          Decanted:
Sample Wt/Vol:	30.09          Units:    g	Final Vol:	10000          uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0                  PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP051590.D	1	09/23/22 08:28	09/23/22 16:48	PB147860

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	20.0	U	3.60	20.0	ug/kg
11104-28-2	Aroclor-1221	20.0	U	5.50	20.0	ug/kg
11141-16-5	Aroclor-1232	20.0	U	4.60	20.0	ug/kg
53469-21-9	Aroclor-1242	20.0	U	2.80	20.0	ug/kg
12672-29-6	Aroclor-1248	20.0	U	3.50	20.0	ug/kg
11097-69-1	Aroclor-1254	20.0	U	5.00	20.0	ug/kg
37324-23-5	Aroclor-1262	20.0	U	3.90	20.0	ug/kg
11100-14-4	Aroclor-1268	20.0	U	6.70	20.0	ug/kg
11096-82-5	Aroclor-1260	20.0	U	3.80	20.0	ug/kg
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	20.8		40 - 162	104%	SPK: 20
2051-24-3	Decachlorobiphenyl	14.5		32 - 176	73%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	15.3
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055025.D	1	09/26/22 09:40	09/26/22 13:51	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	200	U	87.0	200	ug/Kg
208-96-8	Acenaphthylene	200	U	80.9	200	ug/Kg
83-32-9	Acenaphthene	200	U	92.9	200	ug/Kg
86-73-7	Fluorene	200	U	92.8	200	ug/Kg
85-01-8	Phenanthrene	200	U	98.5	200	ug/Kg
120-12-7	Anthracene	200	U	98.9	200	ug/Kg
206-44-0	Fluoranthene	200	U	94.0	200	ug/Kg
129-00-0	Pyrene	200	U	87.4	200	ug/Kg
56-55-3	Benzo(a)anthracene	200	U	100	200	ug/Kg
218-01-9	Chrysene	200	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	200	U	81.3	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	200	U	86.7	200	ug/Kg
50-32-8	Benzo(a)pyrene	200	U	79.7	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	200	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	200	U	110	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	78.3		27 - 109	78%	SPK: 100
321-60-8	2-Fluorobiphenyl	79.3		30 - 103	79%	SPK: 100
1718-51-0	Terphenyl-d14	69.5		21 - 107	69%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	38100		8.055		
1146-65-2	Naphthalene-d8	146000		10.881		
15067-26-2	Acenaphthene-d10	102000		14.7		
1517-22-2	Phenanthrene-d10	250000		17.45		
1719-03-5	Chrysene-d12	293000		21.727		
1520-96-3	Perylene-d12	309000		25.03		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	15.3
Sample Wt/Vol:	30.07      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055025.D	1	09/26/22 09:40	09/26/22 13:51	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 393A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-08-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7440-39-3	Barium	1050		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:49	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 23:10	SW6010

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture: \_\_\_\_\_  
 Color After: \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_  
 Comments: TCLP METALS

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.5
Sample Wt/Vol:	5.03      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010670.D	1		09/26/22 14:57	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	1.00	U	1.00	6.10	ug/Kg
74-87-3	Chloromethane	1.30	U	1.30	6.10	ug/Kg
75-01-4	Vinyl Chloride	1.10	U	1.10	6.10	ug/Kg
74-83-9	Bromomethane	1.40	U	1.40	6.10	ug/Kg
75-00-3	Chloroethane	1.10	U	1.10	6.10	ug/Kg
75-69-4	Trichlorofluoromethane	1.20	U	1.20	6.10	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.88	U	0.88	6.10	ug/Kg
75-35-4	1,1-Dichloroethene	1.00	U	1.00	6.10	ug/Kg
67-64-1	Acetone	34.1		14.9	30.5	ug/Kg
75-15-0	Carbon Disulfide	0.91	U	0.91	6.10	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.10	U	1.10	6.10	ug/Kg
79-20-9	Methyl Acetate	1.50	U	1.50	6.10	ug/Kg
75-09-2	Methylene Chloride	7.30	U	7.30	12.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.83	U	0.83	6.10	ug/Kg
75-34-3	1,1-Dichloroethane	0.85	U	0.85	6.10	ug/Kg
110-82-7	Cyclohexane	1.00	U	1.00	6.10	ug/Kg
78-93-3	2-Butanone	14.3	J	8.90	30.5	ug/Kg
56-23-5	Carbon Tetrachloride	0.96	U	0.96	6.10	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.83	U	0.83	6.10	ug/Kg
74-97-5	Bromochloromethane	0.99	U	0.99	6.10	ug/Kg
67-66-3	Chloroform	0.82	U	0.82	6.10	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.91	U	0.91	6.10	ug/Kg
108-87-2	Methylcyclohexane	0.98	U	0.98	6.10	ug/Kg
71-43-2	Benzene	0.80	U	0.80	6.10	ug/Kg
107-06-2	1,2-Dichloroethane	1.00	U	1.00	6.10	ug/Kg
79-01-6	Trichloroethene	0.89	U	0.89	6.10	ug/Kg
78-87-5	1,2-Dichloropropane	0.79	U	0.79	6.10	ug/Kg
75-27-4	Bromodichloromethane	0.85	U	0.85	6.10	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.60	U	5.60	30.5	ug/Kg
108-88-3	Toluene	0.77	U	0.77	6.10	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.90	U	0.90	6.10	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.87	U	0.87	6.10	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.5
Sample Wt/Vol:	5.03      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010670.D	1		09/26/22 14:57	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	1.00	U	1.00	6.10	ug/Kg
591-78-6	2-Hexanone	5.70	U	5.70	30.5	ug/Kg
124-48-1	Dibromochloromethane	0.91	U	0.91	6.10	ug/Kg
106-93-4	1,2-Dibromoethane	0.91	U	0.91	6.10	ug/Kg
127-18-4	Tetrachloroethene	0.93	U	0.93	6.10	ug/Kg
108-90-7	Chlorobenzene	0.79	U	0.79	6.10	ug/Kg
100-41-4	Ethyl Benzene	0.85	U	0.85	6.10	ug/Kg
179601-23-1	m/p-Xylenes	1.80	U	1.80	12.2	ug/Kg
95-47-6	o-Xylene	0.96	U	0.96	6.10	ug/Kg
100-42-5	Styrene	0.96	U	0.96	6.10	ug/Kg
75-25-2	Bromoform	0.99	U	0.99	6.10	ug/Kg
98-82-8	Isopropylbenzene	0.88	U	0.88	6.10	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.40	U	1.40	6.10	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.82	U	0.82	6.10	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.77	U	0.77	6.10	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.78	U	0.78	6.10	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.50	U	1.50	6.10	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.10	U	1.10	6.10	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.20	U	1.20	6.10	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	49.3		50 - 163	99%	SPK: 50
1868-53-7	Dibromofluoromethane	44.5		54 - 147	89%	SPK: 50
2037-26-5	Toluene-d8	41.9		78 - 125	84%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.3		50 - 146	79%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	223000	7.789			
540-36-3	1,4-Difluorobenzene	372000	8.685			
3114-55-4	Chlorobenzene-d5	345000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	167000	13.422			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
75-65-0	Tert butyl alcohol	87.1	J		4.92	ug/Kg

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-6.5-7.0	SDG No.:	N4742
Lab Sample ID:	N4742-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	18.5
Sample Wt/Vol:	5.03      Units:    g	Final Vol:	5000            uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624            ID :    0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010670.D	1		09/26/22 14:57	VY092622

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 14:05
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	SOIL
		% Solid:	82.7

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.92	H	1	0	0	pH		09/23/22 17:24	9045D
Ignitability	NO		1	0	0	oC		09/22/22 15:00	1030
Reactive Cyanide	0.050	U	1	0.050	0.050	mg/Kg	09/23/22 09:10	09/23/22 11:24	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/26/22 10:30	09/26/22 12:53	9034

Comments: pH result reported at temperature 21.2 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ = Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	17.3      Decanted:
Sample Wt/Vol:	30.06      Units: g	Final Vol:	1      mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF011522.D	1	09/23/22 09:40	09/23/22 16:24	PB147864

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	1230	J	264	2010	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	15.7		37 - 130	79%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	SOIL
Analytical Method:	8015D GRO	% Moisture:	17.3          Decanted:
Sample Wt/Vol:	5.03          Units:    g	Final Vol:	5                  mL
Soil Aliquot Vol:	uL	Test:	Gasoline Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
FB028414.D	50	09/23/22 18:42	FB092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
GRO	GRO	1050	J	218	2700	ug/kg
<b>SURROGATES</b>						
98-08-8	Alpha,Alpha,Alpha-Trifluoroto	24.6		50 - 150	123%	SPK: 20

## Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates &gt;25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.3
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055027.D	1	09/26/22 09:40	09/26/22 15:14	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	200	U	89.1	200	ug/Kg
208-96-8	Acenaphthylene	200	U	82.8	200	ug/Kg
83-32-9	Acenaphthene	200	U	95.1	200	ug/Kg
86-73-7	Fluorene	200	U	95.0	200	ug/Kg
85-01-8	Phenanthrene	200	U	100	200	ug/Kg
120-12-7	Anthracene	200	U	100	200	ug/Kg
206-44-0	Fluoranthene	200	U	96.2	200	ug/Kg
129-00-0	Pyrene	200	U	89.5	200	ug/Kg
56-55-3	Benzo(a)anthracene	200	U	100	200	ug/Kg
218-01-9	Chrysene	200	U	100	200	ug/Kg
205-99-2	Benzo(b)fluoranthene	200	U	83.2	200	ug/Kg
207-08-9	Benzo(k)fluoranthene	200	U	88.7	200	ug/Kg
50-32-8	Benzo(a)pyrene	200	U	81.6	200	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	200	U	120	200	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	U	120	200	ug/Kg
191-24-2	Benzo(g,h,i)perylene	200	U	120	200	ug/Kg
<b>SURROGATES</b>						
4165-60-0	Nitrobenzene-d5	63.9		27 - 109	64%	SPK: 100
321-60-8	2-Fluorobiphenyl	65.9		30 - 103	66%	SPK: 100
1718-51-0	Terphenyl-d14	59.8		21 - 107	60%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	41800		8.058		
1146-65-2	Naphthalene-d8	164000		10.884		
15067-26-2	Acenaphthene-d10	114000		14.703		
1517-22-2	Phenanthrene-d10	269000		17.453		
1719-03-5	Chrysene-d12	286000		21.73		
1520-96-3	Perylene-d12	306000		25.032		

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.3
Sample Wt/Vol:	30.09      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BG055027.D	1	09/26/22 09:40	09/26/22 15:14	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 403A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-06-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-04	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7440-39-3	Barium	958		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7440-47-3	Chromium	29.4	J	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:52	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 23:14	SW6010

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments: TCLP METALS

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ - 404 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-8.5-9.0	SDG No.:	N4742
Lab Sample ID:	N4742-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010647.D	1		09/23/22 14:36	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
75-71-8	Dichlorodifluoromethane	0.95	U	0.95	5.50	ug/Kg
74-87-3	Chloromethane	1.20	U	1.20	5.50	ug/Kg
75-01-4	Vinyl Chloride	1.00	U	1.00	5.50	ug/Kg
74-83-9	Bromomethane	1.30	U	1.30	5.50	ug/Kg
75-00-3	Chloroethane	0.98	U	0.98	5.50	ug/Kg
75-69-4	Trichlorofluoromethane	1.10	U	1.10	5.50	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.80	U	0.80	5.50	ug/Kg
75-35-4	1,1-Dichloroethene	0.95	U	0.95	5.50	ug/Kg
67-64-1	Acetone	13.5	U	13.5	27.6	ug/Kg
75-15-0	Carbon Disulfide	0.83	U	0.83	5.50	ug/Kg
1634-04-4	Methyl tert-butyl Ether	1.00	U	1.00	5.50	ug/Kg
79-20-9	Methyl Acetate	1.40	U	1.40	5.50	ug/Kg
75-09-2	Methylene Chloride	6.60	U	6.60	11.0	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.75	U	0.75	5.50	ug/Kg
75-34-3	1,1-Dichloroethane	0.77	U	0.77	5.50	ug/Kg
110-82-7	Cyclohexane	0.93	U	0.93	5.50	ug/Kg
78-93-3	2-Butanone	8.00	U	8.00	27.6	ug/Kg
56-23-5	Carbon Tetrachloride	0.87	U	0.87	5.50	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.75	U	0.75	5.50	ug/Kg
74-97-5	Bromochloromethane	0.89	U	0.89	5.50	ug/Kg
67-66-3	Chloroform	0.74	U	0.74	5.50	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.83	U	0.83	5.50	ug/Kg
108-87-2	Methylcyclohexane	0.88	U	0.88	5.50	ug/Kg
71-43-2	Benzene	0.73	U	0.73	5.50	ug/Kg
107-06-2	1,2-Dichloroethane	0.93	U	0.93	5.50	ug/Kg
79-01-6	Trichloroethene	0.81	U	0.81	5.50	ug/Kg
78-87-5	1,2-Dichloropropane	0.72	U	0.72	5.50	ug/Kg
75-27-4	Bromodichloromethane	0.77	U	0.77	5.50	ug/Kg
108-10-1	4-Methyl-2-Pentanone	5.10	U	5.10	27.6	ug/Kg
108-88-3	Toluene	0.70	U	0.70	5.50	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.82	U	0.82	5.50	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	0.78	U	0.78	5.50	ug/Kg

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-8.5-9.0	SDG No.:	N4742
Lab Sample ID:	N4742-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.08      Units: g	Final Vol:	5000      uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624      ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010647.D	1		09/23/22 14:36	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
79-00-5	1,1,2-Trichloroethane	0.95	U	0.95	5.50	ug/Kg
591-78-6	2-Hexanone	5.20	U	5.20	27.6	ug/Kg
124-48-1	Dibromochloromethane	0.83	U	0.83	5.50	ug/Kg
106-93-4	1,2-Dibromoethane	0.83	U	0.83	5.50	ug/Kg
127-18-4	Tetrachloroethene	0.84	U	0.84	5.50	ug/Kg
108-90-7	Chlorobenzene	0.72	U	0.72	5.50	ug/Kg
100-41-4	Ethyl Benzene	0.77	U	0.77	5.50	ug/Kg
179601-23-1	m/p-Xylenes	1.60	U	1.60	11.0	ug/Kg
95-47-6	o-Xylene	0.87	U	0.87	5.50	ug/Kg
100-42-5	Styrene	0.87	U	0.87	5.50	ug/Kg
75-25-2	Bromoform	0.89	U	0.89	5.50	ug/Kg
98-82-8	Isopropylbenzene	0.80	U	0.80	5.50	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1.20	5.50	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.74	U	0.74	5.50	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.70	U	0.70	5.50	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.71	U	0.71	5.50	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	1.40	U	1.40	5.50	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.50	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.50	ug/Kg
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	56.6		50 - 163	113%	SPK: 50
1868-53-7	Dibromofluoromethane	38.1		54 - 147	76%	SPK: 50
2037-26-5	Toluene-d8	39.3		78 - 125	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	34.2		50 - 146	68%	SPK: 50
<b>INTERNAL STANDARDS</b>						
363-72-4	Pentafluorobenzene	160000	7.789			
540-36-3	1,4-Difluorobenzene	310000	8.691			
3114-55-4	Chlorobenzene-d5	334000	11.489			
3855-82-1	1,4-Dichlorobenzene-d4	156000	13.428			
<b>TENTATIVE IDENTIFIED COMPOUNDS</b>						
	unknown10.941	6.90	J		10.9	ug/Kg

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-8.5-9.0	SDG No.:	N4742
Lab Sample ID:	N4742-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	10.9
Sample Wt/Vol:	5.08 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VY010647.D	1		09/23/22 14:36	VY092322

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22 14:45
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-06	Matrix:	SOIL
		% Solid:	89

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.82	H	1	0	0	pH		09/23/22 17:25	9045D
Ignitability	NO		1	0	0	oC		09/22/22 15:08	1030
Reactive Cyanide	0.049	U	1	0.049	0.049	mg/Kg	09/23/22 09:10	09/23/22 11:24	9012B
Reactive Sulfide	10.0	U	1	10.0	10.0	mg/Kg	09/26/22 10:30	09/26/22 12:55	9034

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

\* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

HAZ-408 Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Moisture:	11                      Decanted:
Sample Wt/Vol:	30.01              Units:    g	Final Vol:	1                              mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF011523.D	1	09/23/22 09:40	09/23/22 16:54	PB147864

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
DRO	DRO	936	J	246	1870	ug/kg
<b>SURROGATES</b>						
16416-32-3	Tetracosane-d50	10.1		37 - 130	51%	SPK: 20

## Comments:

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
E = Value Exceeds Calibration Range  
P = Indicates >25% difference for detected concentrations between the two GC columns  
Q = indicates LCS control criteria did not meet requirements  
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
N = Presumptive Evidence of a Compound  
\* = Values outside of QC limits  
D = Dilution  
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
() = Laboratory InHouse Limit





### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	11
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130410.D	1	09/26/22 09:40	09/26/22 16:10	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
<b>TARGETS</b>						
91-20-3	Naphthalene	190	U	83.0	190	ug/Kg
208-96-8	Acenaphthylene	190	U	77.1	190	ug/Kg
83-32-9	Acenaphthene	190	U	88.6	190	ug/Kg
86-73-7	Fluorene	190	U	88.5	190	ug/Kg
85-01-8	Phenanthrene	190	U	93.8	190	ug/Kg
120-12-7	Anthracene	190	U	94.3	190	ug/Kg
206-44-0	Fluoranthene	190	U	89.6	190	ug/Kg
129-00-0	Pyrene	190	U	83.3	190	ug/Kg
56-55-3	Benzo(a)anthracene	190	U	97.4	190	ug/Kg
218-01-9	Chrysene	190	U	96.0	190	ug/Kg
205-99-2	Benzo(b)fluoranthene	190	U	77.5	190	ug/Kg
207-08-9	Benzo(k)fluoranthene	190	U	82.6	190	ug/Kg
50-32-8	Benzo(a)pyrene	190	U	76.0	190	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	190	U	110	190	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	190	U	110	190	ug/Kg
191-24-2	Benzo(g,h,i)perylene	190	U	110	190	ug/Kg

**SURROGATES**

4165-60-0	Nitrobenzene-d5	87.3	27 - 109	87%	SPK: 100
321-60-8	2-Fluorobiphenyl	92.9	30 - 103	93%	SPK: 100
1718-51-0	Terphenyl-d14	80.2	21 - 107	80%	SPK: 100

**INTERNAL STANDARDS**

3855-82-1	1,4-Dichlorobenzene-d4	91600	6.651
1146-65-2	Naphthalene-d8	356000	7.934
15067-26-2	Acenaphthene-d10	176000	9.686
1517-22-2	Phenanthrene-d10	255000	11.163
1719-03-5	Chrysene-d12	159000	13.798
1520-96-3	Perylene-d12	202000	15.192

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	11
Sample Wt/Vol:	30.03      Units: g	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-PAH
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N      PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130410.D	1	09/26/22 09:40	09/26/22 16:10	PB147890

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 413 A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/20/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	SB-05-COMP	SDG No.:	N4742
Lab Sample ID:	N4742-06	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	100	U	1	30.8	100	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7440-39-3	Barium	1240		1	77.9	500	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7440-43-9	Cadmium	30.0	U	1	2.60	30.0	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7440-47-3	Chromium	50.0	U	1	10.4	50.0	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7439-92-1	Lead	60.0	U	1	16.4	60.0	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7439-97-6	Mercury	2.00	U	1	0.70	2.00	ug/L	09/26/22 13:30	09/27/22 09:54	SW7470A
7782-49-2	Selenium	100	U	1	35.3	100	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010
7440-22-4	Silver	50.0	U	1	8.20	50.0	ug/L	09/22/22 16:15	09/23/22 23:18	SW6010

Color Before:	Clarity Before:	Texture:
Color After:	Clarity After:	Artifacts:
Comments: TCLP METALS		

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 414 Spiked sample recovery not within control limits

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22 07:30
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05	SDG No.:	N4742
Lab Sample ID:	N4742-07	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Nitrite	0.60	U	1	0.032	0.60	mg/L		09/22/22 13:36	300.0
Nitrate	0.50	U	1	0.050	0.50	mg/L		09/22/22 13:36	300.0
Nitrate+Nitrite	1.10	U	1	0.080	1.10	mg/L		09/22/22 13:36	300.0
CBOD5	2.00	U	1	0.17	2.00	mg/L		09/22/22 16:40	SM5210 B
Chloride	302		1	0.68	5.00	mg/L		09/26/22 11:16	SM4500-CL C
Flash Point	>212		1	0	0	o F		09/22/22 14:15	1010B
Hexavalent Chromium	0.010	U	1	0.0030	0.010	mg/L		09/23/22 15:17	SM3500-Cr B
Non-Polar Material	2.60	J	1	0.62	5.00	mg/L		09/23/22 09:30	1664A
Phenolics	0.29		1	0.013	0.050	mg/L	09/26/22 10:20	09/27/22 11:08	420.1
TKN	1.40		1	0.15	0.50	mg/L	09/26/22 12:30	09/27/22 16:21	SM4500-N Org C-11 plus NH3 B plus G-11
Nitrogen	1.40		1	0.31	1.30	mg/L		09/27/22 16:21	CAL
TS	1790		1	1.00	5.00	mg/L		09/22/22 09:00	SM2540B
TSS	879		1	1.00	4.00	mg/L		09/23/22 09:00	SM2540D

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ = Spiked sample recovery not within control limits



**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05	SDG No.:	N4742
Lab Sample ID:	N4742-07	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-43-9	Cadmium	1.74	J	1	0.23	3.00	ug/L	09/23/22 11:44	09/23/22 19:39	EPA 200.7
7440-50-8	Copper	79.5		1	4.99	10.0	ug/L	09/23/22 11:44	09/23/22 19:39	EPA 200.7
7439-92-1	Lead	80.3		1	1.17	6.00	ug/L	09/23/22 11:44	09/23/22 19:39	EPA 200.7
7439-97-6	Mercury	0.58		1	0.033	0.20	ug/L	09/23/22 12:20	09/23/22 15:34	E245.1
7440-02-0	Nickel	141		1	1.51	20.0	ug/L	09/23/22 11:44	09/23/22 19:39	EPA 200.7
7440-66-6	Zinc	201		1	2.33	20.0	ug/L	09/23/22 11:44	09/23/22 19:39	EPA 200.7

Color Before:	Brown	Clarity Before:	Cloudy	Texture:	
Color After:	Brown	Clarity After:	Cloudy	Artifacts:	
Comments:	NYC Discharge				

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 416 Spiked sample recovery not within control limits

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05	SDG No.:	N4742
Lab Sample ID:	N4742-07	Matrix:	WATER
Analytical Method:	608.3	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP051637.D	1	09/23/22 08:30	09/26/22 12:09	PB147859

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	0.050	U	0.014	0.050	ug/L
11104-28-2	Aroclor-1221	0.050	U	0.014	0.050	ug/L
11141-16-5	Aroclor-1232	0.050	U	0.017	0.050	ug/L
53469-21-9	Aroclor-1242	0.050	U	0.012	0.050	ug/L
12672-29-6	Aroclor-1248	0.050	U	0.015	0.050	ug/L
11097-69-1	Aroclor-1254	0.050	U	0.022	0.050	ug/L
11096-82-5	Aroclor-1260	0.050	U	0.011	0.050	ug/L
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	13.0		60 - 140	65%	SPK: 20
2051-24-3	Decachlorobiphenyl	11.2	*	60 - 140	56%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05RE	SDG No.:	N4742
Lab Sample ID:	N4742-07RE	Matrix:	WATER
Analytical Method:	608.3	% Moisture:	100
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:		uL	
Extraction Type:		Test:	PCB
GPC Factor :	1.0	PH :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PP051640.D	1	09/23/22 08:30	09/26/22 12:58	PB147859

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
12674-11-2	Aroclor-1016	0.050	U	0.014	0.050	ug/L
11104-28-2	Aroclor-1221	0.050	U	0.014	0.050	ug/L
11141-16-5	Aroclor-1232	0.050	U	0.017	0.050	ug/L
53469-21-9	Aroclor-1242	0.050	U	0.012	0.050	ug/L
12672-29-6	Aroclor-1248	0.050	U	0.015	0.050	ug/L
11097-69-1	Aroclor-1254	0.050	U	0.022	0.050	ug/L
11096-82-5	Aroclor-1260	0.050	U	0.011	0.050	ug/L
<b>SURROGATES</b>						
877-09-8	Tetrachloro-m-xylene	13.3		60 - 140	67%	SPK: 20
2051-24-3	Decachlorobiphenyl	10.6	*	60 - 140	53%	SPK: 20

Comments:

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 P = Indicates >25% difference for detected concentrations between the two GC columns  
 Q = indicates LCS control criteria did not meet requirements  
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution  
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.  
 () = Laboratory InHouse Limit

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05	SDG No.:	N4742
Lab Sample ID:	N4742-07	Matrix:	Water
Analytical Method:	625.1	% Moisture:	100
Sample Wt/Vol:	1000      Units:    mL	Final Vol:	1000      uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted :    N	Level :	LOW
Injection Volume :	GPC Factor :    1.0	GPC Cleanup :	N            PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130413.D	1	09/23/22 08:27	09/26/22 17:56	PB147858

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
108-95-2	Phenol	5.00	U	1.70	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.90	5.00	ug/L
91-20-3	Naphthalene	5.00	U	2.00	5.00	ug/L
<b>SURROGATES</b>						
367-12-4	2-Fluorophenol	75.2		60 - 140	75%	SPK: 100
13127-88-3	Phenol-d6	50.2	*	60 - 140	50%	SPK: 100
4165-60-0	Nitrobenzene-d5	92.4		60 - 140	92%	SPK: 100
321-60-8	2-Fluorobiphenyl	101		60 - 140	101%	SPK: 100
118-79-6	2,4,6-Tribromophenol	96.8		60 - 140	97%	SPK: 100
1718-51-0	Terphenyl-d14	80.9		60 - 140	81%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	89600		6.651		
1146-65-2	Naphthalene-d8	325000		7.933		
15067-26-2	Acenaphthene-d10	151000		9.68		
1517-22-2	Phenanthrene-d10	212000		11.163		
1719-03-5	Chrysene-d12	160000		13.798		
1520-96-3	Perylene-d12	206000		15.192		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 419A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-05	SDG No.:	N4742
Lab Sample ID:	N4742-07	Matrix:	Water
Analytical Method:	E624.1	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-NYCD
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN074633.D	1		09/27/22 17:41	VN092722

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
1634-04-4	Methyl tert-Butyl Ether	0.51	U	0.51	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.61	U	0.61	5.00	ug/L
67-66-3	Chloroform	0.50	U	0.50	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.75	U	0.75	5.00	ug/L
71-43-2	Benzene	0.59	U	0.59	5.00	ug/L
108-88-3	Toluene	0.57	U	0.57	5.00	ug/L
127-18-4	Tetrachloroethene	0.53	U	0.53	5.00	ug/L
100-41-4	Ethyl Benzene	0.52	U	0.52	5.00	ug/L
1330-20-7	Total Xylenes	1.64	U	1.64	15.0	ug/L
106-46-7	1,4-Dichlorobenzene	0.75	U	0.75	5.00	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	30.7		91 - 110	102%	SPK: 30
2037-26-5	Toluene-d8	31.5		91 - 112	105%	SPK: 30
460-00-4	4-Bromofluorobenzene	23.7		63 - 112	79%	SPK: 30
<b>INTERNAL STANDARDS</b>						
74-97-5	Bromochloromethane	105000	7.498			
540-36-3	1,4-Difluorobenzene	634000	8.827			
3114-55-4	Chlorobenzene-d5	533000	11.621			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22 08:40
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-14	SDG No.:	N4742
Lab Sample ID:	N4742-08	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Nitrite	0.60	U	1	0.032	0.60	mg/L		09/22/22 14:08	300.0
Nitrate	2.30		1	0.050	0.50	mg/L		09/22/22 14:08	300.0
Nitrate+Nitrite	2.30		1	0.080	1.10	mg/L		09/22/22 14:08	300.0
CBOD5	2.00	U	1	0.17	2.00	mg/L		09/22/22 16:40	SM5210 B
Chloride	377		1	0.68	5.00	mg/L		09/26/22 11:19	SM4500-CL C
Flash Point	>212		1	0	0	o F		09/22/22 15:15	1010B
Hexavalent Chromium	0.010	U	1	0.0030	0.010	mg/L		09/23/22 15:18	SM3500-Cr B
Non-Polar Material	1.70	J	1	0.62	5.00	mg/L		09/23/22 09:30	1664A
Phenolics	0.050	U	1	0.013	0.050	mg/L	09/26/22 10:20	09/27/22 11:08	420.1
TKN	0.50	U	1	0.15	0.50	mg/L	09/26/22 12:30	09/27/22 16:21	SM4500-N Org C-11 plus NH3 B plus G-11
Nitrogen	2.30		1	0.31	1.30	mg/L		09/27/22 16:21	CAL
TS	949		1	1.00	5.00	mg/L		09/22/22 09:00	SM2540B
TSS	195		1	1.00	4.00	mg/L		09/23/22 09:00	SM2540D

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-14	SDG No.:	N4742
Lab Sample ID:	N4742-08	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-43-9	Cadmium	0.31	J	1	0.23	3.00	ug/L	09/23/22 11:44	09/23/22 19:50	EPA 200.7
7440-50-8	Copper	64.4	1	1	4.99	10.0	ug/L	09/23/22 11:44	09/23/22 19:50	EPA 200.7
7439-92-1	Lead	63.0	1	1	1.17	6.00	ug/L	09/23/22 11:44	09/23/22 19:50	EPA 200.7
7439-97-6	Mercury	0.50	1	1	0.033	0.20	ug/L	09/23/22 12:20	09/23/22 15:36	E245.1
7440-02-0	Nickel	34.2	1	1	1.51	20.0	ug/L	09/23/22 11:44	09/23/22 19:50	EPA 200.7
7440-66-6	Zinc	1070	1	1	2.33	20.0	ug/L	09/23/22 11:44	09/23/22 19:50	EPA 200.7

Color Before:	Brown	Clarity Before:	Cloudy	Texture:
Color After:	Brown	Clarity After:	Cloudy	Artifacts:
Comments:	NYC Discharge			

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 422 Spiked sample recovery not within control limits





## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-14	SDG No.:	N4742
Lab Sample ID:	N4742-08	Matrix:	Water
Analytical Method:	625.1	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130414.D	1	09/23/22 08:27	09/26/22 18:32	PB147858

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
108-95-2	Phenol	5.00	U	1.70	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.90	5.00	ug/L
91-20-3	Naphthalene	5.00	U	2.00	5.00	ug/L
<b>SURROGATES</b>						
367-12-4	2-Fluorophenol	50.7	*	60 - 140	51%	SPK: 100
13127-88-3	Phenol-d6	30.8	*	60 - 140	31%	SPK: 100
4165-60-0	Nitrobenzene-d5	87.8		60 - 140	88%	SPK: 100
321-60-8	2-Fluorobiphenyl	95.5		60 - 140	96%	SPK: 100
118-79-6	2,4,6-Tribromophenol	96.1		60 - 140	96%	SPK: 100
1718-51-0	Terphenyl-d14	86.0		60 - 140	86%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	95200		6.651		
1146-65-2	Naphthalene-d8	365000		7.934		
15067-26-2	Acenaphthene-d10	174000		9.686		
1517-22-2	Phenanthrene-d10	246000		11.163		
1719-03-5	Chrysene-d12	182000		13.798		
1520-96-3	Perylene-d12	216000		15.192		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 424 A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-14RE	SDG No.:	N4742
Lab Sample ID:	N4742-08RE	Matrix:	Water
Analytical Method:	625.1	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM036793.D	1	09/23/22 08:27	09/28/22 11:24	PB147858

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
108-95-2	Phenol	5.00	U	1.70	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.90	5.00	ug/L
91-20-3	Naphthalene	5.00	U	2.00	5.00	ug/L
<b>SURROGATES</b>						
367-12-4	2-Fluorophenol	58.7	*	60 - 140	59%	SPK: 100
13127-88-3	Phenol-d6	35.1	*	60 - 140	35%	SPK: 100
4165-60-0	Nitrobenzene-d5	99.9		60 - 140	100%	SPK: 100
321-60-8	2-Fluorobiphenyl	92.8		60 - 140	93%	SPK: 100
118-79-6	2,4,6-Tribromophenol	133		60 - 140	133%	SPK: 100
1718-51-0	Terphenyl-d14	105		60 - 140	105%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	415000		7.986		
1146-65-2	Naphthalene-d8	1710000		10.798		
15067-26-2	Acenaphthene-d10	1060000		14.615		
1517-22-2	Phenanthrene-d10	2230000		17.351		
1719-03-5	Chrysene-d12	2060000		21.515		
1520-96-3	Perylene-d12	1700000		23.938		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 425A = Aldol-Condensation Reaction Products

### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-14	SDG No.:	N4742
Lab Sample ID:	N4742-08	Matrix:	Water
Analytical Method:	E624.1	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-NYCD
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN074646.D	1		09/28/22 14:06	VN092822

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
1634-04-4	Methyl tert-Butyl Ether	0.51	U	0.51	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.61	U	0.61	5.00	ug/L
67-66-3	Chloroform	0.50	U	0.50	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.75	U	0.75	5.00	ug/L
71-43-2	Benzene	0.59	U	0.59	5.00	ug/L
108-88-3	Toluene	0.57	U	0.57	5.00	ug/L
127-18-4	Tetrachloroethene	0.53	U	0.53	5.00	ug/L
100-41-4	Ethyl Benzene	0.52	U	0.52	5.00	ug/L
1330-20-7	Total Xylenes	1.64	U	1.64	15.0	ug/L
106-46-7	1,4-Dichlorobenzene	0.75	U	0.75	5.00	ug/L
<b>SURROGATES</b>						
17060-07-0	1,2-Dichloroethane-d4	31.5		91 - 110	105%	SPK: 30
2037-26-5	Toluene-d8	32.1		91 - 112	107%	SPK: 30
460-00-4	4-Bromofluorobenzene	24.3		63 - 112	81%	SPK: 30
<b>INTERNAL STANDARDS</b>						
74-97-5	Bromochloromethane	99600	7.492			
540-36-3	1,4-Difluorobenzene	591000	8.828			
3114-55-4	Chlorobenzene-d5	498000	11.616			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

## Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22 09:30
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-21	SDG No.:	N4742
Lab Sample ID:	N4742-09	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Nitrite	0.60	U	1	0.032	0.60	mg/L		09/22/22 14:39	300.0
Nitrate	0.50	U	1	0.050	0.50	mg/L		09/22/22 14:39	300.0
Nitrate+Nitrite	1.10	U	1	0.080	1.10	mg/L		09/22/22 14:39	300.0
CBOD5	2.00	U	1	0.17	2.00	mg/L		09/22/22 16:40	SM5210 B
Chloride	52.5		1	0.68	5.00	mg/L		09/26/22 11:46	SM4500-CL C
Flash Point	>212		1	0	0	o F		09/22/22 15:45	1010B
Hexavalent Chromium	0.010	U	1	0.0030	0.010	mg/L		09/23/22 15:19	SM3500-Cr B
Non-Polar Material	1.50	J	1	0.62	5.00	mg/L		09/23/22 09:30	1664A
Phenolics	0.20		1	0.013	0.050	mg/L	09/26/22 10:20	09/27/22 11:08	420.1
TKN	1.50		1	0.15	0.50	mg/L	09/26/22 12:30	09/27/22 16:21	SM4500-N Org C-11 plus NH3 B plus G-11
Nitrogen	1.50		1	0.31	1.30	mg/L		09/27/22 16:21	CAL
TS	2590		1	1.00	5.00	mg/L		09/22/22 09:00	SM2540B
TSS	2030		1	1.00	4.00	mg/L		09/23/22 09:00	SM2540D

Comments: \_\_\_\_\_

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 D = Dilution  
 Q = indicates LCS control criteria did not meet requirements  
 H = Sample Analysis Out Of Hold Time

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ = Spiked sample recovery not within control limits

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-21	SDG No.:	N4742
Lab Sample ID:	N4742-09	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-43-9	Cadmium	3.00	U	1	0.23	3.00	ug/L	09/23/22 11:44	09/23/22 19:54	EPA 200.7
7440-50-8	Copper	171		1	4.99	10.0	ug/L	09/23/22 11:44	09/23/22 19:54	EPA 200.7
7439-92-1	Lead	153		1	1.17	6.00	ug/L	09/23/22 11:44	09/23/22 19:54	EPA 200.7
7439-97-6	Mercury	0.56		1	0.033	0.20	ug/L	09/23/22 12:20	09/23/22 15:38	E245.1
7440-02-0	Nickel	181		1	1.51	20.0	ug/L	09/23/22 11:44	09/23/22 19:54	EPA 200.7
7440-66-6	Zinc	1120		1	2.33	20.0	ug/L	09/23/22 11:44	09/23/22 19:54	EPA 200.7

Color Before:	Brown	Clarity Before:	Cloudy	Texture:	
Color After:	Brown	Clarity After:	Cloudy	Artifacts:	
Comments:	NYC Discharge				

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 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
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J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 \* = indicates the duplicate analysis is not within control limits.  
 E = Indicates the reported value is estimated because of the presence of interference.  
 OR = Over Range  
 HAZ - 428  
 N = Spiked sample recovery not within control limits



### Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OEGS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-21	SDG No.:	N4742
Lab Sample ID:	N4742-09	Matrix:	Water
Analytical Method:	625.1	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF130415.D	1	09/23/22 08:27	09/26/22 19:09	PB147858

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
108-95-2	Phenol	5.00	U	1.70	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.90	5.00	ug/L
91-20-3	Naphthalene	5.00	U	2.00	5.00	ug/L
<b>SURROGATES</b>						
367-12-4	2-Fluorophenol	45.7	*	60 - 140	46%	SPK: 100
13127-88-3	Phenol-d6	28.4	*	60 - 140	28%	SPK: 100
4165-60-0	Nitrobenzene-d5	81.8		60 - 140	82%	SPK: 100
321-60-8	2-Fluorobiphenyl	89.8		60 - 140	90%	SPK: 100
118-79-6	2,4,6-Tribromophenol	88.3		60 - 140	88%	SPK: 100
1718-51-0	Terphenyl-d14	76.6		60 - 140	77%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	91700		6.651		
1146-65-2	Naphthalene-d8	340000		7.934		
15067-26-2	Acenaphthene-d10	161000		9.686		
1517-22-2	Phenanthrene-d10	225000		11.163		
1719-03-5	Chrysene-d12	158000		13.798		
1520-96-3	Perylene-d12	205000		15.192		

U = Not Detected

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MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

HAZ - 430A = Aldol-Condensation Reaction Products

**Report of Analysis**

Client:	LiRo Engineers, Inc.	Date Collected:	09/21/22
Project:	DDC OECS - Reconstruction of Rosedale Area	Date Received:	09/21/22
Client Sample ID:	TWP-21RE	SDG No.:	N4742
Lab Sample ID:	N4742-09RE	Matrix:	Water
Analytical Method:	625.1	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-NYCD
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM036794.D	1	09/23/22 08:27	09/28/22 12:01	PB147858

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
<b>TARGETS</b>						
108-95-2	Phenol	5.00	U	1.70	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.00	U	1.90	5.00	ug/L
91-20-3	Naphthalene	5.00	U	2.00	5.00	ug/L
<b>SURROGATES</b>						
367-12-4	2-Fluorophenol	51.7	*	60 - 140	52%	SPK: 100
13127-88-3	Phenol-d6	29.2	*	60 - 140	29%	SPK: 100
4165-60-0	Nitrobenzene-d5	89.8		60 - 140	90%	SPK: 100
321-60-8	2-Fluorobiphenyl	91.8		60 - 140	92%	SPK: 100
118-79-6	2,4,6-Tribromophenol	109		60 - 140	109%	SPK: 100
1718-51-0	Terphenyl-d14	99.5		60 - 140	99%	SPK: 100
<b>INTERNAL STANDARDS</b>						
3855-82-1	1,4-Dichlorobenzene-d4	364000	7.987			
1146-65-2	Naphthalene-d8	1380000	10.792			
15067-26-2	Acenaphthene-d10	736000	14.61			
1517-22-2	Phenanthrene-d10	1400000	17.351			
1719-03-5	Chrysene-d12	1240000	21.515			
1520-96-3	Perylene-d12	1250000	23.939			

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D = Dilution

() = Laboratory InHouse Limit

HAZ - 431A = Aldol-Condensation Reaction Products





**NOTICE**

THE PAGES CONTAINED IN THIS JOINT BID (JB-PAGES) REPRESENT ADDITIONAL CONTRACT REQUIREMENTS APPLYING TO WORK PERFORMED IN THE PRESENCE OF PRIVATELY OWNED UTILITY FACILITIES.

**(NO TEXT ON THIS PAGE)**

## **JB-PAGES TABLE OF CONTENTS**

- SECTION A. JOINT BID CONTRACT REQUIREMENTS AND STANDARD SPECIFICATIONS
- SECTION B. NYCDDC INFRASTRUCTURE DIVISION JOINT BID UTILITY PRICE LIST
- SECTION C. JOINT BID SPECIAL SPECIFICATIONS
- SECTION D. PRIVATE UTILITIES PARTICIPATING LIST
- SECTION E. PRIVATE UTILITIES SCOPE OF WORK
- SECTION F. PRIVATE UTILITIES TEST PITS AND SKETCHES
- SECTION G. PRIVATE UTILITY DRAWING LIST

**SECTION A. JOINT BID CONTRACT  
REQUIREMENTS AND STANDARD  
SPECIFICATIONS**

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## **SECTION A.1 - Requirements for Joint Bid Work**

A. Definitions. Additional terms are defined in Standard Construction Contract.

1. "Business Days" will mean Monday through Friday, excluding holidays.
2. "City Facility(ies)" will mean any facility owned by the City, including, but not limited to, roadways, streets, highways, parkways and other thoroughfares, bridges, sewers, culverts, catch basins, chutes and water mains.
3. "Joint Bid Project(s)" will mean a construction project that the City and Utilities agree will be awarded in accordance with applicable law and will include both City Facilities and Utility Facilities.
4. "Pre-engineer" or "Pre-engineering" will mean a process undertaken by the Utilities on all Joint Bid Projects whereby the Utilities will determine and mark-out current Utility Facilities, and design the location and/or re-location of Utility Facilities in a manner that is to the extent practicable, efficient and cost-effective for both the City and the Utilities to avoid or ameliorate disturbances to the City Facilities and the Utilities Facilities, and in which the City and Utility participate in prior to the award of a Joint Bid Project contract.
5. "Public Work" will mean the following: (a) construction, reconstruction, installation, alteration, maintenance, repair, grading, re-grading, regulating and improvement of roadways, highways, streets, parkways and other thoroughfares, and bridges and (b) similarly for sewers, culverts, catch basins, chutes and water mains.
6. "Shared Items" will mean the bid items in the City's construction contract in which the total cost will be paid for by the City and the Utilities in accordance with their share as mutually agreed upon.
7. "Specialty Contractor" will mean a contractor provided and paid for by the Utility, and includes the Utilities' in-house field forces.
8. "Specific Public Work Items" will mean a detailed set of specifications prepared by the City based on the City's engineering, design and plans that will represent the Public Work portion of the Joint Bid Project and it is these unit price items and quantities related to the Public Work that will be bid upon and evaluated by the City for the Public Work portion of the City's construction contract.
9. "Specific Shared Items" will mean a detailed set of specifications prepared by the City based on the City's engineering, design and plans that will represent the Shared Items portion of the Joint Bid Project and it is these unit prices and quantities related to Shared Items that will be bid upon and evaluated by the City for the Shared Items portion of the City's construction contract.
10. "Specific Utility Work Items" will mean a detailed set of specifications prepared by the Utilities based on the Utility's Pre-engineering that will represent the Utility Work portion of the Joint Bid Project. The Specific Utility Work Items are composed of the Joint Bid Fixed Sum Items and Joint Bid Specialty Items, as described in Section A.2 below.

11. "Utility Facility(ies)" will mean the property owned by the Utilities, including, but not limited to, pipes, poles, conduits, wires, lines and other facilities, structures or property of the Utilities that may be below ground, at ground-level or above ground, that could disturb or interfere with the Public Work.
  12. "Utility" or "Utilities" will mean the utility entities participating in this Joint Bid Project.
  13. "Utility Work" will mean such work as is required to be performed by the Contractor during the performance of Public Work, as defined herein, in order to maintain, protect, support, shift, alter, relocate, remove, construct, and/or replace Utility Facilities at the Utilities' expense.
- B. The City is bidding jointly this Contract. The City has combined its Public Work and Utility Work into one bid contract package. All prospective bidders should be alerted to the fact that the City prepared all specifications, drawings, and all other necessary contract documents for the Public Work and Utility Work.
  - C. The City has prepared contract documents which include specifications, drawings and all other necessary contract documents for the Public Work and Utility Work. The bid items, specifications, and estimated quantities have been designed to fully compensate the Contractor for its costs to perform the Public Work and Utility Work.
  - D. The Contractor agrees that its bid prices and the NYC Utility Price List prices for the Public Work and Utility Work will include all incremental costs and/ or additional compensation for performing Public Work and Utility Work including: coordination of its work with the Utilities, loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, demobilization, remobilization, added cost or expense, loss of profit, other damages or impact costs that may be suffered by the Contractor because of direct or indirect obstructions due to the presence of Utility Facilities, such as conduits, ducts or duct banks containing conductors for live and/or abandoned electric, telephone, cable TV, any type of communication cables, "Non Cost Sharing" gas mains and services, steam mains, and various non-hazardous encasement materials or utility structures located within the Public Work project area.
  - E. In the bid solicitation documents, the City has provided estimated quantities for both Specific Public Work Items, Specific Utility Work Items, and Specific Shared Items. Bidders are required to bid a unit price on all Work in the Bid Schedules. For the purposes of identifying the lowest responsive and responsible bidder, a bidder's unit prices bid must be calculated based on all Work, which includes the combined Specific Public Work Items, the Specific Utility Work Items, and the Specific Shared Items.
  - F. If the Utility determines that the Contractor is not qualified or best suited to perform a specific scope of Utility Work, the Utility has the right to utilize their Specialty Contractors. If the Contractor claims that delays were caused by a Utility for failure to supply and/or provide Specialty Contractors in a timely manner, then the Contractor may bring a claim against the Utility. To the extent the Contractor claims that a delay was caused by a Utility, the Contractor will be limited to bringing such legal action in a court of law and may not seek arbitration over any delay claims or delay-related claims. If the Contractor and Utility initiate a legal action against each other, this legal action will be outside the jurisdiction of the City's Contract Dispute Resolution Board process and the City will not be a party in the litigation process. Neither the Contractor nor the Utility may bring a delay claim against the City through either a

court of law or the City's Contract Dispute Resolution Board process. Refer to the Standard Construction Contract for additional details. The Contractor must allow the Utility's Specialty Contractors to have reasonable access to the work area with prior notice and may, with the exception of the Utilities' in-house field forces, condition such access on proof of insurance acceptable to the Engineer.

- G. The Lower Manhattan Joint Bid Agreement, dated June 6, 2006, shall not apply to this project. The Contractor agrees that the Utilities are third-party beneficiaries of the contract for a Joint Bid Project, and that the Utilities shall be entitled to rely upon and enforce any and all terms and conditions of the Contract for a Joint Bid Project as it pertains to the Contractor and the performance of the Public Work, Shared Items, and Utility Work.



## **SECTION A.2 – Price List Method**

A. This Contract has been prepared using the Price List Method. The Price List Method consists of all of the following.

1. The Contractor bids on the items listed in the Bid Schedule (“Bid Items”)
2. The Contractor agrees that the prices listed for items in the Price List (“PL Items”) represent full and complete compensation for the Specific Utility Work Items listed in the NYC Utility Price List. The NYC Utility Price List prices are fixed for the duration of the Contract, regardless of any time extensions.
3. The Bid Schedule contains Joint Bid Fixed Sum Items (“JB FS Items”) that will be used for payment of Utility Work. These items may include:

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>
JB-FS-AL	ALTICE JB FIXED SUM	F.S.
JB-FS-CC	CROWN CASTLE JB FIXED SUM	F.S.
JB-FS-CE	CON EDISON JB FIXED SUM	F.S.
JB-FS-EX	EXTNET JB FIXED SUM	F.S.
JB-FS-NG	NATIONAL GRID JB FIXED SUM	F.S.
JB-FS-LI	LIPA-PSEG JB FIXED SUM	F.S.
JB-FS-RC	RCN JB FIXED SUM	F.S.
JB-FS-SP	CHARTER-SPECTRUM-TW JB FIXED SUM	F.S.
JB-FS-VZ	ECS-VERIZON JB FIXED SUM	F.S.

4. If this Contract contains Specialty JB items that are not covered by the NYC Utility Price List (“JB Specialty Items”), the Contractor will bid on the JB Special items listed in the separate JB Specialty Item Bid Schedule. For clarity, standard City items that are not used in the Bid Schedule may be used as JB Specialty Items.

B. Any costs that are to be paid for by the Utility will be paid according to the JB FS Items, whether the work is a Bid Item, PL Item, or JB Specialty Item.

C. There is no restriction as to which items may be used to pay for Utility Work – any Bid Item, PL Item (regardless of the utility), or JB Specialty Item (regardless of the utility) may be used. Utility may use any applicable item from the Bid Items, the PL Items, or the JB Specialty Items, whether for anticipated or unanticipated Utility work, regardless of whether the item is considered or defined as a City item, such Utility’s item, or another Utility’s item. In consultation with the Utilities, the Engineer is responsible for verifying the applicability of items proposed for use by the Utilities in accordance with any agreement in effect between the City and the Utilities. The arbitrator(s) under Section A.4 shall have the sole and exclusive authority to determine which items are applicable should there be a dispute between any Utility and the Contractor on such issue.

D. Quantities of work to be paid for under the JB FS Items must be tracked separately from the quantities of work paid for under the Bid Items. The method and format of separate tracking must be submitted to the Engineer for review and processing.

E. Overruns:

1. Bid Items: Quantities of Bid Items paid for according to the JB FS Items are not overruns for the purpose of Standard Construction Contract Article 26.1. However, if the City negotiates a new unit price for an item per Article 26.1, that new unit price will also be used for payment under the JB FS Items.

2. JB FS Items: The City will not pay the Contractor directly when there is an overrun of the JB FS Items, except when the City's RE determines that such overruns are caused by field conditions impacting planned City work, or scope of work changes. Overruns not paid by City will be paid directly to Contractor by the Utility at the established unit rate for the Bid Items, the PL Items, or the JB Specialty Items and according to the same retainage requirements as applicable between the City and the Contractor. In order to facilitate the shared cost reconciliation between the City and the Utilities, the Contractor must provide details of all payments from the Utilities. These details must include the items, quantities, and amounts that are covered by the payment.

In the event that funds are insufficient in the Utility budget code to continue payments under the JB FS Item, the Engineer may determine that all future payments under the JB FS Item are overruns, and will be paid directly to the Contractor by the Utility as specified in the paragraph above.

#### F. Extra Work:

1. If during construction the Contractor encounters utility facilities interferences or utility scope of work that it believes is not covered by the Contract, then the Contractor must immediately notify the City and the Utility in writing, describing the nature and location of the extra work in question. The Utility then has five (5) business days to investigate the conditions and then either:
  - i. Advise the Contractor and the City in writing that no interference with its facilities exists at the location in question, and hence that the Contractor may proceed with City work without providing for any impact from Company facilities;
  - ii. Advise the Contractor and the City in writing that the Contract items provide for the scope of work encountered, specifying the exact unit items that cover the work;
  - iii. Advise the Contractor and the City in writing that it intends to perform the necessary utility work with Utility forces or with Specialty Contractors, but not limited to, relocating its facility out of the way of the proposed City work. In this case, the Utility must provide a written schedule for the performance of the utility work it proposes to perform, which shall be subject to approval by the City based on its impact to the Contractor's currently approved progress schedule. Upon approval of the Utility's schedule by the City, the Contractor must provide access to the worksite to the Utility and/or any Specialty Contractors hired by it to perform this utility work. If necessary, the City may grant a contract time extension for delays caused by the performance of such utility work by the Utility.
  - iv. Reasonably specify in writing the scope of work to be performed by the Contractor on behalf of the Company that is not covered under the Contract, including, but not limited to, relocating, supporting, and/or protecting the Utility's facilities, and/or shifting the City facility if approved by the Engineer, and/or otherwise changing its operations to work in the presence of the Utility's facilities. Should the Utility elect this option, it must adequately define and provide an initial price offer for the work required to be performed.
2. For items not included in the Bid Items, PL Items, or JB Specialty Items ("Utility Extra Work"), the Utility and the Contractor will directly negotiate unit rates, lump sum amounts, or agree to payment on a Time and Material Basis. In this case, the

requirements above for overruns apply for payment. The Utility may select whether the Extra Work will be paid under the appropriate JB FS Item or paid directly from the Utility, unless such payment would cause an overrun of the JB FS Item and the Extra Work will be paid directly from the Utility. In this case, the requirements above for overruns apply for payment. If Extra Work agreed to on a Time and Material Basis is not calculated in accordance with Article 26 of the Standard Construction Contract, this Extra Work must be paid directly to the Contractor by the Utility.

In order to facilitate the shared cost reconciliation between the City and the Utilities, the Contractor must provide details of all payments from the Utilities. These details must include the items, quantities, and amounts that are covered by the payment.

G. Overtime on Utility Work:

The Contractor will be paid under this article for Utility Work deemed necessary by the Commissioner (in consultation with the Utility) to accelerate Specific Utility Work Items during critical periods. Such accelerated Utility Work includes:

- A. 100% of the premium portions of overtime pay for working during non-scheduled work hours which must be defined as those hours of work outside the permissible hours stated in the original contract OCMC Traffic Stipulations; or,
- B. The premium portion of overtime pay for overtime actually worked beyond the 40-hour work week but within the permissible hours of work stated in the original contract OCMC Traffic Stipulations; or,
- C. All other incidental expenditures caused by modifications of project site regulations or administrative requirements ordered by the Commissioner (in consultation with the Utility) that result in additional costs to perform Contract Work as specified.

Such accelerated Utility Work must be paid for under the appropriate JB FS Item in accordance with the requirements of Articles 25 and 26 of the Standard Construction Contract.

Payment made under this article must cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to accelerate the work as ordered by the Commissioner (in consultation with the Utility).

This article may only be applied to Utility Work performed prior to Substantial Completion of the Project.

### **SECTION A.3 - Standard Specifications for Joint Bid Work**

- A. The Contractor is be responsible for performing work in accordance with the Private Utilities reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", dated August 1, 2005, as amended below and in Section C.
- B. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 450, pages 56, 57, and 58;

Note: Items under JB 450 are task driven operation items and are not based on crew size. These items are divided into three unique types, each of which provides a description of applicability and typical use. The "Method of Measurement", on page 57, states that "The actual crew performing the operation will not be considered by the facility operator, in consultation with the Resident Engineer, when determining the applicable Unit Item Type, which will be only as per the task performed."

- C. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 225, page 10, Article A. Description;

Delete the last four lines of text in their entirety, beginning with the words: "accordance with Specification under Addendum #1, . . .";

Substitute the following revised text: "accordance with Specification Section 7.18 – Controlled Low Strength Material (CLSM), in the Standard Highway Specification. All backfill within the maximum excavation limits shown in Sketch No. JB 225 will be of controlled low strength material (CLSM) in compliance with requirements of Section 7.18, and its cost will be deemed included in this item."

- D. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 225, page 10, Article B. Materials;

Delete the first sentence in its entirety, beginning with the words: "Furnish Controlled Low Strength Material fill or backfill . . ."; Substitute the following revised sentence: "Furnish Controlled Low Strength Material fill or backfill as required and specified in Section 7.18 – Controlled Low Strength Material (CLSM), of the Standard Highway Specification."

- E. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 226, page 12, Article A. Description;

Delete the last five lines of text in their entirety, beginning with the words: "accordance with Specification under Addendum #1, . . .";

Substitute the following revised text: "accordance with Specification Section 7.18 – Controlled Low Strength Material (CLSM), in the Standard Highway Specification. All backfill within the maximum excavation limits shown in Sketch No. JB 225 will be of controlled low strength material (CLSM) backfill in compliance with Section 7.18 in the Standard Highway Specifications, and its cost will be deemed included in this item."

- F. Refer to the Private Utility reference document called "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR LOWER MANHATTAN", Specification for JB 226, page 12, Article B. Materials;

Delete the first sentence in its entirety, beginning with the words: “Furnish controlled low strength material fill or backfill . . .”;

Substitute the following revised sentence: “Furnish controlled low strength material fill or backfill as required and specified in Section 7.18 – Controlled Low Strength Material (CLSM), of the Standard Highway Specification.”

- G. Section JB 350 is not applicable and deemed deleted. The Contractor will not be paid separately to modify means and methods around overhead utilities; those costs must be included in the prices bid for all work.
- H. Section JB 900 is not applicable and deemed deleted.

SECTION A.4 – Resolution of Certain Disputes Arising Between the Contractor and the Utilities  
(Appendix “JB-A”)

A.1.0 Applicability. In recognition of the usefulness of a process of alternative dispute resolution for its efficiency, speed and cost-effectiveness in managing conflict and settling disputes that may arise under, or by virtue of, these special provisions of Joint Bidding, the City and Utilities have agreed to the procedures set forth in this **Appendix “JB-A.”** Accordingly, this **Appendix “JB-A”** will apply to disputes between the Contractor and the Utilities that arise in relation to this Contract, except for those disputes between the Contractor and the Utilities relating to delay claims, as described in Section A.1, Article F of these JB-Pages.

A.1.1 The Utilities’ Responsibilities. If the Utility identifies an issue in the payment requisition for the Utility Work, the Utility will immediately notify the City and the Contractor by a written notice. After sending such written notice, the Utility agrees to meet with the Contractor to resolve the issue. If the issue cannot be resolved, then the Utility or the Contractor will seek to resolve the issue through the arbitration process as set forth herein.

A.1.2 No Extra Or Disputed Work. If the Utility determines that the alleged extra Utility Work or the disputed Utility Work is part of the City’s Contract Documents and denies the Contractor’s claim or request for a change order, then after receiving the Utility’s written response, the Contractor will either accept the Utility’s determination or immediately seek to have the issue resolved through the arbitration process as set forth herein.

A.1.3 Extra Work. If the Utility determines that there is extra Utility Work, the extra Utility Work will be paid for based on the contract rates as set forth in A.2 of these JB-Pages. If all or a portion of the agreed upon extra Utility Work items are not in the contract rates, then the Utility and the Contractor will negotiate the cost of the extra Utility Work with each other with the understanding that the performance of Public and Utility Work will continue during all negotiations and discussions. If the parties reach an agreement on cost for the extra Utility Work, then the Contractor and the Utility will submit to the City’s RE a copy of the agreed upon prices together with supporting documentation. If the parties do not reach an agreement on cost for the extra Utility Work, then the parties will immediately arbitrate the issue as set forth herein.

A.2.0 Joint Bid Projects. Disputes that arise under this Appendix, as described above in paragraph A.1.0, will be resolved in accordance with the provisions of this **Appendix “JB-A”**. **Appendix “JB-A”** will NOT apply to any disputes between the City and the Contractor, or any disputes between the City and the Utilities. Since the arbitration of Utility interference disputes, as described in Article A.1.0 above, is a matter solely between the Utilities and the Contractor, and since the parties agree to reduce or eliminate any costs to the City relating to any arbitration pursuant to this **Appendix “JB-A”**, the parties hereby agree that:

A.2.1 The City will not be a party in the arbitration process;

A.2.2 Neither the Contractor nor the Utilities will call as a witness in the arbitration process any City employee, agent or consultant, including the City’s RE, his staff or City inspection personnel;

A.2.3 The City will not be responsible for any costs, fees or monetary awards or price adjustments associated in any way with the arbitration process described in this **Appendix “JB-A”**; and

A.2.4 Notwithstanding Articles A.2.1 and A.2.2, the City’s obligation to furnish information to the parties will be limited to those requests as set forth under the New York State Freedom of Information Law, as amended.

A.3.0 Pre-Arbitration Procedures.

A.3.1 Should a dispute arise between any Utility and the Contractor pursuant to Article A.1.0 of this Appendix, the disputing party will notify the City and the other party in writing within two (2) Business Days of the dispute that a dispute exists, and briefly describe; (i) the nature of the dispute; and (ii) the proposed resolution and rationale supporting its proposal.

A.3.2 After notifying the City of the dispute, the disputing parties will have fifteen

(15) Business Days to meet, discuss the issues, exchange documents and/or exchange offers with due diligence and in good faith in order to reach an agreement and resolve the dispute.

- A.3.3. If the disputing parties reach an agreement, they will immediately notify the City in writing that the dispute has been resolved and describe the terms of the resolution.
  - A.3.4. If the disputing parties have not reached an agreement within fifteen (15) Business Days of the date the City was first notified of the dispute, the Contractor will, within five (5) Business Days thereafter, submit to the Utility a written Final Offer, which will consist of: (i) a description (e.g., units and quantities) of all reasonable and necessary disputed work or extra work which the Contractor contends are not covered by application of the contract rates; and (ii) a detailed breakdown of the Contractor's proposed prices (e.g., unit prices and quantities) for such work.
  - A.3.5. Upon receipt of the Contractor's Final Offer, the Utility will, within five (5) Business Days, either accept the Contractor's Final Offer or submit to the Contractor a written Final Offer which will consist of: (i) a description (e.g., units and quantities) of all reasonable and necessary disputed work or extra work, if any; and (ii) a detailed breakdown of the Utility's proposed prices (e.g., unit prices and quantities) for such work, if applicable.
  - A.3.6. Once Final Offers have been exchanged by the parties, they may not be modified or withdrawn by either party except by mutual agreement or final settlement of the dispute.
  - A.3.7. Upon exchange of Final Offers, the Contractor will have three (3) Business Days, to either accept or reject the Utility's Final Offer. If the Contractor rejects the Utility's Final Offer, then either the Contractor or the Utility will submit the dispute to the American Arbitration Association ("AAA") to be resolved in accordance with the Construction Industry Arbitration Rules ("Rules") in effect on the date the arbitration is initiated, except as such Rules are modified herein.
  - A.3.8. Each of the steps described above will be a condition precedent to the obligations of the parties in succeeding steps. Since **Time is of the Essence**, should either party fail to comply with any of the pre-arbitration procedures described above, that party will be deemed to be in default. If, upon receipt of written notice of default by the other party, the defaulting party has not cured the default within three (3) Business Days, the other party may proceed to arbitration solely on the issue of whether the defaulting party was in default of these pre-arbitration procedures. If, after hearing evidence, the arbitrator(s) determine that the defaulting party was in default of these pre-arbitration procedures, then the arbitrator(s) will enter a final decision in favor of the other party in accordance with the Final Offer submitted by the other party or, if no Final Offer has been submitted prior to the default, according to the last written proposal submitted by the other party.
- A.4.0 General Provisions.
- A.4.1. The Utility agrees to pay for any disputed or extra Utility Work while the arbitration proceeding is pending based on the Utility's Final Offer.
  - A.4.2. All determinations by the parties required by this **Appendix "JB-A"** will be clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination.
  - A.4.3. The Utility agrees to copy the City on all communications involving the arbitration process and to notify the City of the final determination.
  - A.4.4. The Utility agrees to pay the Contractor directly for any final settlement for extra Utility Work that may be agreed to by the Utilities and the Contractor or any final award for extra Utility Work issued by the arbitrator(s), less credits for any payments previously made by the Utility to the Contractor.
  - A.4.5. All of the contract defined terms will apply here, as if they were re-stated herein.

- A.4.6 Since **Time Is Of The Essence** on all Joint Bid Projects, whenever there is a dispute pursuant to this **Appendix “JB-A”**, the terms of the City’s Construction Contract will remain in full force and effect, and the Contractor will continue performing all of the Contract Work and the Utility Work as directed by the City.
- A.4.7 The timeframes set forth herein have been established to ensure that the Joint Bid Project does not stop for any disputes between the Contractor and the Utility.
- A.4.8 All of the timeframes are measured in Business Days, which include Monday, Tuesday, Wednesday, Thursday and Friday, but exclude holidays.
- A.4.9 For all disputes that arise under **Appendix “JB-A”**, the City’s role will be limited to receiving copies of all written communications.
- A.4.10 The Contractor and all subcontractors hired by it agree to waive any rights they may have, if any, under law, equity, contract or otherwise to compel the City to assert any right the City may have, including the issuance of any directives or so-called “order outs” under the New York City Administrative Code, to require any or all of the Utilities to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove Utility facilities in connection with work to be performed under this contract. However, nothing in this Agreement will preclude the City from exercising its rights under the law, including the right to issue such a directive to a Utility.
- A.4.11 Each Utility will be named as an additional insured on all insurance policies required to be maintained by the Contractor in connection with the Joint Bid Project. The actual incremental cost, if any, to the Contractor of providing such insurance coverage will be borne by the Contractor. The Contractor will provide a written statement from its insurance provider documenting this added coverage to the Utility. Under no circumstances will the cost of insurance coverage on behalf of the Utility be borne by the City. Nothing in this paragraph will be interpreted to imply the City’s acceptance of any additional responsibility or liability for any matter related to the performance of Utility Work. In particular, with regard to any Utility Work performed in accordance with or through this **Appendix “JB-A”**, the Utility and the Contractor bear joint and full responsibility to ensure that any Utility Work performed by the Contractor is in compliance with all applicable government and Utility regulations.
- A.5.0 The Arbitration Procedures.
- A.5.1 Once the AAA has appointed an arbitrator(s), the arbitration will be scheduled as promptly as possible given the arbitrator(s) and the parties’ schedules.
- A.5.2 No later than fourteen (14) calendar days prior to the first day of arbitration, the Utility and Contractor will submit to the arbitrator(s), and to each other, a summary of each party’s respective position, all documentary, photographic or physical evidence on which the party intends to rely, and such other information as is deemed appropriate, along with a copy of each party’s “Final Offer” as described above.
- A.5.3 The arbitration will be conducted and concluded in two (2) days.
- A.5.4 On the morning of the first (1<sup>st</sup>) day of the arbitration, Contractor and/or representatives will have 3½ hours to make a presentation of its claim to the arbitrator(s). During its presentation, Contractor will not be permitted to produce any evidence that has not already been provided to the Utility and the arbitrator(s) pursuant to Paragraph A.5.2, above. Contractor will be permitted to produce any analysis or description of its claim that has been prepared for the purpose of its presentation.
- A.5.5 After the Contractor’s presentation, Utility and/or its representatives will have 2 hours to ask the Contractor questions about its claim and its presentation. Thereafter, the arbitrator(s) will have 2 hours to ask the Contractor questions about its claim and its presentation.



- A.5.6 On the morning of the second (2<sup>nd</sup>) day of the arbitration, Utility and/or its representatives will have 3½ hours to make a presentation of its claim to the arbitrator(s). During its presentation, the Utilities will not be permitted to produce any evidence that has not already been provided to the Contractor and the arbitrator(s) pursuant to Paragraph A.5.2, above. The Utility will be permitted to produce any analysis or description of its claim that has been prepared for the purpose of its presentation.
- A.5.7 After the Utility's presentation, the Contractor and/or its representatives will have 2 hours to ask the Utility questions about its claim and its presentation. Thereafter, the arbitrator(s) will have 2 hours to ask the Utility questions about its claim and its presentation.
- A.5.8 Subject to the above maximum time limitations set forth above, the arbitrator(s) may conduct the arbitration in such manner as the arbitrator(s) deems reasonable.
- A.5.9 The arbitrator(s) will then have one (1) week to select in writing, as the arbitrators' award, that party's Final Offer that appears to be more reasonable, based on the presentations at the arbitration hearings.
- A.5.10 The arbitrator(s) will have no discretion to grant an award other than one of the two (2) Final Offers submitted by the parties.
- A.5.11 The arbitration award will be final and binding upon the parties to the arbitration and judgment upon the award may be entered in a court having jurisdiction.
- A.5.12 Any award for work that has already been performed will be paid on the 7<sup>th</sup> day after receipt of the arbitrator's decision, or on the 30<sup>th</sup> day after completion of the work, whichever is later. Payment for work not yet completed at the time of the arbitrator's decision will be paid within thirty (30) calendar days of completion of work. Interest will accrue from the date payment is due at the rate of nine (9%) percent per annum. Either party may cause judgment to be entered in accordance with the decision of the arbitrator(s) in a court in the State of New York, County of New York.
- A.5.13 The Utility and the Contractor initially will share the arbitrator's(s') fees and any other costs of the arbitration equally. The non-prevailing party will then pay all arbitrator's(s') fees and costs of the arbitration and will reimburse the prevailing party for its share of such fees and costs theretofore paid.
- A.5.14 The parties may, at any time, settle any matter submitted to arbitration.
- A.5.15 Since **Time is of the Essence**, should any party, at any time after the dispute has been submitted for arbitration, materially fail to comply with: (i) the Rules, (ii) any of these arbitration procedures, or (iii) any procedural decisions by the arbitrator(s), then the arbitrator(s) will enter an order directing the party to cure its non-compliance within five (5) Business Days. If the party fails to comply with the order of the arbitrator(s) order within the five (5) Business Days, upon receipt of evidence that the non-complying party has failed to comply with the arbitrator's(s') order, the arbitrator(s) will enter a final decision in favor of the other party in accordance with the other party's Final Offer.

**END OF JB-PAGES SECTION A  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION B. NYCDDC INFRASTRUCTURE DIVISION  
JOINT BID UTILITY PRICE LIST**

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## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .1)	EACH	\$ 573
JB 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .2)	EACH	\$ 858
JB 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .3)	EACH	\$ 1,125
JB 100.4	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .4)	EACH	\$ 1,368
JB 100.5	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .5)	EACH	\$ 1,883
JB 100.6	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .6)	EACH	\$ 2,012
JB 100.7	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION (TYPE .7)	EACH	\$ 2,182
JB 101.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	EACH	\$ 2,862
JB 101.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	EACH	\$ 3,284
JB 101.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .3)	EACH	\$ 4,428
JB 101.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)	EACH	\$ 4,686
JB 101.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .5)	EACH	\$ 5,673
JB 101.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .6)	EACH	\$ 6,208
JB 101.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .7)	EACH	\$ 6,284
JB 102.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .1)	EACH	\$ 3,565
JB 102.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .2)	EACH	\$ 4,006
JB 102.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .3)	EACH	\$ 4,780
JB 102.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .4)	EACH	\$ 5,465
JB 102.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .5)	EACH	\$ 6,056
JB 102.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .6)	EACH	\$ 6,413
JB 102.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 24" TO 36" DIAMETER (TYPE .7)	EACH	\$ 7,526
JB 103.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .1)	EACH	\$ 4,178
JB 103.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .2)	EACH	\$ 4,910
JB 103.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMETER (TYPE .3)	EACH	\$ 6,109
JB 103.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMATER (TYPE .4)	EACH	\$ 7,183
JB 103.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMATER (TYPE .5)	EACH	\$ 8,594

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 103.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMATER (TYPE .6)	EACH	\$ 9,213
JB 103.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 36" TO 48" DIAMATER (TYPE .7)	EACH	\$ 9,832
JB 104.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .1)	EACH	\$ 4,601
JB 104.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .2)	EACH	\$ 5,088
JB 104.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .3)	EACH	\$ 6,071
JB 104.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .4)	EACH	\$ 6,821
JB 104.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .5)	EACH	\$ 7,943
JB 104.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .6)	EACH	\$ 8,311
JB 104.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 48" TO 54" DIAMETER (TYPE .7)	EACH	\$ 8,835
JB 105.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .1)	EACH	\$ 4,933
JB 105.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .2)	EACH	\$ 5,460
JB 105.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .3)	EACH	\$ 6,744
JB 105.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .4)	EACH	\$ 7,854
JB 105.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .5)	EACH	\$ 9,426
JB 105.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .6)	EACH	\$ 10,001
JB 105.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 54" TO 60" DIAMETER (TYPE .7)	EACH	\$ 9,372
JB 106.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .1)	EACH	\$ 5,156
JB 106.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .2)	EACH	\$ 5,689
JB 106.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .3)	EACH	\$ 7,013
JB 106.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .4)	EACH	\$ 8,152
JB 106.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .5)	EACH	\$ 9,659
JB 106.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .6)	EACH	\$ 10,240
JB 106.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 60" TO 72" DIAMETER (TYPE .7)	EACH	\$ 10,821
JB 107.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .1)	EACH	\$ 5,442
JB 107.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .2)	EACH	\$ 6,079
JB 107.3	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .3)	EACH	\$ 7,402

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 107.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .4)	EACH	\$ 8,592
JB 107.5	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .5)	EACH	\$ 10,314
JB 107.6	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .6)	EACH	\$ 10,709
JB 107.7	UTILITIES CROSSING TRENCH FOR SEWERS OVER 72" TO 84" DIAMETER (TYPE .7)	EACH	\$ 11,104
JB 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	EACH	\$ 873
JB 108.2	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .2)	EACH	\$ 1,503
JB 108.3	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .3)	EACH	\$ 2,139
JB 108.4	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .4)	EACH	\$ 2,733
JB 108.5	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .5)	EACH	\$ 3,186
JB 108.6	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .6)	EACH	\$ 3,568
JB 108.7	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .7)	EACH	\$ 4,373
JB 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	EACH	\$ 1,265
JB 109.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	EACH	\$ 1,758
JB 109.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	EACH	\$ 2,378
JB 109.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .4)	EACH	\$ 3,045
JB 109.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .5)	EACH	\$ 3,530
JB 109.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .6)	EACH	\$ 3,956
JB 109.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .7)	EACH	\$ 4,100
JB 110.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .1)	EACH	\$ 1,649
JB 110.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .2)	EACH	\$ 2,126
JB 110.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	EACH	\$ 2,744
JB 110.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .4)	EACH	\$ 3,466
JB 110.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .5)	EACH	\$ 4,055
JB 110.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .6)	EACH	\$ 4,663
JB 110.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .7)	EACH	\$ 5,453
JB 111.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .1)	EACH	\$ 2,054

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 111.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .2)	EACH	\$ 2,748
JB 111.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .3)	EACH	\$ 3,656
JB 111.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .4)	EACH	\$ 4,652
JB 111.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .5)	EACH	\$ 5,491
JB 111.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .6)	EACH	\$ 6,228
JB 111.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .7)	EACH	\$ 7,781
JB 112.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .1)	EACH	\$ 2,050
JB 112.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .2)	EACH	\$ 2,657
JB 112.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .3)	EACH	\$ 3,687
JB 112.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .4)	EACH	\$ 4,753
JB 112.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .5)	EACH	\$ 5,574
JB 112.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .6)	EACH	\$ 6,273
JB 112.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 48" AND UP TO 54" DIAMETER (TYPE .7)	EACH	\$ 7,413
JB 113.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .1)	EACH	\$ 2,361
JB 113.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .2)	EACH	\$ 3,198
JB 113.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .3)	EACH	\$ 4,249
JB 113.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .4)	EACH	\$ 5,340
JB 113.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .5)	EACH	\$ 6,135
JB 113.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .6)	EACH	\$ 6,914
JB 113.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 54" AND UP TO 60" DIAMETER (TYPE .7)	EACH	\$ 8,046
JB 114.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .1)	EACH	\$ 2,492
JB 114.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .2)	EACH	\$ 3,599
JB 114.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .3)	EACH	\$ 5,401
JB 114.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .4)	EACH	\$ 7,013
JB 114.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .5)	EACH	\$ 8,301
JB 114.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .6)	EACH	\$ 9,188

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 114.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 60" AND UP TO 72" DIAMETER (TYPE .7)	EACH	\$ 9,474
JB 115.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .1)	EACH	\$ 2,874
JB 115.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .2)	EACH	\$ 4,116
JB 115.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .3)	EACH	\$ 6,065
JB 115.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .4)	EACH	\$ 7,994
JB 115.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .5)	EACH	\$ 9,455
JB 115.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .6)	EACH	\$ 10,379
JB 115.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 72" AND UP TO 84" DIAMETER (TYPE .7)	EACH	\$ 10,742
JB 116.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .1)	EACH	\$ 3,118
JB 116.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .2)	EACH	\$ 4,480
JB 116.3	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .3)	EACH	\$ 6,478
JB 116.4	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .4)	EACH	\$ 8,628
JB 116.5	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .5)	EACH	\$ 10,236
JB 116.6	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .6)	EACH	\$ 11,263
JB 116.7	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 84" (TYPE .7)	EACH	\$ 11,627
JB 200	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	L.F.	\$ 190
JB 225.1A	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EACH	\$ 4,018
JB 225.1B	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES AT AN ADDITIONAL DEPTH OF UP TO 3 FEET	EACH	\$ 4,548
JB 225.2A	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EACH	\$ 2,009
JB 225.2B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES AT AN ADDITIONAL DEPTH OF UP TO 3 FEET	EACH	\$ 2,539
JB 225.3A	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EACH	\$ 1,845
JB 300A	SPECIAL CARE EXCAVATION AND BACKFILLING FOR TRANSMISSION MAINS (TRANSMISSION MAIN IS DESCRIBED AS ANY GAS MAIN WITH A MAOP GREATER THAN 124-PSIG)	C.Y.	\$ 312
JB 300.1	SPECIAL CARE EXCAVATION AND BACKFILLING IN TRENCH LESS THAN 5' DEEP	C.Y.	\$ 229

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 300.2	SPECIAL CARE EXCAVATION AND BACKFILLING IN TRENCH GREATER THAN 5' DEEP	C.Y.	\$ 265
JB 301	SPECIAL CARE EXCAVATION AND BACKFILLING FOR OIL-O-STATIC PIPE	C.Y.	\$ 316
JB 303	FURNISH, DELIVER AND INSTALL TYPE 3/8 CLEAN SAND BACKFILL	C.Y.	\$ 52
JB 306	SPECIAL CARE EXCAVATION AND BACKFILLING WITHIN A CITY TRENCH	C.Y.	\$ 272
JB 330E	SUPPORT AND PROTECTION OF UTILITY FACILITIES DURING EXCAVATION	L.F.	\$ 232
JB 330G	SUPPORTS FOR PARALLEL FULLY EXPOSED GAS MAINS IN TRENCH	EACH	\$ 1,629
JB 330T1	SUPPORT AND PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN PARALLELING COMMUNICATION FACILITIES LIE COMPLETELY IN THE PROPOSED CITY TRENCH	L.F.	\$ 157
JB 330T2.1	COMMUNICATIONS FACILITY OPERATOR(S) REQUESTS THE TRENCH BE WIDENED	L.F.	\$ 319
JB 330T2.2	COMMUNICATION FACILITY OPERATOR(S) REQUESTS THE TRENCH / SHEETING BE MODIFIED	L.F.	\$ 448
JB 351	INSTALL AND REMOVE "A" FRAME ON UTILITY POLES	EACH	\$ 1,416
JB 400	TEST PITS FOR UTILITY FACILITIES	C.Y.	\$ 242
JB 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	C.Y.	\$ 284
JB 401A	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES CONNECTED TO THE BASE PAVEMENT	C.Y.	\$ 349
JB 401AC	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF CABLE TV FACILITIES CONNCTED TO THE BASE PAVEMENT	C.Y.	\$ 96
JB 401AT	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF TELECOMMUNICATION FACILITIES CONNECTED TO OR NEAR THE BASE PAVEMENT	C.Y.	\$ 105
JB 402.1	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 64
JB 402.1A	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 73
JB 402.2	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 42



## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 402.2A	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 52
JB 402T.1	EXISTING CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 64
JB 402T.1A	EXISTING CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 69
JB 402T.2	EXISTING NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 46
JB 402T.2A	EXISTING NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 60
JB 402T.3	ACM REMOVAL AND DISPOSAL OF VERIZON/ECS CONDUITS WITH ASBESTOS CONTAINING MATERIAL TRANSITE PIPES (ACM-TP) UP TO AND INCLUDING 4" DIAMETER	L.F.	\$ 90
JB 402T.J1	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT - JOINTS BROKEN OUT AND CONDUITS REMAIN INTACT	L.F.	\$ 64
JB 402T.J1A	EXISTING CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT - JOINTS BROKEN OUT AND CONDUITS REMAIN INTACT	L.F.	\$ 72
JB 402T.J2	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT - JOINTS BROKEN OUT AND CONDUITS REMAIN INTACT	L.F.	\$ 53
JB 402T.J2A	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT - JOINTS BROKEN OUT AND CONDUITS REMAIN INTACT	L.F.	\$ 60
JB 402T.R1A	EXISTING CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 67
JB 402T.R2A	EXISTING NON - CONCRETE ENCASED STEEL/IRON CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 53
JB 402T.V1	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 65
JB 402T.V1A	EXISTING VACANT CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 45

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 402T.V2	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 54
JB 402T.V2A	EXISTING VACANT NON-CONCRETE ENCASED TELECOMMUNICATION CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 61
JB 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.	\$ 4
JB 403T.1	FURNISH AND INSTALL STEEL PROTECTION PLATES FOR UTILITY FACILITIES (1/4" THICK)	S.F.	\$ 16
JB 403T.2	FURNISH AND INSTALL STEEL PROTECTION PLATES FOR UTILITES FACILITES (3/8" THICK)	S.F.	\$ 20
JB 404	PIER & PLATE METHOD OF PROTECTION FOR DUCTILE IRON WATER MAINS AND OTHER SHALLOW FACILITIES	S.F.	\$ 664
JB 405.1	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS LESS THAN FIVE FEET	C.Y.	\$ 368
JB 405.2	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL TO OR GREATER THAN FIVE FEET, REQUIRING SHEETING	C.Y.	\$ 445
JB 406	EXCAVATION FOR UTILITY STRUCTURE	C.Y.	\$ 307
JB 410.1	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% (TYPE .1)	C.Y.	\$ 367
JB 410.2	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% (TYPE .2)	C.Y.	\$ 437
JB 410.3	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% (TYPE .3)	C.Y.	\$ 510
JB 410.4	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 60% AND UP TO AND INCLUDING 80% (TYPE .4)	C.Y.	\$ 630
JB 410.5	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES UP TO AND INCLUDING 20% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .5)	C.Y.	\$ 713
JB 410.6	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 20% AND UP TO AND INCLUDING 40% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .6)	C.Y.	\$ 747

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 410.7	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 40% AND UP TO AND INCLUDING 60% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .7)	C.Y.	\$ 828
JB 410.8	MASS TRENCH EXCAVATION FOR UTILITY FACILITIES OVER 60% AND UP TO AND INCLUDING 80% WITH TRENCH DEPTH EQUAL TO OR GREATER THAN FIVE FEET (TYPE .8)	C.Y.	\$ 910
JB 450.1	CONSTRUCTION FIELD SUPPORT - SURVEY CREW (TYPE .1)	CREW/HR	\$ 353
JB 450.2	CONSTRUCTION FIELD SUPPORT - SMALL SIZE CREW (TYPE .2)	CREW/HR	\$ 388
JB 450.3	CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .3)	CREW/HR	\$ 998
JB 450.4	CONSTRUCTION FIELD SUPPORT - LARGE SIZE CREW (TYPE .4)	CREW/HR	\$ 1,363
JB 450.5	CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .5) PIPE-RIPPING SUPPORT	CREW/HR	\$ 835
JB 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	L.F.	\$ 5
JB 501	REMOVAL OF ABANDONED MASONRY FOR UTILITY FACILITIES	C.Y.	\$ 308
JB 603E.1	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	\$ 4
JB 603E.2	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	\$ 8
JB 603T.1	INSTALL 1 EACH 2", 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 7
JB 603T.2	INSTALL 2 EACH 2", 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 14
JB 603T.3	INSTALL 4 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 23
JB 603T.4	INSTALL 6 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 45
JB 603T.5	INSTALL 8 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 61
JB 603T.6	INSTALL 12 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 91
JB 603T.7	INSTALL 15 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 113
JB 603T.8	INSTALL 24 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 182
JB 603T.9	INSTALL 30 EACH 4" OR 1-1/4" QUAD CONDUITS (PVC OR STEEL) IN ANY COMBINATION	L.F.	\$ 212
JB 636 EA	ADJUSTMENT OF UTILITY HARDWARE (UNDER 7" WIDTH)	EACH	\$ 212
JB 636 EB	ADJUSTMENT OF UTILITY HARDWARE (7" TO UNDER 14" WIDTH)	EACH	\$ 356
JB 636 EC	ADJUSTMENT OF UTILITY HARDWARE (14" TO UNDER 30" WIDTH)	EACH	\$ 905
JB 636 ED	ADJUSTMENT OF UTILITY HARDWARE (30" TO UNDER 34" WIDTH)	EACH	\$ 950

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 636 EE	ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	EACH	\$ 1,086
JB 636 EG	ADJUSTMENT OF UTILITY HARDWARE (41" TO UNDER 75" WIDTH)	EACH	\$ 1,222
JB 636 EH	ADJUSTMENT OF UTILITY HARDWARE (75" TO UNDER 125" WIDTH)	EACH	\$ 1,371
JB 636 EI	ADJUSTMENT OF UTILITY HARDWARE (125" TO UNDER 170" WIDTH)	EACH	\$ 1,512
JB 636 MA	ADJUSTMENT OF UTILITY HARDWARE 7" to 30" MILLING / RESURFACING	EACH	\$ 129
JB 636 MB	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (7" TO UNDER 14" WIDTH)	EACH	\$ 156
JB 636 MC	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (14" TO UNDER 30" WIDTH)	EACH	\$ 170
JB 636 MD	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (30" TO UNDER 34" WIDTH)	EACH	\$ 183
JB 636 ME	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (34" TO UNDER 41" WIDTH)	EACH	\$ 206
JB 636 MG	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (41" TO UNDER 75" WIDTH)	EACH	\$ 233
JB 636 MH	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (75" TO UNDER 125" WIDTH)	EACH	\$ 265
JB 636 MI	MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE (125" TO UNDER 170" WIDTH)	EACH	\$ 299
JB 636 R	REPAIR TO UTILITY STRUCTURES	C.Y.	\$ 267
JB 636 SA	CONCRETE COLLAR AROUND STEAM CASTINGS	S.F.	\$ 15
JB 636 SB	ADJUSTMENT TO UTILITY STEAM CASTINGS (UNDER AND INCLUDING 8" WIDTH)	EACH	\$ 243
JB 636 SC	ADJUSTMENT OF UTILITY STEAM CASTINGS (ABOVE 8" TO 34" WIDTH)	EACH	\$ 718
JB 638 N	INSTALLATION OF FIELD CONSTRUCTED UTILITIES STRUCTURES.	C.Y.	\$ 1,256
JB 638 NT	INSTALLATION OF FIELD CONSTRUCTED TELEPHONE/COMMUNICATIONS UTILITY STRUCTURE	C.Y.	\$ 3,539
JB 638 R	BREAK OUT AND REMOVE UTILITY STRUCTURE	C.Y.	\$ 686

## NYCDDC Infrastructure Division - Joint Bid Utility Price List

Item No.	Item Description	Unit	Price
JB 638 RT	BREAK OUT AND REMOVE TELEPHONE/COMMUNICATIONS UTILITY STRUCTURE CONTAINING ACTIVE CABLES	C.Y.	\$ 6,991
JB 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	C.Y.	\$ 95
JB 710.1	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, UP TO AND INCLUDING 12" DIAMETER PIPE	L.F.	\$ 16
JB 710.2	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON/ PLASTIC PIPES, OVER 12" AND UP TO AND INCLUDING 20" DIAMETER PIPE	L.F.	\$ 18
JB 710.3	REMOVAL OF ABANDONED UTILITY STEEL/CAST IRON PIPE, STRUCTURE OPENINGS GREATER THAN 20"	L.F.	\$ 45
JB 711	USE SHEETING LINE AS FORM	L.F.	\$ 7
JB 781	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	EACH	\$ 1,609
JB 798	MODIFICATION OF NON-CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	L.F.	\$ 331
JB 799	MODIFICATION OF NON-CONCRETE YOKE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES	L.F.	\$ 105
JB 800	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	L.F.	\$ 248
JB 801	MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	L.F.	\$ 126
JB 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	S.F.	\$ 5
JB 802B	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	L.F.	\$ 12
JB 803.1	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH RDWY REMOVAL (LINE CUT ASPHALT)	L.F.	\$ 11
JB 803.2	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS (LINE CUT ANY COMBINATION OF ASPHALT AND CONCRETE ROADWAY)	L.F.	\$ 22
JB 803.3	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ASPHALT, CONCRETE AND BELGIAN BLOCK ROADWAY REMOVAL OPERATIONS	L.F.	\$ 31

**END OF JB-PAGES SECTION B  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION C. JOINT BID SPECIAL  
SPECIFICATIONS**

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## Guideline Document for Public Improvement

## CONST- 029 Revision Number 4

Purpose: To update the Public Improvement Contractor Guideline document for safe entry into Sub-Surface Structures and moving energized underground cables.

Revision Date: 7-30-2020 Next Revision Due 7-30-2022  
Date:

Supersedes Date: 6-30-2018 Revision Cycle  
Period: Once every 2 years

TYPE	NAME	DATE
EH&S	Glenn D. Newell	7/30/2020
Technical	Joseph Bedell, Joseph Bedell Jr. John Stefandl & Marlon Kalloo	7/30/2020
Legal	Inna Rozenberg	7/30/2020

Summary of Changes:


1. Updated Reference Section to Include OSHA 1926 Subpart V
2. Removed Section on Moving Energized U.G. Cables Located Inside Sub-Surface Structures. (Previously Section 4.0 in Revision 3)
3. Updated/Revised Sections 1.4, 2.1, 2.2.2, 3.4, 3.6, 3.8, 3.9, 4.5.5, 4.7 & 4.7.1
4. Added New Section 4.5.4 – HDPE Conduit
5. Added New Chapter 5.0 – Breaking Out a Point of Entry (POE)

Training Requirements - N/A

DOJT/Course #, etc. Associated with this Operating Document:

None

Subject Matter Expert: Marlon Kalloo Approved Date: 7/30/2020 

Approver Name: Theresa Kong Approved Date: 7/30/2020 



**Consolidated Edison Company of New York, Inc.**

**Guideline**

**For**

**Safe Entry into Sub-Surface Structures  
(Electrical Enclosed Space),**

**Moving Energized Underground Cables**

**Removal of Conduit from Cables, and**

**Breaking Point of Entry (POE's) Into Sub-Surface Structures**

**Performed by**

**Municipal Contractors**

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- 1.1 - Competent Person
- 1.2 - Attendant
- 1.3 - Electrical Enclosed Space
- 1.4 - CET Specification
- 1.5 - JB Specification
- 1.6 - Public Improvement Representative
- 1.7 – Municipal Contractor
- 1.8 - Electrically Competent Qualified Municipal Contractor

**2.0 - References**

- 2.1 – OSHA Sections 1910.269 & 1926 Subpart V
- 2.2 - Training
  - 2.2.1 – Electrically Competent Qualified Municipal Contractor
  - 2.2.2- Municipal Contractor Employee

**3.0 - Safe Entry into Sub-Surface Structures. (Electrical Enclosed Space)**

- 3.1 - Purpose
- 3.2 - Application
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**4.0 - Removal of Conduit from Cables and Moving Energized Underground Cables Located Outside of Subsurface Structures**

- 4.1 – Purpose
- 4.2 – Application
- 4.3 – Guideline
- 4.4 – Job Briefing
- 4.5 - Removal of Conduit from Cables
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**5.0 - Breaking Out a Point of Entry (POE’s) in an Electrical Enclose Space**

- 5.1 – Activities Prior to creating POE’s
- 5.2 – Creation of POE Operations

## 1.0 **Definitions**

- 1.1 **Competent Person-** As a general rule, a Competent Person is an individual who, by way of training and/or experience, is knowledgeable of OSHA and other applicable standards, is capable of identifying workplace hazards relating to the specific operation, and is designated by the employer with the authority to take all appropriate actions necessary to comply with all applicable standards and properly address hazards. Some OSHA standards add additional specific requirements that must be met by the Competent Person.
- 1.2 **Attendant** - An authorized individual who is stationed outside a sub-surface structure or an Electrical Enclosed Space to monitor the authorized entrants and to perform duties assigned including providing assistance to individual inside the sub-surface structure or Electrical Enclosed Space.
- 1.3 **Electrical Enclosed Space** – OSHA defines an Electrical Enclosed Space as a working space, such as a manhole, vault, tunnel, service box, or shaft, used for the operation and maintenance of electric power generation, transmission, and distribution lines and equipment. An Electrical Enclosed Space has a limited means of egress or entry, and is designed for periodic entry under normal operating conditions. Under normal conditions, an Electrical Enclosed Space does not contain a hazardous atmosphere, but may contain a hazardous atmosphere under abnormal conditions.
- 1.4 **CET Specification** – CET Specification defining private utility work within Municipal Construction Contracts.
- 1.5 **JB Specification** – Joint Bid specification defining private utility work within a NYC DDC Capital contract.
- 1.6 **Public Improvement Representative** - Con Edison employee, (Inspector, Construction Representative, Chief Construction Inspector, Project Specialist, or Manager) assigned to the Public Improvement section.
- 1.7 **Municipal Contractor** – Construction municipal contractor performing work for Municipal, State or other Public Agencies or Authorities.
- 1.8 **Electrically Competent Qualified Municipal Contractor** - is a Municipal Contractor employee designated and documented by the Municipal Contractor employer, in writing, as the electrically competent and qualified person who, by way of training and/or experience has the skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment, can identify non-insulated conductors from insulated conductors and/or cables and has the knowledge of the precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools that are required for working on or near exposed energized electrical equipment. The Electrically Competent Qualified Municipal Contractor employee is capable of identifying varying workplace electrical hazards relating to the specific operation and has the authority to take appropriate actions, as required. In order to meet the task specific qualifications of this guideline, the Electrically Competent Qualified Municipal Contractor employee must be familiar with this document and be able to demonstrate adherence.

## 2.0 References

2.1 **OSHA Section 1910.269 – Electric Power Generation, Transmission & Distribution & 1926 Subpart V –Electric Power Transmission and Distribution**

2.2 **Training-** The OSHA Office of Training and Education (OTE) develops, directs, oversees, manages and ensures implementation of OSHA's national training and education policies and programs in support of OSHA's strategic goals with the objective of reducing occupational hazards through direct intervention, promoting a safety and health culture through compliance assistance, cooperative programs and strong leadership and maximizing OSHA effectiveness and efficiency by strengthening capabilities and infrastructure.

All Municipal Contractor employees shall be trained in and familiar with the safety-related work practices, safety procedures, and other safety requirements in section 1910.269(a)(2) and 1926 Subpart V that pertains to the Municipal Contractor employees' respective job assignments. Municipal Contractor employees' shall also be trained in and familiar with any other safety practices, including emergency procedures, such as manhole rescue, that are not specifically addressed by this referenced section but that is related to their work and is necessary for their safety.

Con Edison manhole inspection and underground awareness training can be scheduled through the Con Edison TLC upon request of the municipal contractor. OSHA 10 certification cards and CPR / First Aid training are prerequisites.

**2.2.1** Electrically Competent Qualified municipal contractors shall also be trained and competent in:

- a- The skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment
- b- The skills and techniques necessary to determine exposed live parts from other parts, (determination of non-insulated conductors from insulated conductors / cables).
- c- The knowledge of the precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools that are required for working on or near exposed energized parts of electrical equipment. Generally, the Municipal Contractor will not be required to work on or near exposed/non-insulated energized parts of electrical equipment or cables. In the event special conditions exist requiring working near exposed/non insulated energized parts of electrical equipment or cables, the Municipal Contractor shall cease working and immediately contact the authorized Con Edison Inspector so that a further assessment of the condition can be evaluated, and appropriate guidance provided.
- d- The Electrically Competent Qualified Municipal Contractor employee shall determine, through regular supervision and through inspections conducted on at least an annual basis that each Municipal Contractor employee is complying with the safety-related work practices outlined in this guidance document.

**2.2.2** A Municipal Contractor employee shall receive additional training (or retraining) by the Electrically Competent Municipal Contractor under any of the following conditions:

- a- If the Electrically Competent Qualified Municipal Contractor employee indicates that the Municipal Contractor employee is not complying with safety-related work practices
- b- If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those which the Municipal Contractor employee would normally use
- c- If the Municipal Contractor employee must employ other safety-related work practices that are not normally used or that require modification from those stated in this guidance document

Note: OSHA requires retraining before commencing with a task that has not been performed within one year.

The required training shall be of the classroom and/or on-the-job type. The training shall establish Municipal Contractor proficiency in the work practices required and shall introduce the procedures necessary for compliance. The Electrically Competent Qualified Municipal Contractor shall certify that each Municipal Contractor employee has received the training required and retains records of this training to be supplied upon request by Con Edison.

### **3.0 Safe Entry into Sub-Surface Structures, (Electrical Enclosed Space)**

**3.1 Purpose:** To establish a guideline that shall be employed for safe entry into Con Edison sub-surface structures by Municipal Contractors.

**3.2 Application:** Municipal Contractor personnel

**3.3 Guideline:** This guideline provides the requirements for practices that shall be employed for safe entry into Con Edison sub-surface structures. Municipal Contractor personnel requiring entry into Con Edison sub-surface structures shall adhere to this guideline.

### **3.4 Inspection/Testing**

Prior to entry into a Con Edison sub-surface structure, properly trained and qualified Con Edison electrical personnel must conduct an inspection. The assessment will determine if the condition of the electrical facilities contained therein is sufficient to allow need based unrestricted access. Con Edison electrical personnel shall validate that the Con Edison sub-surface structure inspected is approved for need based unrestricted access. The Con Edison Inspector shall communicate and document to an Electrically Competent Municipal Contractor personnel any safety precautions to be taken and that the subsurface structure is safe for entry. Any condition deemed to be un-safe through this formal inspection process would preclude granting access.

An inspection must take place daily prior to Municipal Contractor entry. Once the cover is placed on the electric subsurface structure another inspection must occur prior to Municipal Contractor entry. Inspections include but are not limited to:

- 1) Testing for stray voltage by a qualified Con Edison employee or qualified Municipal Contractor employee.
- 2) Completion of atmospheric testing.
- 3) Determination that it is safe to enter the space.
- 4) A visual inspection for any abnormalities previously defined.
- 5) Communication of inspection results and hazards to the Con Edison inspectors and the municipal contractor supervisor.

### **3.5 Job Briefing**

The Electrically Competent Qualified Municipal Contractor in charge shall conduct a job briefing with the municipal contractor's employees involved before they start the job. The briefing shall cover: the hazards associated with the job; work procedures involved; special precautions; and personal protective equipment requirements. The Electrically Competent Qualified Municipal Contractor shall instruct that all cables are to be treated as energized. Additional briefings shall be held if significant changes, which might affect the safety of the municipal contractor's employees, occur during the course of the work. The Electrically Competent Qualified Municipal Contractor shall document completion of the job briefing. A copy of the documented job briefing should be available upon request by Con Edison.

### **3.6 Attendants**

While work is performed in a Con Edison sub-surface structure, a Municipal Contractor Attendant shall be available in the immediate vicinity to render emergency assistance. Sub-surface structure Attendants shall comply with applicable OSHA requirements.

### **3.7 Hazardous Atmosphere**

Municipal Contractor personnel shall perform a hazardous atmosphere test before entry into any Con Edison sub-surface structure and perform continuous air monitoring in compliance with applicable OSHA requirements. Any atmospheric reading deemed to be un-safe would prohibit access to the structure. The Municipal Contractor shall immediately notify the authorized Con Edison Inspector.

### **3.8 Personal Protective Equipment**

Municipal Contractor personnel requiring entry into Con Edison sub-surface structures shall refer to and comply with applicable OSHA requirements regarding the use of Personal Protective Equipment when performing this work. In addition, Con Edison is requiring that Municipal Contractor personnel assigned to work inside Con Edison sub-surface structures shall at all times wear Flame Resistant (FR) Clothing with a rating of 8 cal/cm<sup>2</sup> or HR2, a retrieval harness and that a retrieval device be on location. In addition, an atmospheric tester

must be in use continuously anytime a structure is occupied. See section 3.9 for Matrix on Con Edison's Personal Protective Equipment Guideline.

### 3.9 Con Edison Personal Protective Equipment Guideline

	Task	Class 0 Gloves	FR Clothing	FR Hood	Blast Goggles	Face Shield	Safety Glasses
1	Pavement breaking	N	N				Y
2	Breaking out concrete encased duct	Y	Y				Y
3	Moving energized primary cables that are located outside a structure while in proximity to joints	Y	Y	Y	Y		
4	Moving primary cables outside a structure (no joints involved)	Y	Y				Y
5	Moving energized secondary cables	Y	Y				Y
6	Hand excavate to locate precast ducts	N	N				Y
7	Hand excavate to locate direct buried cables	Y	Y				Y
8	Removing cable from conduit	Y	Y				Y
9	Breaking structure for POE from outside/inside	Y	Y			Y	Y
10	Breaking sub-structure walls	Y	Y				Y
11	Pulling rope within structure with energized cable	Y	Y				Y
12	Pulling rope in enclosed spaces	Y	Y				Y
13	Building a bench or platform within a subsurface structure to support or protect cables.	Y	Y				Y
14	Breaking out unknown precast electric duct	Y	Y				Y
15	Using digging bar over electric facility	Y	N				Y
16	Using digging bar over direct buried cables	Y	Y				Y
17	Using Pneumatic clay digger in vicinity of electric facility	Y	Y				Y
18	Installing forms for field-constructed subsurface structures from inside the designed footprint when connected cables are present	Y	Y				Y
19	Installing forms for field-constructed subsurface structures from outside the designed footprint when connected cables are present	N	N				Y
20	Installing forms for field-constructed subsurface structure prior to first energization of new cables	N	N				Y
21	Saw cutting operation	Y	N				Y
22	Hand excavate to locate cable fault	Y	Y				Y
23	Hand excavating to find service dead leg	Y	Y				Y
24	Removing underground silo	Y	Y				Y
25	Regrade	Y	N				Y
26	Build/remove shunt box w/ energized cable inside	Y	Y				Y

### 3.10 Access

Municipal Contractor personnel shall not climb into or out of Con Edison subsurface structures by stepping on cables or hangers.

#### **4.0 Removal of Conduit from Cables and Moving Energized Underground Cables Located Outside of Subsurface Structures**

**4.1 Purpose:** Establish a guideline that shall be employed by Electrically Competent Qualified Municipal Contractor personnel, meeting OSHA training requirements, when removing conduit from cables and moving Con Edison energized underground cables located outside structures.

**4.2 Application:** Municipal Contractor personnel

**4.3 Guideline:** This guideline details the requirements for practices that shall be employed when moving Con Edison energized underground cables located outside of Con Edison structures. Movement of energized cables on the Con Edison system shall be performed in accordance with the following directions. Only Electrically Competent Qualified Municipal Contractor personnel who have been trained and meet necessary OSHA requirements for moving energized underground cables and in accordance with the following directions shall perform movement of energized cables on the Con Edison system.

#### **4.4 Job Briefing**

The Electrically Competent Qualified Municipal Contractor in charge shall conduct a job briefing with the Municipal Contractor's employees involved before they start the job. The briefing shall cover: the hazards associated with the job; work procedures involved; special precautions; and personal protective equipment requirements. The Electrically Competent Qualified Municipal Contractor shall instruct that all cables are to be treated as energized. Additional briefings shall be held if significant changes, which might affect the safety of the Municipal Contractor's employees, occur during the course of the work. The Electrically Competent Qualified Municipal Contractor shall document completion of the job briefing.

#### **4.5 Removal of Conduit from Cables**

All subsurface electric cable systems and related components shall be considered energized. Caution shall always be employed whenever conduits are opened to expose the interior cable.

##### **4.5.1- Pre-cast Concrete Conduit**

- a- The conduit shall be fractured by striking the top end corner of the conduit with a 3 lb. hammer equipped with a non-conductive handle. When fracturing the conduit, all impact/chipping action shall be performed in such a manner so as to be directed across the top of the conduit away from any cable that may be inside of the conduit.
- b- A small piece of the concrete conduit shall be chipped away so that a visual examination of the interior of the conduit can be made to verify the presence of cable. All impact/chipping actions shall be performed in such a manner so as to be directed across the top of the duct, away from the cable.



- c- If cable is present, concrete-chipping operations shall continue until enough material has been removed to permit insertion of a non-conductive protective shield barrier between the conduit and cable or as directed by the authorized Con Edison Inspector based on existing field conditions. Material such as exterior grade plywood or lumber (min. thickness  $\frac{3}{4}$ " ) or suitably reinforced plastic sheet material (min. thickness 0.060" – e.g. Norplex Micarta RT504 NEMA Grade G-3) shall be used for this purpose. This shield material shall provide protection for the cable during the remaining conduit removal operations. The remainder of the conduit shall be fractured using the 3 lb. hammer equipped with a non-conductive handle. Care shall be taken so as to avoid any impact upon the cable, either by direct or indirect hammer blows.
- d- During and after conduit removal operations, cable/conduit shall be properly supported as indicated in Section 5.7, below.

#### **4.5.2 - Concrete Encased Conduit**

- a- The concrete encased conduit (including but not limited to pre-cast, fiber, tile, clay), shall be fractured by striking the top end corner of the conduit with a 3 lb. hammer equipped with a non-conductive handle. When fracturing the conduit, all impact/chipping action shall be performed in such a manner so as to be directed across the top of the conduit away from any cable that may be inside of the conduit.
- b- For concrete encased conduit, it may be necessary to employ a handheld cold chisel (in conjunction with the 3 lb. hammer) to remove concrete encasement. If a chisel is utilized, all impact/chipping actions shall be performed in such a manner so as to be directed across the top of the duct, away from the cable.
- c- If the concrete encasement is so dense as to render the use of a hammer and handheld chisel non-effective, an 8-pound sledgehammer may be employed. If neither of these devices proves effective, the use of a pneumatic chipping hammer will be permitted. The weight/size of the pneumatic chipping hammer shall not exceed 20 lbs. When utilizing a pneumatic chipping hammer, the device shall be securely positioned and be under close operator control at all times. The tool bit used for these operations shall be chisel shaped with a minimum width of two (2") inches. All impact/chipping actions shall be performed in such a manner so as to be directed across the top of the duct, away from the cable.
- d- A small piece of the concrete conduit shall be chipped away so as to permit verification of the presence of cable inside the conduit.
- e- If cable is present, concrete-chipping operations shall continue until enough material has been removed to permit insertion of a non-conductive protective shield barrier between the conduit and cable or as directed by the authorized Con Edison Inspector

based on existing field conditions. Material such as exterior grade plywood or lumber (min. thickness  $\frac{3}{4}$ " ) or suitably reinforced plastic sheet material (min. thickness 0.060" – e.g. Norplex Micarta RT504 NEMA Grade G-3) shall be used for this purpose. This shield material shall provide protection for the cable during the remaining conduit removal operation.

- f- After installation of the shield material has been completed, continue removal of remaining conduit and encasement, using handheld and power tools.
- g- During and after conduit removal operations, cable/conduit shall be properly supported as indicated in Section 5.7, below.

#### **4.5.3 – Wood Conduit**

- a- Wooden conduit shall be split using a handheld cold chisel and a 3 lb. hammer equipped with a non-conductive handle. All impact/chipping action shall be performed in such a manner so as to be directed across the top of the conduit away from the cable.
- b- The chisel shall use to create a small window in the conduit that will permit a visual inspection of the conduit interior for the presence of cable.
- c- If cable is present, wood conduit material shall continue to be removed until enough material has been removed to permit insertion of a non-conductive protective shield barrier between the conduit and cable or as directed by the authorized Con Edison Inspector based on existing field conditions. Material such as exterior grade plywood or lumber (min. thickness  $\frac{3}{4}$ " ) or suitably reinforced plastic sheet material (min. thickness 0.060" – e.g. Norplex Micarta RT504 NEMA Grade G-3) shall be used for this purpose. This shield material shall provide protection for the cable during the remaining conduit removal operation.
- d- After installation of the shield material has been completed, continue removal of remaining conduit
- e- During and after conduit removal operations, cable/conduit shall be properly supported as indicated in Section 5.7, below.

#### **4.5.4 – HDPE Conduit**

- a- HDPE conduit shall be split using hand tools or a handheld pneumatic rotary cutting tool. All splitting/cutting actions shall be performed in such a manner so as to be directed across the top of the duct, away from the cable.
- b- Pneumatic Rotary Cutting Tool – A pneumatic rotary cutting tool shall be used to score an access area in the surface of the conduit., Prior to application of the cutting tool to the surface of the

conduit, the depth collar on the pneumatic rotary cutting tool shall be set so that the cutting bit will penetrate approximately  $\frac{3}{4}$  of the wall thickness of the conduit. After the conduit has been cut to the maximum depth allowable (such that the bit does not fully penetrate the thickness of the conduit), a 3 lb hammer shall be used to knock out the access area (window) outlined by the cutting tool. This will permit visual inspection of the conduit interior for the presence of cable.

- c- If inspection of the interior of the conduit reveals that cable is present, a non-conductive protective shield barrier shall be inserted into the conduit between the conduit and cable. This shield material shall provide protection for the cable during the remaining conduit removal operations. Material such as exterior grade plywood or lumber (min. thickness  $\frac{3}{4}$ " ) or suitably reinforced plastic sheet material (min. thickness 0.060" – e.g. Norplex Micarta RT504 NEMA Grade G-3) shall be used for this purpose. This shield material shall provide protection for the cable during the remaining conduit removal operations.
- d- If inspection of the conduit interior does not reveal the presence of cable, the remaining conduit may be removed using the tool choices mentioned in 4.5.4.a.

#### **4.5.5 - Metal Conduit**

- a. When removing metal conduit, the Municipal Contractor should first excavate and expose a collar connecting two sections of conduit. Once the collar is accessible, split and/or cut the collar off to inspect the conduit interior for the presence of cable. If a metal conduit collar is NOT easily accessible, or found within 20 to 40 feet of open excavation, proceed to section 4.5.5.b. Note: If the work to be performed is in response to a suspected natural gas leak or in the presence of natural gas, only the use of non-powered hand tools is allowed. Further guidance will be provided by Gas Engineering.
- b. If a collar connecting two sections of conduit cannot be found, metal conduit will be split using hand tools and/or a handheld rotary cutting tool. All splitting actions will be directed across the top of the conduit, away from the cable. Note: If the work to be performed is in response to a suspected natural gas leak or in the presence of natural gas, only the use of non-powered hand tools is allowed. Further guidance will be provided by Gas Engineering.
- c. Score the outline of an access area onto the surface of the conduit. Do not fully penetrate the conduit with the tool while making this outline.
- d. Use this outline as a guide for further splitting and cutting operations that will eventually create a viewing window into the conduit.

- e. If inspection of the conduit interior reveals the presence of cable, insert a non-conductive protective barrier between the cable and conduit wall. The barrier will provide physical protection for the cable during remaining conduit removal operations. Materials including, but not limited to, exterior grade plywood, lumber, and Norplex Micarta are acceptable. After the installation of the non-conductive protective barrier, the removal of the remaining conduit may proceed using the tool choices mentioned in section 5.5.4b.
- f. If inspection of the conduit interior does not reveal the presence of cable, the remaining conduit may be removed using the tool choices mentioned in section 4.5.5b.

#### **4.6 Visual Inspection**

- a- A visual inspection of cables located outside Con Edison structures that will be moved, shall be performed by Electrically Competent Qualified Municipal Contractor personnel or the authorized Con Edison Inspector.
- b- After the conduits have been broken out (removed from the cables), the exposed cable(s) shall be inspected by the Electrically Competent Qualified Municipal Contractor personnel.
- c- The cables shall be visually inspected by the Electrically Competent Qualified Municipal Contractor personnel, and determined to be free from any of the defects that would prevent relocation. Cable(s) shall be free of cracks, tears, and evidence of oil stains, swelling, or melting of the insulation. Cables shall not have any exposed conductor.

#### **4.7 Cable Moving Operations – Outside Structures**

- a- Prior to moving any cables outside of a subsurface structure, the cables located within the associated connecting subsurface structures shall be inspected in accordance with the guideline requirements for moving cables within Con Edison sub-structures.
- b- Municipal Contractor personnel experienced in moving Con Edison cables only shall move cables.
- c- Cables shall not be moved until plastic “fair-leaders” are positioned at the duct edges to prevent chaffing damage.
- d- Synthetic web slings having a minimum width of two (2) inches shall support cables that have been removed from conduit. Slings shall be used in a basket hitch configuration.
- e- Conduits housing cables shall be supported using slings, cable, or rope. Conduits shall be supported in such manner as to maintain alignment with one another.
- f- Maximum distance between support points shall be four (4) feet.

- g- To prevent inadvertent over bending of the cables, the maximum vertical or horizontal offset between supports shall be one foot (1') for cable that is supported outside of conduit. For cable that is being moved while still installed in conduit, the conduit shall not be offset more than one foot per four-foot section of conduit.
- h- Each set of cables (cables from one duct/conduit) shall be moved individually. Cables from multiple ducts/conduits shall not be moved as a bundle.
- i- Relocation of cables shall be performed in a careful manner with the movement of cable under complete control at all times. There shall be no sudden movements of the cable or the conduit that contains cable.
- j- An observer shall be positioned so as to determine proper slack in structures and to ensure that joints remain properly supported on rack arms and specified offsets are maintained. This observation shall be performed from outside of the structure while the cable is being moved.
- k- Allowable horizontal and vertical offsets shall be determined based on applicable CET or JB item sketches and/or as directed by the authorized Con Edison Inspector.
- l- Cables shall not be permitted to fall freely from temporary supports.
- m- All cables supported by slings shall be visually inspected at the beginning and end of each work shift to ensure that no cracks, leaks, or other defects have developed.
- n- Cables shall be repositioned with care when being moved into their final position for the installation of split conduit.

#### **4.7.1 Personal Protective Equipment**

Municipal Contractor personnel moving Con Edison energized cables shall refer to and comply with applicable OSHA requirements regarding the use of Personal Protective Equipment when performing this work. See Section 3.9 for Matrix on Con Edison's Personal Protective Equipment Guideline.

### **5.0 Breaking Out a Point of Entry (POE's) in an Electrical Enclosed Space**

#### **5.1 Activities Prior to creating POE's**

- 5.1.1** Prior to creating POE's, the location of all conduit and cable passing through the section of the wall shall be visually identified and protected inside structure.
- 5.1.2** If any cables are required to be moved prior to creation of a POE, they shall be moved by properly trained and qualified Con Edison electrical personnel.

## 5.2 Creation of POE Operations

**5.2.1** Using caution, expose the exterior section of the wall that you intend to create the POE (typically done in 2' – deep vertical sections) by carefully excavating on the outside of the structure.

**5.2.2** When there is a potential for contact between the existing cables that have been visually identified and the tool being used to break out the POE, protect the cables using fire rated wood, phenolic board, cable shields or other acceptable non-conductive materials. Along with protecting the cable from coming in contact with the implement being used for breaking, cables on the walls in the POE area shall also be protected from falling debris using FR wood even if there is no potential for contact with said cables.

**5.2.3** Once the following conditions have been satisfied:

**5.2.3.1** Location of cables inside the structure and the associated conduit outside have been verified.

**5.2.3.2** Protection of cable on both the inside and the outside of the structure walls

**5.2.3.3** Structural integrity of the proposed POE area has been confirmed using hand tools

Then use the appropriate tool (up to and including a 90 lb. jackhammer) to create the POE on the section of structure wall that was previously prepared.

**5.2.4** If a jackhammer is being used for the POE breakout operation, where feasible, support the tool from underneath to prevent slippage.

**5.2.5** Where possible, the use of a 90 lb. jackhammer shall be avoided within 8" of a live conduit. If the competent person determines that the breakout can only be made using a jackhammer within 8" of live conduit, a physical barrier must be placed between the jackhammer and all facilities that could possibly come in contact with the jackhammer. The Municipal Contractor may then begin utilizing the 90 lb. jackhammer using a 3" bit or wider.

**CON EDISON MODIFIED SPECIFICATIONS**

The specifications listed below supersede the specifications found in the "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR MANHATTAN".

<b>Specification</b>	<b>Superseded Specifications</b>
JB 802	JB 802A & JB 802B

## **JB 802 - SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS AND SIDEWALKS**

### **A. Description**

Under this Section, the Contractor shall be required to modify work methods of installing new curb and sidewalk in order to maintain, protect and accommodate the integrity of private Utility Facilities located within a zone of protection immediately beneath existing sidewalk and curb designated to be replaced under other Contract items. The zone of protection shall define an area of curb and sidewalk where: work is within the vicinity of private Utility Facilities as shown on the Special Care Excavation Plan or where utilities are encountered during construction that are within 18 inches of either face of curb and/or 12 inches of the base material of proposed curb and/or sidewalk.

### **B. Materials – N/A**

### **C. Method of Operation/Construction**

Once clearances have been verified by available records to the satisfaction of the facility operator, the Contractor shall exercise extreme caution to install new curb and sidewalks within zoned areas of protection. Exercising extreme caution shall mean utilizing appropriate methods of operation/construction, special operations and sequencing, and by employing hand labor, using hand held tools only, under the personal direction of the appropriate facility operator. The work shall incorporate, but not be limited by, the following restrictions:

#### **1. Removal of Existing Curb and Sidewalk**

Removal of existing curb and sidewalk material shall be performed by saw cutting the curb and sidewalk, for a depth of not less than 2", to assist the Contractor in breaking up the concrete curb and sidewalk for removal by hand. Curb and sidewalk removal shall be done with hand labor, using hand held tools only while working from adjacent undisturbed sidewalk and/or pavement. Furthermore, it shall be understood to mean that digging and/or excavating directly with power-mechanized earth moving equipment will not be permitted. Power mechanized earth moving equipment may only be used as a depository of material removed from the excavation by hand as described above. All equipment, methods, and maintenance and protection provisions shall require full authorization by the facility operator.

#### **2. Preparation and Installation of New Curb and Temporary and New Sidewalk**

Backfilling, filling, grading of sub base, and installation of new curb and both temporary and new sidewalk, as required under other Contract Items, shall be performed utilizing materials, equipment and methods of construction that will insure the integrity of the private utility facilities and at the same time meet all requirements for this work as specified in other sections of this contract.

#### **3. Compaction**

The Contractor shall compact all sub-grade and new sub-base materials by utilizing native and/or blended fill material, equipment and methods of construction that will ensure integrity of private Utility Facilities and at the same time meet all requirements for compaction as specified in Section 4.11 of the Standard Highway Specifications.



#### **4. Powered Excavating Equipment Limitations**

The Contractor shall not employ powered or mechanical excavating equipment within the zone of protection. Powered or mechanical excavating equipment may only be used as a depository for material removed from the excavation by hand as described above.

The Contractor shall not be permitted to store, stand and/or travel equipment/vehicles on specified unpaved zoned protection areas.

#### **D. Method of Measurement**

##### **1. JB 802A**

The quantity of "Special Care Excavation and Restoration for Sidewalk Work" to be measured for payment shall be the number of square feet (S.F.) of new sidewalk actually installed under other contract items within the zone of protection areas requested by the facility operator. For payment purposes, the horizontal limits for a zone of protection area shall be defined as the area designated on the plans or an area equal to the length of the designated facility multiplied by its width plus 18 inches on each side. Where overlapping of zones occur due to multiple facilities, the area will be modified to one zone measured from the outside limits. Where the 18-inch area falls beyond the curb line the outside boundary shall be the curb line.

##### **2. JB 802B**

The quantity of "Special Care Excavation and Restoration for Curb Work" to be measured for payment shall be equal to the number of linear feet (L.F.) of new curb actually installed under other contract items within the zone of protection areas requested by the facility operator.

**E. Price to Cover****1. JB 802A**

The contract price per square foot for "Special Care Excavation and Restoration for Sidewalk Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required for excavation and disposal of pavement, base and all other material to new sub-grade within and adjacent to zone of protection areas; saw cutting, grading, preparation of sub-grades, backfilling and compaction within zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting and accommodating the integrity of private Utility Facilities during the performance of sidewalk reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

**2. JB 802B**

The contract price per linear foot for "Special Care Excavation and Restoration for Curb Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required to install new curbs and temporary restoration material under other Contract items, within and adjacent to zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting, and accommodating the integrity of private Utility Facilities during the performance of curb reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

Payment for all work specified herein shall be made on a one-time basis only; no payment will be made for the same area of sidewalk or length of curb more than one time. When the installation of curb and sidewalk are performed as separate operations on the same location, payment shall be made separately for each operation. In addition, work under these items shall not be paid in combination with other utility items.

**F. References**

1. Section 4.11 Standard Highway Specification

## VERIZON MODIFIED SPECIFICATIONS

The specifications listed below supersede the specifications found in the "JOINT-BIDDING SPECIFICATIONS AND SKETCHES FOR MANHATTAN".

<b>Specification</b>	<b>Superseded Specifications</b>
JB 225	JB 225.1A, JB 225.1B, JB 225.2A, JB 225.2B, & JB 225.3A
JB 300	JB 300.1 & JB 300.2
JB 401	JB 401
JB 351T	N/A
JB 402T.3	JB 402T.3
JB 402T	JB 402T.1, JB 402T.1A, JB 402T.2, JB 402T.2A, JB 402T.J1, JB 402T.J1A, JB 402T.J2, JB 402T.J2A, JB 402T.R1A, JB 402T.R2A, JB 402T.V1, JB 402T.V1A, JB 402T.V2, & JB 402T.V2A
JB 403T	JB 403T.1 & JB 403T.2
JB 405	JB 405.1 & JB 405.2
JB 450	JB 450.1, JB 450.2, JB 450.3, JB 450.4, & JB 450.5
JB 603T	JB 603T.1, JB 603T.2, JB 603T.3, JB 603T.4, JB 603T.5, JB 603T.6, JB 603T.7, JB 603T.8, & JB 603T.9
JB 636 E	JB 636 EA, JB 636 EB, JB 636 EC, JB 636 ED, JB 636 EE, JB 636 EG, JB 636 EH, & JB 636 EI
JB 636 M	JB 636 MA, JB 636 MB, JB 636 MC, JB 636 MD, JB 636 ME, JB 636 MG, JB 636 MH, & JB 636 MI
JB 638 NT	JB 638 NT
JB 638 RT	JB 638 RT
JB 798	JB 798
JB 799	JB 799
JB 800	JB 800
JB 801	JB 801
JB 802	JB 802A & JB 802B
JB 803	JB 803.1, JB 803.2, & JB 803.3

## **JB 225 – INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES**

### **A. Description**

Under this section, the Contractor shall provide all incremental labor, materials, equipment, insurance and incidentals required to support and/or protect the integrity of utility facilities required during the excavation, installation and removal of catch basins within maximum excavation limits shown on sketch JB 225. This shall include but not be limited to the following types of utility facilities:

1. Conduits
2. Cables
3. Concrete encased conduit duct banks
4. Steel pipes
5. Steam facilities
6. Oil-o-static facilities, and
7. Non-Cost sharing gas facilities

encroaching the catch basin excavation and sheeting lines as described further in this section and attached sketch JB 225.

### **B. Materials**

Furnish slurry fill or backfill as required. All materials used to support and protect utility facilities shall be as indicated on standard Sketches JB 100A, JB 100B, JB 100C, JB 100C-1, JB 100D, JB 100E and JB 100F, contained elsewhere in these specifications, shall be supplied by the Contractor and approved by the facility operator(s).

### **C. Methods of Construction**

The Contractor shall use sheeting methods that permit maintenance, support and protection of all utility facilities covered by this section. It is the intent of this item to support, maintain and protect any and all combinations and configurations of utility facilities located within limits indicated on sketch JB 225. For the construction of Type III catch basins, the spillway shall be constructed in a separate stage where the excavation limits may be waived after the basin structure has been installed and backfilled. Excavation for the spillway shall not exceed 3' beyond the exterior finished surface of the proposed spillway. Excavation method for spillway construction shall be done by hand. Utility facilities located within the catch basin footprint, are not covered by this section and shall be removed or adjusted by the Contractor under other JB items or by facility operator at their own expense. This section shall then cover the adjusted facilities.

Utility facilities located beyond the established maximum payment limits are not affected by work specified and shall not be disturbed during any type of catch basin installation and/or removal. Contractor shall be solely and totally responsible for support, maintain and protect, any disturbances and/or any damages to such facilities at his expense. The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick

and shovel and/or hand held power tools) directly below the pavement base to expose the facilities and to ascertain the spatial relationships and/or dimensions of these utilities with respect to the proposed excavation. Upon exposing the affected utilities as determined solely by the facility operator(s), the Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, within a zone of protection whose limit shall be defined as a perimeter located one foot from the outside face of each utility interference.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be each basin where utility facilities are located within the limits indicated on sketch JB 225. Utility facilities located within the catch basin footprint shall be removed or adjusted by the contractor under other JB items. This section shall then cover the adjusted facilities. Payment will be made only one time at locations where a new catch basin is to be installed at the same location as a preexisting catch basin as specified on contract drawings. For the purpose of this item, "same location" shall mean within 10ft of the preexisting basin location.

JB 225.1A – Installation and removal of catch basins with utility interferences (EA)

JB 225.1B – Installation and removal of catch basin with utility interference at an additional depth of up to 3 feet (EA)

JB 225.2A – Installation of catch basins with utility interferences (EA)

JB 225.2B – Installation of catch basins with utility interferences at an additional depth of up to 3 feet (EA)

JB 225.3A – Removal of catch basins with utility interferences. This item shall be applied only in situations where the catch basin is being removed and not replaced. This item requires complete removal of the catch basin including the floor. (EA)

#### **E. Price to Cover**

For JB items 225.1A & 225.2A – The price shall cover the cost of all labor, material, equipment, insurance and incidentals necessary to completely support and protect and maintain the integrity of the utilities without disruption of service to the customers and in accordance with other types of utility items. The price shall also include the cost of: supports, slings and beams installed for utility support; changes of sheeting method and configuration where necessary to accommodate the utility; a combination of hand and machine excavation within the payment limits specified; the disposal of excess backfill material; the placing of backfill material adjacent to catch basins within the maximum payment limits shown on sketch JB 225; backfilling and compacting around over, under and in between utility facilities; installation and removal of sheeting around facilities; support and protection of utility facilities encountered during construction of the spillway. The price shall also cover any additional excavations including hand and hand and machine excavations under and in between single and multiple facilities; and/or in between utility facilities and other existing structures. The unit price shall be deemed to cover all incremental cost for all labor, material, equipment, and incidentals necessary to excavate, install and/or remove specified catch basins while completely supporting, protecting, maintaining and/or adjusting the catch basin to accommodate the integrity of the encroaching utility facilities without disruption of service to the customers in accordance with the contract documents. All cost to support maintain, protect, and accommodate the integrity of utility facilities shall be deemed included in the price for this item. The price shall also cover all additional restricted excavating, sheeting, backfilling, and

compaction around, over, under, and between utility facilities and all other existing structures and/or newly installed and/or removed catch basin.

For JB items 225.1B and .2B – The price to cover shall include all work as described in price to cover for JB 225.1A and .2A plus installation of the catch basin at an additional depth of up to three feet. Payment for all work herein specified shall be made on a one-time basis only; no payment for work herein specified shall be made for the same area more than one time. Payment will be made only one time if the Contractor elects to install new basins next to existing basins to accommodate their operations. No payment will be made for the removal of the existing basins if performed at a later sequence.

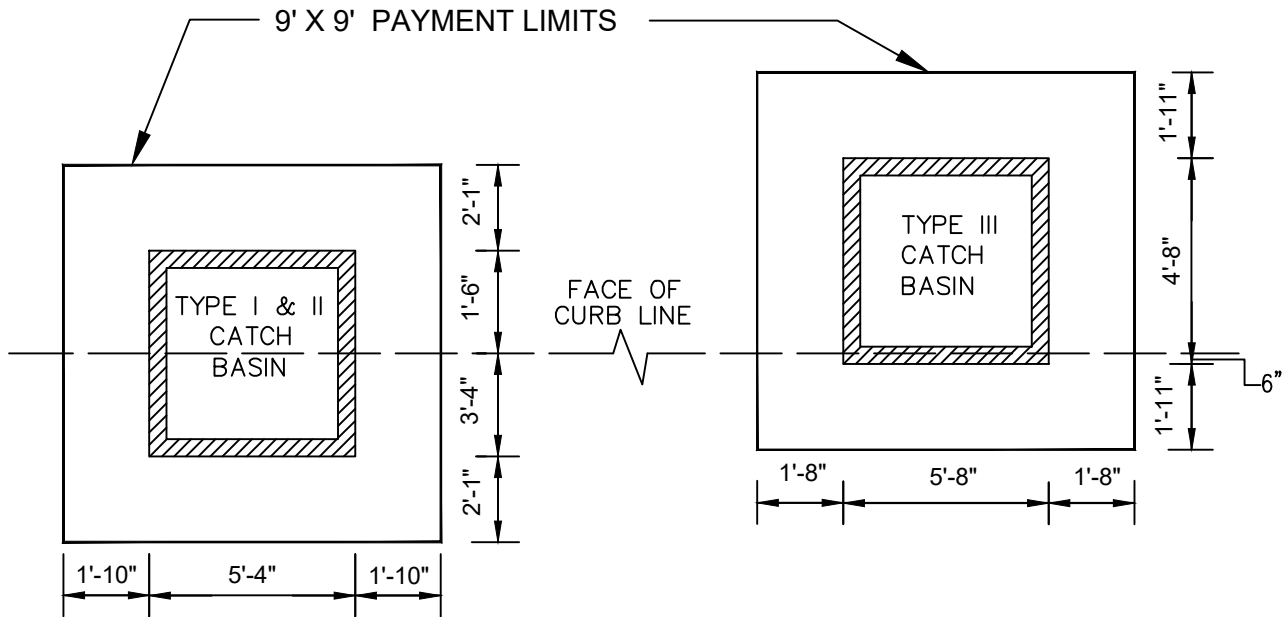
For JB items 225.1A, .1B, .2A, and .2B - if tight sheeting is not utilized for the installation of the catch basin this JB pay item shall be reduced by 60%.

For JB item 225.3A – The price to cover shall include all work as described in price to cover for JB 225.1A and .2A plus the modification of means and methods for the removal of catch basins using hand tools including but not limited to chipping guns and jack hammers when work is performed in the presence of utility facilities within the excavation limits as outlined in sketch JB 225.

Payment for all work herein specified shall be made on a one-time basis only; no payment for work herein specified shall be made for the same area more than one time. Payment will be made only one time if the Contractor elects to install new basins next to existing basins to accommodate their operations. No payment will be made for the removal of the existing basins if performed at a later sequence.

## **F. References**

1. Sketches JB 225, JB 100A, JB 100B, JB 100C, JB 100C-1, JB 100D, JB 100E and JB 100F
2. NYS Industrial Code Rule 753



CATCH BASIN ORIENTATION TO CURB LINE WITH PAYMENT LIMITS CONCENTRIC TO BASINS  
N.T.S.

JB 225 PAY LIMITS

CATCH BASIN TYPE	DIMENSION TO UTILITY FACILITY PARALLEL FROM FACE OF CURB INTO STREET	DIMENSION TO UTILITY FACILITY PARALLEL FROM FACE OF CURB INTO SIDEWALK	DIMENSION TO UTILITY FACILITY PERPENDICULAR TO CURB FROM FACE OF CATCH BASIN
TYPE I & II TYPE III	3'-6" TO 5'-5" 0'-8" TO 2'-5"	1'-8" TO 3'-7" 4'-10" TO 6'-7"	0'-2" TO 1'-10" 0'-2" TO 1'-8"

NOTES:

FOR EXCAVATIONS GREATER THAN 9'X9', THE CONTRACTOR SHALL SUPPORT ALL UTILITIES AS SPECIFIED UNDER THE VARIOUS ITEMS WITH NO ADDITIONAL COMPENSATION FROM THE IMPACTED UTILITIES. PAYMENT UNDER THIS ITEM SHALL INCLUDE MODIFICATION OF SHEETING METHODS TO SUPPORT UTILITY FACILITIES PARTIALLY WITHIN THE PAYMENT LIMITS SPECIFIED.

ACCOMODATION OF UTILITY FACILITIES DURING CATCH BASIN INSTALLATIONS

LAST REVISION  
2/27/2016

SKETCH NO.  
JB 225

## **JB 300 - SPECIAL CARE EXCAVATION AND BACKFILLING**

### **A. Description**

Under this section, the Contractor shall provide all incremental labor, materials, equipment, insurance and incidentals required for trench excavation when protecting and maintaining and accommodating the integrity of utility facilities, including but not limited to:

1. Conduits
2. Cables
3. Structures
4. Concrete encased conduit ductbanks
5. Steel pipes
6. Steam facilities
7. Non-cost sharing gas facilities

of various sizes and configurations, encroaching (partially exposed) or paralleling (not exposed) within 6 inches of the approved city trench lines for all phases of contract excavation as shown on contract drawings and/or as encountered during construction, except excavations to the ultimate depth for curbs, sidewalks and roadway/base/sub-base removal which are covered under other JB items. This item shall also apply to facilities that cross excavations for water service installation and extensions or excavations for water tap searches. The items specified under this section shall not be measured for payment in conjunction with any other types of utility items. All work shall be performed in accordance with contract plans, specifications, sketches JB 300A and JB 300B and at the direction of the facility operator(s).

### **B. Materials** – N/A

### **C. Method of Construction**

The Contractor shall maintain and protect and accommodate the integrity of all utility facilities encroaching/paralleling within excavations as schematically shown on sketches JB 300A and JB 300B. The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (i.e. pick and shovel or hand held power tools) directly below the pavement base to expose the facilities and ascertain the spatial relationships and/or dimensions of these utilities with respect to the proposed excavation. Upon exposing the affected utilities sufficiently as determined solely by the facility operator(s), the Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, within a zone of protection whose limit shall be defined as a perimeter located one foot from the outside face of each utility encroaching.

### **D. Method of Measurement**

The unit price for this work item shall be based on the volume (C.Y.) of special care excavation calculated as follows:

- For paralleling facilities (not exposed) within six inches of city trench line: The area for payment shall be measured horizontally from the face of the excavation plus one foot towards the center



of trench and vertically from bottom of the roadway to the bottom of the trench, multiplied by the length of the paralleling utility facility as indicated in sketches JB 300A and JB 300B.

- For encroaching facilities: The area for payment shall be measured horizontally as the width of the encroaching facility plus one foot towards the center of the trench and vertically from the bottom of the roadway to the bottom of the trench, multiplied by the length of the encroaching utility facility as indicated in sketches JB 300A and JB 300B.
- For facilities crossing water service excavations: Depth as defined above multiplied by the width taken as the outside diameter width of structure plus one foot on either side, multiplied by the length of the exposed facility inside the trench.

The volume calculation shall in all cases include, the volume occupied by the utility proper within the payment area described above. Overlapping volume dimensions measured as described above may occur when multiple utilities are encroaching trench excavations. In such cases, all such utilities shall be counted as one utility limited by the maximum encroachment of pipes, conduit(s), and conduit banks faces. The volume shall then be calculated as described above and shown on sketches JB 100E, JB 300A and JB 300B. Utilities identified as abandoned by the facility operator prior to beginning of excavation, are not included for payment under this item.

JB 300.1 – Special care excavation and backfilling for utility facilities in city trenches less than 5' in depth

JB 300.2 – Special care excavation and backfilling for utility facilities in city trenches 5' or greater in depth

#### **E. Price to Cover**

The price shall cover the cost of all labor, material, equipment, insurance and incidentals necessary to completely protect and maintain and accommodate the integrity of the facilities without disruption of service to the customers and in accordance with contract documents. The price shall also include the cost of modifications to typical work methods, including water tap search excavations and the use of such methods as hand excavation around existing single and multiple facilities; backfilling and compaction around, over and under the utilities including the use of special methods, installation and removal of sheeting from around the facilities, and traffic plates that may be required to temporarily close and/or complete the work.

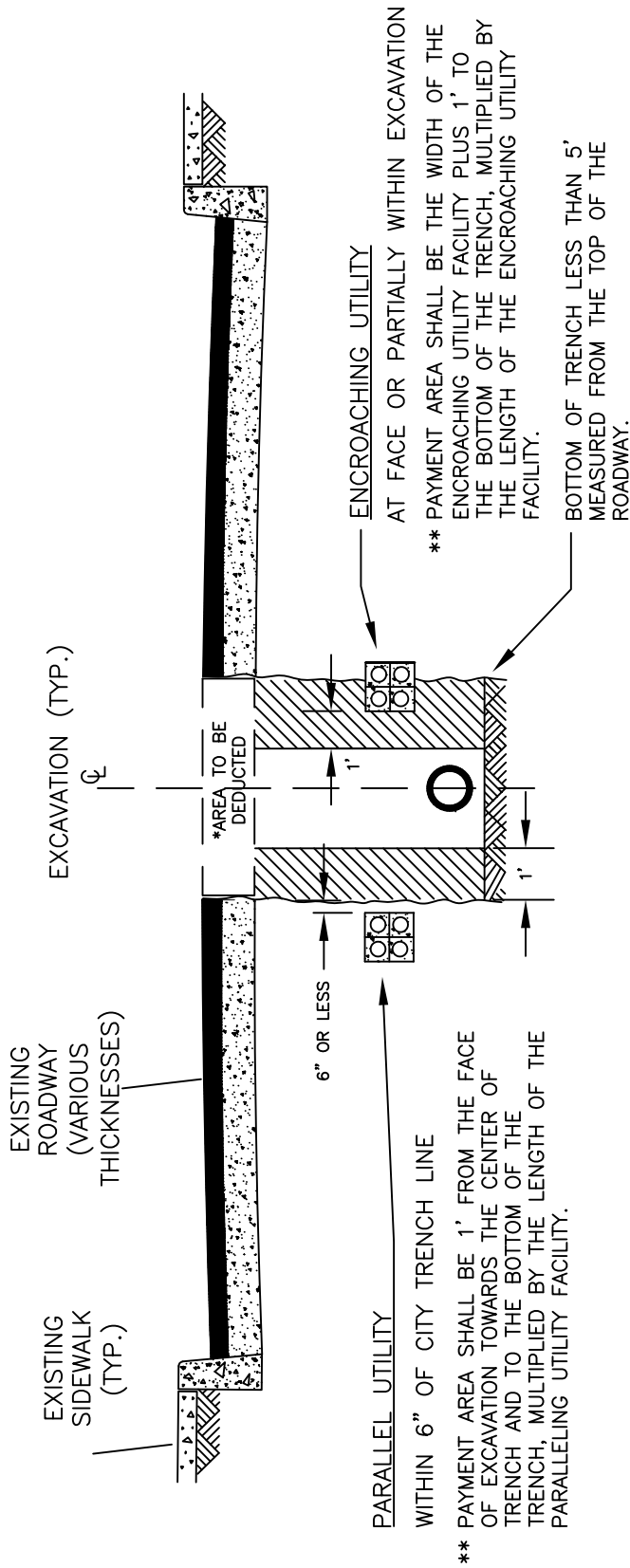
For item JB 300.1 – Depth shall be measured from the bottom of the existing roadway to the bottom of the trench up to a total trench depth of less than 5' measured from top of roadway.

For item JB 300.2 – Depth shall be measured from the bottom of the existing roadway to the bottom of the trench.

If the lowest utility facility is located at a depth less than 5' in a trench greater than 5' deep, then only item 300.1 shall apply. Only one payment for either 300.1 or 300.2 shall apply per trench wall.

#### **F. References**

1. Sketches JB 100E, 300A, JB 300B
2. NYS Industrial Code Rule 753



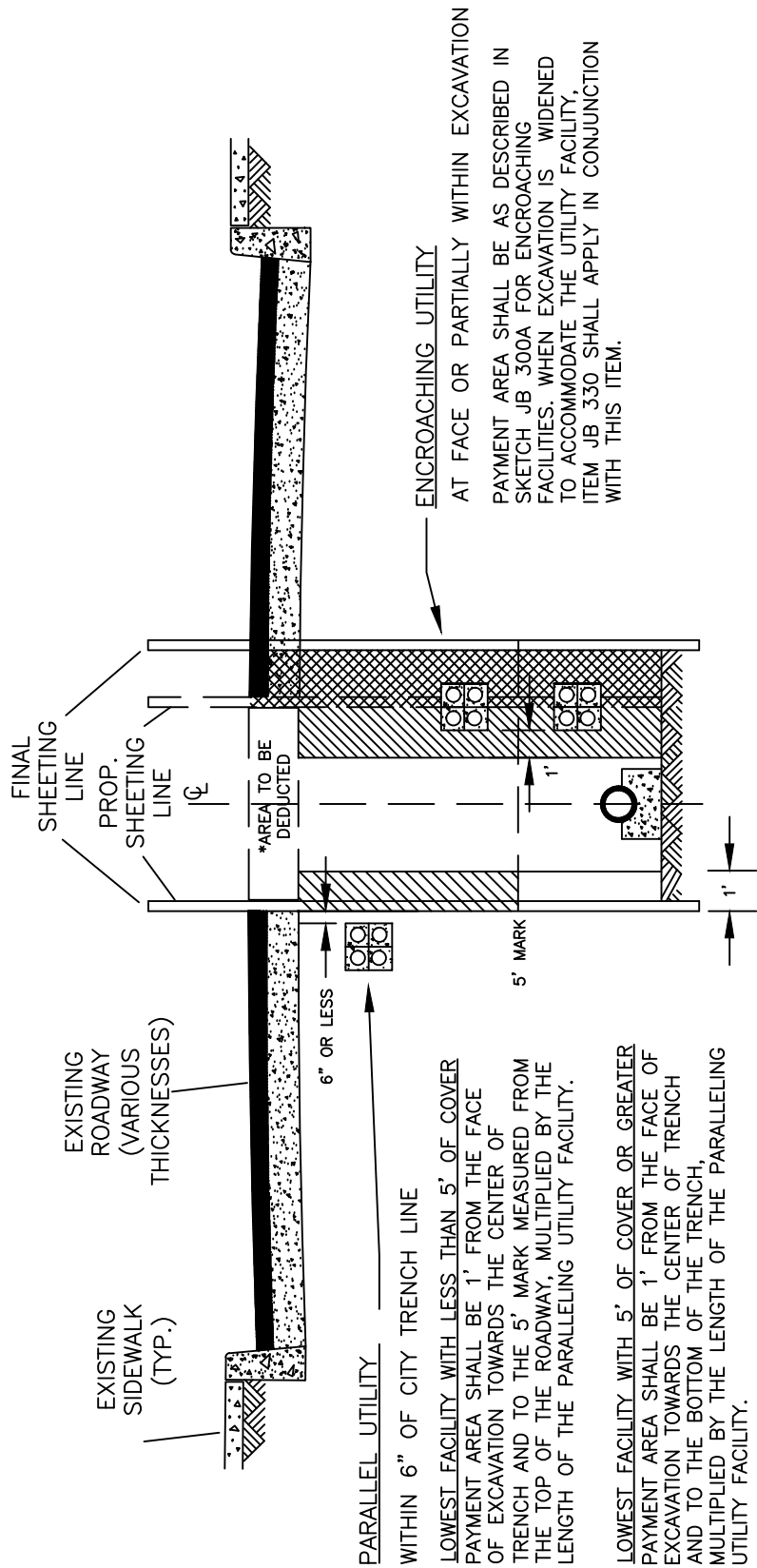
PROFILE

N.T.S.

- NOTES:
- \* VOLUME OF ROADWAY SHALL BE DEDUCTED FROM PAYMENT AREA
  - \*\* ONLY ONE PAYMENT SHALL APPLY PER TRENCH WALL



UTILITY PARALLELING/ ENCROACHING IN CITY FACILITY TRENCH LESS THAN 5' IN DEPTH	
LAST REVISION 6/30/2015	SKETCH NO. JB 300 A





PARALLEL UTILITY  
 WITHIN 6" OF CITY TRENCH LINE  
 LOWEST FACILITY WITH LESS THAN 5' OF COVER  
 PAYMENT AREA SHALL BE 1' FROM THE FACE  
 OF EXCAVATION TOWARDS THE CENTER OF  
 TRENCH AND TO THE 5' MARK MEASURED FROM  
 THE TOP OF THE ROADWAY, MULTIPLIED BY THE  
 LENGTH OF THE PARALLELING UTILITY FACILITY.

LOWEST FACILITY WITH 5' OF COVER OR GREATER  
 PAYMENT AREA SHALL BE 1' FROM THE FACE OF  
 EXCAVATION TOWARDS THE CENTER OF TRENCH  
 AND TO THE BOTTOM OF THE TRENCH,  
 MULTIPLIED BY THE LENGTH OF THE PARALLELING  
 UTILITY FACILITY.

ENCROACHING UTILITY  
 AT FACE OR PARTIALLY WITHIN EXCAVATION  
 PAYMENT AREA SHALL BE AS DESCRIBED IN  
 SKETCH JB 300A FOR ENCROACHING  
 FACILITIES. WHEN EXCAVATION IS WIDENED  
 TO ACCOMMODATE THE UTILITY FACILITY,  
 ITEM JB 330 SHALL APPLY IN CONJUNCTION  
 WITH THIS ITEM.

PROFILE

N.T.S.

-  ITEM 300 PAYMENT AREA
-  ITEM 330 PAYMENT AREA

NOTES:  
 \* VOLUME OF ROADWAY SHALL BE DEDUCTED FROM  
 PAYMENT AREA  
 \*\* ONLY ONE PAYMENT SHALL APPLY PER TRENCH  
 WALL

UTILITY PARALLELING/ ENCROACHING IN CITY FACILITY TRENCH 5' AND GREATER IN DEPTH	
LAST REVISION 10/05/2021	SKETCH NO. JB 300 B

## **JB 351T - UTILITY POLE SUPPORTS**

### **A. Description**

This section describes the temporary supports for utility poles at locations directed by the facility operator(s) in consultation with the Resident Engineer, in order to maintain such poles in their existing upright position without disturbing attached wires and equipment. The Contractor shall provide all labor, material, equipment, insurance, and incidentals required to construct, install and maintain an effective support system that will meet the stated objective.

### **B. Materials**

All materials required to construct and maintain an effective support system shall be supplied by the contractor and approved by the facility operator.

### **C. Method of Construction**

Where directed by the utility representative, the Contractor shall furnish, install and remove utility pole supports and maintain utility poles as shown on Sketch JB 351. Alternate methods proposed by the Contractor will be permitted if approved by the facility operator.

### **D. Method of Measurement**

The quantity of utility pole supports to be measured for payment shall be the number of utility poles supported. The Contractor will be paid only once for each utility pole supported and maintained no matter how many different construction operations have an impact on the pole.

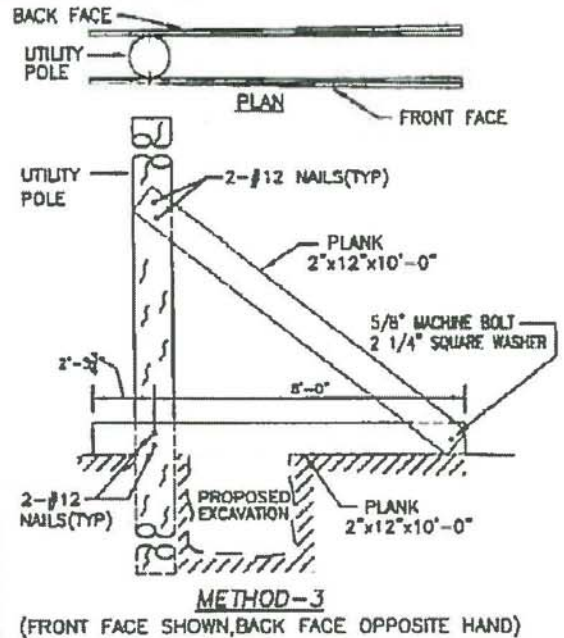
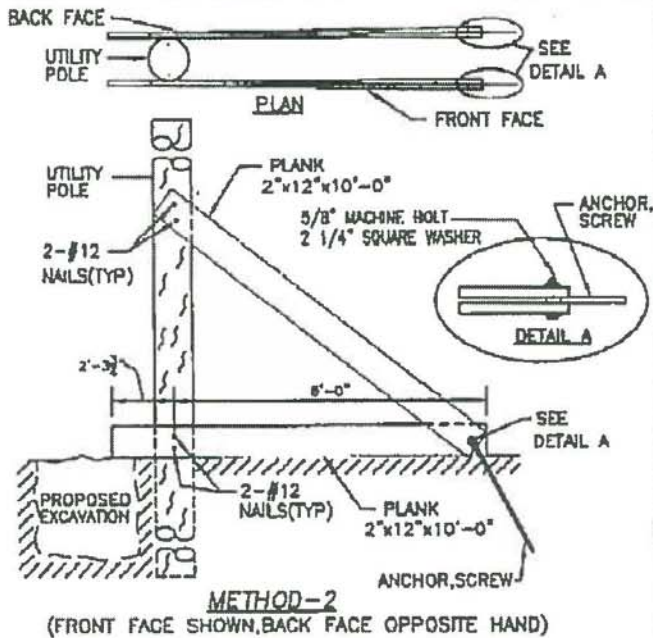
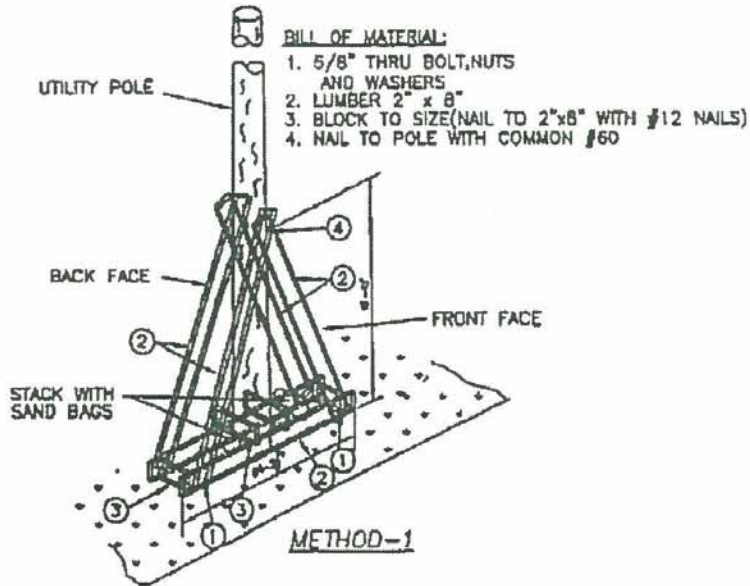
### **E. Price to Cover**

The price shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to furnish, install, maintain and remove utility pole supports to completely support, maintain, protect, and accommodate the integrity of utility poles without disruption of service to customers. The price bid shall also include all additional impact cost associated with working around utility pole supports, poles and appurtenances.

### **F. References**

1. Sketch JB 351T

METHODS OF SHORING UTILITY POLES



NOTES:

- THESE METHODS OF SHORING ARE GENERAL GUIDES. FIELD CONDITIONS WILL DICTATE WHICH METHOD WILL BE USED. VARIATIONS OF THESE METHODS WHICH ACCOMPLISH THE SAME PURPOSE MAY ALSO BE UTILIZED WHEN APPROVED BY OVERHEAD CONSTRUCTION DEPARTMENT.
- ANY INFORMATION NOT SHOWN WILL BE DETERMINED IN THE FIELD TO SUIT THE FIELD CONDITIONS WHEN APPROVED BY THE OVERHEAD CONSTRUCTION DEPARTMENT.

JB SKETCH	
METHODS OF SHORING UTILITY POLES	
REVISIONS	
3/7/18	
CONTRACT NO.	SKETCH NO. JB 351T

## **JB 401 - TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to excavate by hand to locate and expose subsurface utilities encountered during construction in preparation for horizontal and vertical movement (covered by other Sections), and to support and maintain and protect the integrity of utility facilities including but not limited to:

1. Conduits;
2. Conductor(s) and/or cable(s);
3. Concrete Encased Conduit Bank(s);
4. Steel Pipe(s)

The trench to be excavated shall be determined by the size of the utility and the extent of adjustment required to avoid interferences as detailed on Sketch JB 402 A during all phases of contract work. The work shall be performed in accordance with the specifications, and at the directions of the facility operator in consultation with the Resident Engineer.

### **B. Materials**

All materials used to support and maintain and protect shall be similar to those indicated on Sketches JB 100 A and 100 A-1 and shall be supplied by Contractor and be approved by the facility operator in consultation with the Resident Engineer.

### **C. Methods of Construction**

The Contractor shall cut, break and remove various thickness of surface and base pavement, excavate by hand to expose, support and protect all utility facilities within the trench and then furnish and tamp backfill after work has been completed by the parties indicated under other Sections. The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility. Upon exposing the affected utilities sufficiently to determine relationships and/or clearances at the sole discretion of the facility operator in consultation with the Resident Engineer, the Contractor shall be permitted to proceed with a combination of hand and machine excavation sufficiently to wingback all interferences of cable and conduit. The trench shall be adjusted so as to provide a nominal cover of 24" over the highest conduit. The width of the trench shall be as directed by the facility operator in consultation with the Resident Engineer. The bottom of the trench shall be graded smooth and tamped to minimize initial settlement and to avoid "point" support of conduits. All stones projecting into the trench bottom shall be removed, and the voids backfilled before conduits are placed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench.

**D. Method of Measurement**

The Contractor shall be paid per cubic yard (C.Y.) of trench actually excavated to the limits directed as detailed in Sketch JB 402 A and to the satisfaction of the facility operator in consultation with the Resident Engineer. When two or more utility facilities requiring horizontal or vertical adjustment with different owners are in the same trench, the facility operators shall jointly determine the percentage of ownership of the trench.

**E. Price to Cover**

The price for excavation shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to completely expose, support and protect and maintain the integrity of the facilities without disruption of service to the customers and in accordance with the Contract Documents, associated maintenance of traffic, and traffic plates and sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand to expose existing structures, furnish, place and tamp backfill after required vertical and/or horizontal adjustments have been completed under other Sections. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be paid under other items. The price shall also include the cost of locating and supporting and protecting all utilities encountered including slings and beams installed for utility support when required. The price shall include maintaining the sheeting for the duration of the relocation and work required by the facility operator including but not limited to pipe-ripping covered under JB 402T.

**F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 100 A and A-1
3. Sketch JB 402 A

## **JB 402T - HORIZONTAL AND VERTICAL ADJUSTMENT OF TELECOMMUNICATIONS FACILITIES**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to adjust and support and protect and maintain and accommodate the integrity of telecommunication facilities including but not limited to:

1. Conduit(s);
2. Cables and Air Pipe
3. Concrete Encased/Capped Conduit Banks

The work shall be performed in accordance with specifications and at the direction of the facility operator in consultation with the Resident Engineer.

### **B. Materials**

All materials used to adjust and support and protect and maintain and accommodate the integrity of utility facilities shall be similar to those indicated on the standard Sketches JB 100 A & 100 A-1 and shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer.

Materials used for replacing conduit(s) removed under this item shall be supplied by and installed by the Contractor and shall include but not be limited to the following:

1. Bends
2. Split and Solid Conduit(s) PVC and Steel
3. Couplings and Adapters PVC, Tile and Steel
4. Straps or plastic ties

PVC conduit and fittings shall be as supplied by American Pipe and Plastics, Type "C" or approved equal.

Steel Pipe and fittings shall conform to ASTM A53 Schedule 40

Tile to PVC adaptors shall be as supplied American U-Tel or approved equal.

### **C. Methods of Construction**

Lengths of "wing-back" shall be determined by the facility operator in consultation with the Resident Engineer. All work performed prior to that approval shall be at the contractors risk.

Methods of construction shall include but not be limited to the following:

- 1 **Removal and Support**
  - a. Break with hand held power tools, remove and dispose of plain or reinforced concrete encasement.



- b. Break with hand held power tools, remove and dispose of conduit(s) enclosures and conduit that contain conductor(s) and/or cable(s) except steel/iron conduits, inner ducts and 1 ¼" to 1 ½" PVC "quad ducts. Breaking – "ringing and ripping" - of steel/iron conduits belonging to ECS shall be performed by ECS forces only. Contractor shall make safe the work area to accommodate the ECS forces.
- c. Support and protect exposed conduits, cables, innerduct and airpipe as shown in Sketch JB 100A-1 and approved by the facility operator in consultation with the Resident Engineer.
- d. ECS tenants cables may require inspection, testing and encapsulation before they can be shifted. Contractor shall make safe the work area to accommodate these forces. Contractor shall be notified by the facility operator of the ECS tenant requirements before the conduits are broken-out.

## 2. Adjust or Move Conductor(s) and/or cable(s) and support

- a. Cable shall be relocated horizontally and/or vertically as directed by the facility operator in consultation with the Resident Engineer
- b. Support and protect conductors and/or cables as shown on Sketch # JB 100 A-1 and/or as directed by the facility operator.

## 3. Replacement, Encasement, Protection and Support

- a. Replace vacant and loaded conduit(s) with solid and/or split conduit(s) and adapters.
  - 1) Vacant Conduit - Repairs to conduits shall not be permitted. All damaged or impaired lengths of conduit(s) shall be removed and replaced with new conduit(s). The number of vacant conduits replaced shall be confirmed by the facility operator.
  - 2) Loaded Conduit - Replacement of conduits that are removed from around existing cable(s) or innerduct shall be accomplished with split plastic (PVC) or split steel conduits as directed by the facility operator. Where split and solid plastic or steel conduit is used, the conduit(s) shall be spaced 1½ inches from each other. All split PVC shall be secured with plastic straps spaced at a maximum distance of eighteen (18") inches. Plastic conduit shall be joined with plastic couplings.
  - 3) Adapting - Joining plastic conduit to existing conduits of other diameters or material shall be done using single or multiple adapters, (supplied by contractor).
- b. If due to subsurface conditions, the cover is less than 20" from finished grade, the duct shall be protected with steel plates furnished by the contractor and measured for payment under Item JB 403T.
- c. Support and protect cable(s) and/or conductor(s) and conduit(s).
- d. Verify vacant conduits and provide pull ropes.

- e. Encase all exposed conduit with concrete ( $f'_c = 1200$  to 1500 psi maximum) with slump commensurate to completely fill voids around conduits. Concrete encasement shall extend to two (2") inches beyond the limits of the duct bank vertically and horizontally.

#### **D. Method of Measurement**

The quantity to be measured for breaking out conduits, removing concrete, moving, protecting and supporting conductors and replacing conduits with split and solid conduit, shall be paid for by the linear foot (L.F.) of each conduit replaced. A linear foot of conduit shall be defined as one (1) single conduit measured along its longitudinal axis that has been broken out or moved from its original location either horizontally and/or vertically and measured in its final location. Quad PVC ducts produced as one unit shall be consider one duct for each quad unit. All conduits removed under this section and not restored shall be paid at 60% of the appropriate item in this section.

Multiple tile duct bank with concrete protection cover is not considered concrete encasement.

Each type of utility adjustment shall be paid for separately, the types of utility adjustments are defined as follows:

JB-402T.1 Existing Concrete Encased Non-Steel/Iron Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.1A Existing Concrete Encased Non-Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.2 Existing Non-Concrete Encased Non-Steel/Iron Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.2A Existing Non-Concrete Encased Non-Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.R1A Existing Concrete Encased Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.R2A Existing Non-Concrete Encased Steel/Iron Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.V1 Existing Vacant Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.V1A Existing Vacant Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.V2 Existing Vacant Non-Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.)

JB-402T.V2A Existing Vacant Non-Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.)

JB-402T.J1 Existing Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.

JB-402T.J1A Existing Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.

JB-402T.J2 Existing Non-Concrete Encased Conduits Placed in Final Position without Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.

JB-402T.J2A Existing Non-Concrete Encased Conduits Placed in Final Position with Concrete Encasement. (L.F.) in Which Only Conduit Joints are Broken Out and Conduits Remain Intact.

### **E. Price to Cover**

The unit price bid per linear foot (L.F.) of conduit shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to shift, adjust, support, protect, maintain and accommodate the integrity of utilities without disruption of service to the facility operator's customers and in accordance with contract documents. The price bid shall also include the cost of: breaking out, removal and disposal of plain or reinforced concrete encasements, conduits (except iron/steel), support of cables/conduits, replacement with field split, split and solid conduits, adapters, clamps, straps and couplings; verify vacant conduits and provide pull ropes; furnish and install concrete encasement, supports, slings and beams for utility support; changes of sheeting method and/or configuration when required and where necessary to accommodate the utilities during all phases of contract work; and removal of sheeting around the utilities, and all else necessary and required to complete the work.

The unit price shall include providing access to the facility operator pipe-ripping crews and tenants to verify and test cables before, during and after the pipe ripping operation completed by the facility operator or specialized contractor hired by the facility operator and after conduit removal by the Contractor. The unit price shall include, but not limited to, opening and closing of fences; removal and replacement of temporary timber curb and opening and closing of traffic plates. Access to adjacent manholes impacted by the run is included in this item. JB 450 shall not be used in conjunction with JB-402T as JB-402T covers access to the work site at all times for work required under this item.

### **F. References**

1. Sketches JB 100A and 100A-1
2. JB 403T
3. American Pipe and Plastics, P.O. Box 577, Binghamton, N.Y. 13902
4. American U-Tel, 9760 Smith Rd., Willoughby, Ohio 44094

**JB 402T.3 - ACM REMOVAL AND DISPOSAL OF VERIZON/ECS CONDUITS WITH ASBESTOS CONTAINING MATERIAL TRANSITE PIPES (ACM-TP) UP TO AND INCLUDING 4" DIAMETER****A. Description**

Under this item the contractor shall provide all labor, equipment, transportation, insurance and incidentals to remove and dispose of asbestos containing material - transite pipe (ACM-TP).

The contractor shall strictly adhere to all environmental requirements and work practices and notifications specified under construction details.

The transite conduits (ACM-TP) to be removed contain active cables and these cables will remain active during the transite conduits removal.

All removal and disposal of ACM-TP shall be done by pre-qualified contractors (or sub-contractors) as specified under method of construction.

**B. Materials**

The contractor shall supply separate dumpsters to be used exclusively for the removal and disposal of the ACM-TP and all other materials such as bagging, dumpster linings, respirators and filters, enclosures and all other incidental material required for the removal and disposal of the Verizon/ECS ACM-TP in accordance with laws, rules and regulations of Federal, State or local agencies.

**C. Method of Construction****a. Work Scope**

Removal of concrete encased conduits shall be accomplished by hand held chipping hammers. The removal should be in a pre-identified operation in order to minimize the potential release of airborne asbestos fibers from the ACM-TP.

**b. Notification And Variance**

Verizon/ECS is required by the New York City Department of Environmental Protection (NYCDEP) to obtain a site specific variance.

The contractor shall prepare the variance application letter and the NYCDEP Form ACP-9 and will submit them to the NYCDEP not sooner than four (4) weeks prior to the start of the ACM-TP removal.

The contractor is responsible for preparing the NYCDEP Form ACP-7 together with NYCDEP Form ACP-9 as the applicant and providing these forms to Verizon/ECS for review and signature prior to submittal to the NYCDEP seven

(7) weeks prior to the commencement of the project (Notice to begin construction).

The contractor shall prepare the New York State Department of Labor (NYS DOL) notification Form DOSH-483 prior to submittal to the NYSDOL at least four (4) weeks prior to the commencement of the project.

The contractor shall prepare the United States Environmental Protection agency (USEPA) Notification of Demolition and Renovation form for submittal four (4) weeks prior to the commencement of the project.

### **c. Vendor Prequalification**

All subcontracted environmental parties which shall include but not be limited to asbestos abatement contractor, project monitoring firm, air sampling and analytical contractor can be selected from Verizon's currently approved vendor lists. Should the contractor elect to use his own list, that information shall be provided to Verizon/ECS for review/ approval at least four (4) weeks prior to date the ACP-7 form is submitted to Verizon.

### **d. Waste Transport and Disposal**

The ACM-TP that is removed will be disposed of as ACM waste at an asbestos landfill. This landfill site shall be selected from one of Verizon's list of approved disposal sites. The contractor will identify and obtain approval from Verizon for the transporter. The contractor can select one of the Verizon's currently approved transporters, or alternatively select a transporter of its own. Should the contractor elect to use latter, that information shall be provided to Verizon/ECS for review/approval at least 4 weeks prior to the date the ACP-7 is submitted to Verizon.

An original of the asbestos waste manifest is to be provided to the Verizon/ECS representative for all shipments that leave the work site. A signed copy (by the selected landfill) of the waste manifest is to be provided to Verizon/ECS not later than 10 days from the date the shipment leaves the site.

### **e. Exhibits**

The forms are a component part of this item.

- 1-NYCDEP Form ACP-7
- 2-NYCDEP Form ACP-9R1
- 3-NYS DOL Form DOSH-483
- 4-USEPA - Notification Form

### **f. Work Plan**

1. For this item the contractor must submit to Verizon/ECS for review and approval a detailed site specific work plan.
2. The contractor must submit to Verizon/ECS for review and approval any alternate proposals for variance requested from Regulatory Statutes (NYS DOL & NYCDEP).

3. The contractor shall provide all sampling and laboratory analysis required under the Industrial Code Rule 56 Subpart 17 and all applicable Blanket Variances. All sampling and analysis shall be performed by a firm independent from the Contractor. The price for the cost for compliance air monitoring sampling and analysis shall be included in the price bid for listed items.

4. Within five (5) calendar days of the receipt of the results of any part of the compliance air sampling and analysis, the Contractor shall forward a copy of those results (showing the name and address of the laboratory, the type of test performed, the method of measurement and all information normally relevant to sampling and analysis of asbestos remediation procedure) to Verizon/ECS on-site representative.

**g. Project Folder**

Upon completion of the abatement, the Contractor shall provide a complete job folder with the following documents, which shall include chain of custody records:

- a. Copy of Supervisor/Handler certifications
- b. Copy of the Subcontractor's Enclosure Entry Permit
- c. Result of Analysis for All Bulk Samples, Air and Clearance Monitoring
- d. Copy of all Notifications (City, State, Federal)
- e. Copy of the Vendor's Certificate of Insurance
- f. Copy of the Waste Transporter Permit
- g. Signed Asbestos Waste

**D. Method of Measurement**

Payment under this item shall be paid for by the linear foot (L.F.) of each conduit removed. A linear foot of conduit shall be defined as one (1) single conduit up to and including 4" nominal diameter measured along its longitudinal axis that has been broken out and removed.

**E. Price to Cover**

The unit price per linear foot (L.F.) shall cover the actual costs of all supervision, labor, insurance, (including asbestos liability insurance), materials and equipment necessary to complete the work. The Contractor shall cover the cost of preparing variance application, all filing fees and will submit the application with associated fees to the NYCDEP for processing.

Any contractor's alternative proposals for variance requested from regulatory statutes (NYS DOL & NYCDEP) shall be also included in the actual cost.

Excavation and backfill shall be paid for under JB 401.

**F. References**

N/A

## **JB 403T – FURNISH AND INSTALL STEEL PROTECTION PLATES FOR TELECOMMUNICATIONS FACILITIES**

### **A. Description**

Under this section, the Contractor shall furnish and install as required permanent steel protection plates over telecommunications facilities where directed by the facility operator(s).

### **B. Materials**

Material shall be:

1/4" thick ASTM A-36 plates. Maximum size 24" by 48".

3/8" thick ASTM A-36 plates. Maximum size 12" by 18".

Thickness to be determined by the facility operator(s)

### **C. Method of Construction**

Steel protection plates shall be placed in accordance with the attached facility operator(s) standard sketch JB 403T. All protective plates shall overlap a minimum of 3".

### **D. Method of Measurement**

The quantity for payment shall be the area of permanent steel plating protection furnished and installed (excluding overlap) and measured in place in Square Feet (S.F.).

JB 403T.1 – Furnish and Install 1/4" thick steel plate (S.F.)

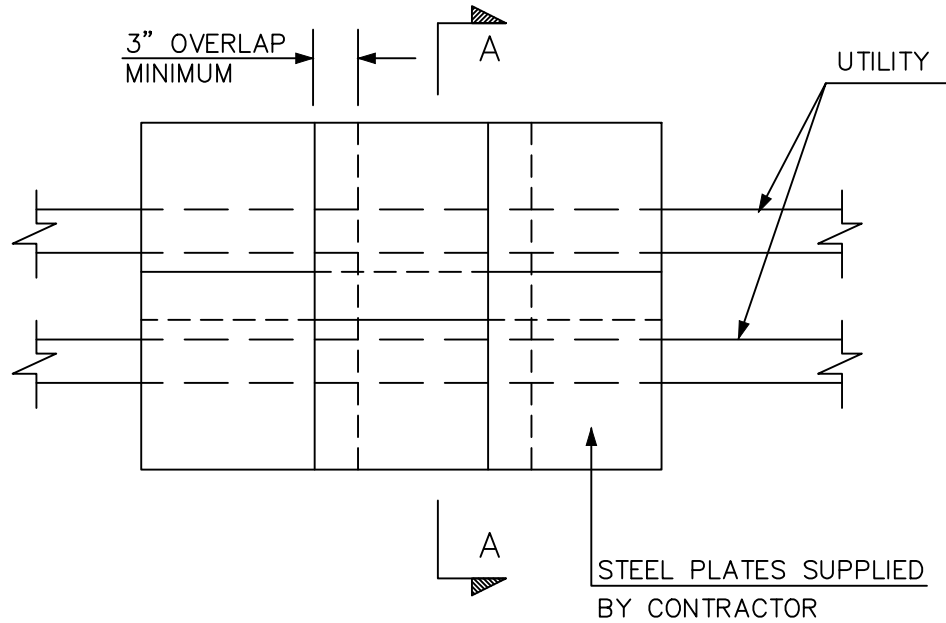
JB 403T.2 – Furnish and Install 3/8" thick steel plate (S.F.)

### **E. Price to Cover**

The price shall cover the cost of all labor, material, equipment, insurance, and incidentals necessary to complete the work.

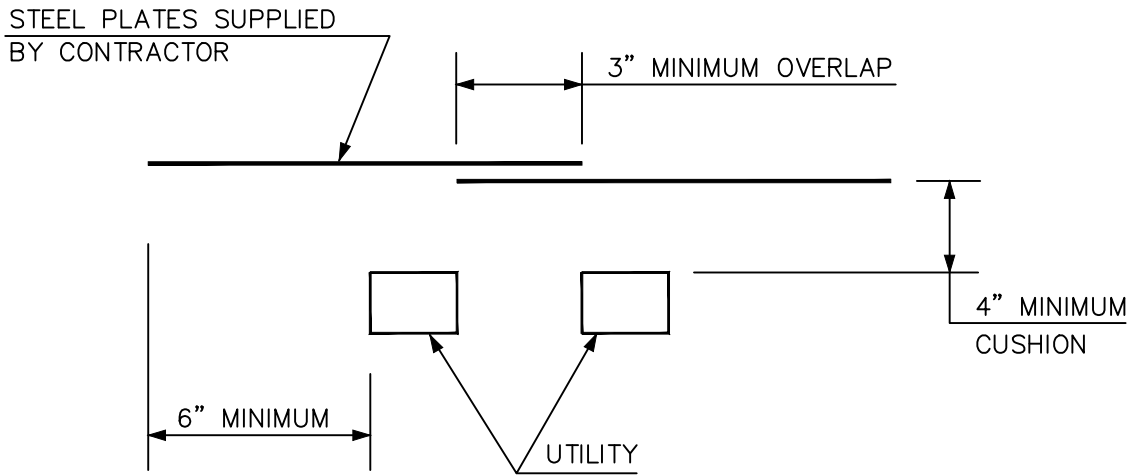
### **F. References**

Sketch JB 403T



PLAN  
NOT TO SCALE

AREA FOR PAYMENT  
SHALL BE AS MEASURED  
IN PLACE (EXCLUDE OVERLAP)



SECTION A-A  
NOT TO SCALE

TYPICAL PLATE SIZES:  
6" x 48" x 1/4"  
12" x 48" x 1/4"  
24" x 48" x 1/4"  
12" x 24" x 3/8"

REVISIONS		J.B. SKETCH	
09/13/2017		PLACING STEEL PROTECTION PLATES FOR COMMUNICATION FACILITIES	
		CONTRACT NO.	SKETCH NO. JB 403 T



## **JB 405 - EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals necessary to excavate, maintain trenches and backfill for the installation of new utility facilities including but not limited to:

1. Conduits
2. Non-cost sharing gas facilities
3. Steam mains
4. Steel pipe(s)

The trench to be excavated shall be determined by the size of the utility facility to be installed. The work shall be performed in accordance with applicable specifications, at the direction of the facility operator.

### **B. Materials**

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator.

### **C. Methods of Construction**

1. Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant and as directed by the facility operator. The trench shall be adjusted so as to provide a nominal cover as defined in the specifications for the facility being installed over the new utility facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator. The width of the trench shall be as directed by the facility operator or as shown on Sketch JB 603T (ECS only). The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of backfill material or in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new utility facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new utility facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new utility facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator.

Care shall be taken that no existing utility facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new utility facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

2. Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator to facilitate the installation of the new utility facility. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator. Upon completion of installation of the new utility facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

3. Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated and backfilled as directed by the facility operator or as shown on Sketch JB 603T for JB 603T Items. The volume occupied by existing pipes or other structures will not be deducted from the total volume measured.

JB 405.1 - Trench Excavations for installation of Utility Facilities with total depths less than five feet (C.Y.)

JB 405.2 - Trench Excavations for Utility Facilities with total depths equal to or greater than five feet (C.Y.)

#### **E. Price to Cover**

The unit price bid for the various trench excavation items shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to completely expose, protect and maintain the integrity of the facilities without disruption of service to the customers and in accordance with the contract documents. The price shall also include, installation of traffic plates as well as opening and closing of plates as may be required in order to provide access to trench; installation, removal and maintenance of tight sheeting as required; cutting, breaking and removing various thickness of surface and base pavement; excavation by hand to expose

existing structures; furnishing, placing and compacting clean backfill following installation of utility facility in compliance with DOT requirements. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be paid under city items. The price shall also include the cost of locating and protecting all utilities encountered as required.

Clean backfill material in accordance with specifications shall be used around gas facilities and critical facilities shall be paid for under item JB 303.

#### **F. References**

1. Item JB 303
2. Sketch JB603T
3. Con Edison Specifications, latest revisions  
CEHSP S13.00 – Excavation and Trenching

## **JB 450 – CONSTRUCTION FIELD SUPPORT**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals necessary to provide construction field support, while maintaining and protecting surface and subsurface facilities, at various locations approved solely by the facility operator. The Contractor shall encounter various surface and subsurface utility facilities while performing various construction field support operations, which may include but are not limited to working over, under, adjacent to, around, in between and in close proximity of:

1. Conduits
2. Conductors
3. Concrete encased conduit banks
4. Steel pipes
5. Gas mains
6. Steam mains
7. Oil-o-static facilities
8. Utility structures and covers

The actual construction field support operation to be performed by the Contractor shall be performed in accordance with the contract plans, specifications or as determined based on actual field conditions and at the sole discretion and direction of the facility operator. This item shall apply to various field support operation tasks for which there are no other applicable JB Items to cover the required work. This item will not apply and will not be paid when there are other applicable JB items available either partly or completely covering tasks described below as determined solely by the facility operator.

### **B. Materials**

All materials used to provide construction field support shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer.

### **C. Methods of Construction**

It is the intent of this item that the Contractor provides field support construction crews suffice to perform various item type tasks required as described. For the purpose of this item a crew consists of more than one non-management individual. The Contractor shall provide all labor and equipment necessary to perform the required task as described below under existing field conditions at various locations and at the sole discretion and direction of the facility operator in consultation with the Resident Engineer. The Contractor shall perform the necessary construction field support, while maintaining and protecting surface and subsurface facilities. The Contractor shall employ approved methods of operation, including the use of appropriate equipment and tools that will enable him to complete the field support operation work as described in the Item Type description below. Existing facilities that are encountered during the construction field support operation shall be supported and protected similar to those indicated on sketches JB 100A and 100B and in a manner suitable to the facility operator in consultation with the Resident Engineer and are deemed included in this item except as included under JB-402T. The Contractor shall properly dispose of all materials excavated away from site, which may require the use of hand held tools and equipment in order to ensure that the integrity of the underground utility facilities are not jeopardized. Care should be taken to avoid damage to existing utility facilities and

structures, and to adjacent curbs, sidewalks, pavements and their foundations, and to avoid caving or sliding banks within excavations.

#### **D. Method of Measurement**

1 – Quantity - The quantity to be measured for payment shall be the number of actual crew hours (CRHRS.) provided by the Contractor for performing the various types of construction field support operation as directed by the facility operator in consultation with the Resident Engineer.

2 – Type – The unit type to be measured for payment shall be based on the actual task performed by the contractor and covered by the applicable Item Type. The tasks described within the Bid Item Type below are provided as a guide only as to the general nature of the various functions included, but these examples in no way limit the use of the item to these functions only. The contractor should use this information in order to approximate the various required crew sizes necessary to perform the work covered by this item in a productive, safe and efficient manner. The actual construction crew size required to perform the field support operation shall be determined solely by the contractor in order to perform the required construction field support operation. It is the responsibility of the contractor to provide appropriate field support crews capable of performing required tasks in a productive, safe and efficient manner. The actual crew performing the operation will not be considered, by the facility operator in consultation with the Resident Engineer, when determining the applicable item type, which shall be only as per the task performed.

Note: Only one measurement type will be used for each defined construction field support area.

Type .1 = Construction Field Support requiring an average size survey crew that will perform typical field survey functions and provide quality data analysis reports.

Type .2 = Construction Field Support requiring an average small size crew capable of performing various tasks not requiring the use of a machine or operator, which may include but are not limited to: opening/closing subsurface structure cover(s), setting/resetting MPT setup(s), assisting Utility Facility/Specialty crew(s) not included in JB 402T or JB 450.5, performing conduit occupancy identification, clean-up storage work-site area, etc.

Type .3 = Construction Field Support requiring an average medium size crew capable of performing various tasks which include the use of a machine and operator, which may include but are not limited to: excavations due to cable failures, including emergency type excavations, construct manhole enclosures, installing support system for utility facilities, dewatering utility structures and excavations, opening/closing traffic and/or pedestrian plates, etc not included in JB 402T or JB 450.5.

Type .4 = Construction Field Support requiring an average large size crew capable of performing various tasks that requires the use of multiple machine(s) and operator(s), which may include but are not limited to: assistance during heat contingency, welding, repositioning and placing large diameter pipe, etc.

Type .5 = Construction Field Support requiring an average small size crew when requested by the facility operator to assist the facility operator or speciality contractor hired by the facility operator in shifting and supporting the conduits during pipe-ripping operations and all else necessary as required to complete the work including but not limited to constructing temporary work platform, temporary weather protection

#### **E. Price to Cover**

The unit price bid for the various construction field support items shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to provide construction field support, which may include but is not limited to working over, under, adjacent to, around, in between and in close proximity of surface and subsurface utility facilities and exposing, supporting, protecting and maintaining the integrity of the facilities without disruption of service to the general public, utility customers and in accordance with the Contract Documents at various locations approved by the Facility Operator in consultation with the Resident Engineer. The unit price shall also include openings and closings of plates, and cones, barrels, arrow-boards, etc. and installing, shifting, moving and relocating cones, barrels, arrow-boards, etc. as may be required in order to provide access to excavations and during specialty work being performed by others excluding work operations covered under JB402T. The unit price shall also include excavating by hand to expose existing structures. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price bid. The unit price shall also include the cost of supporting and protecting all utilities encountered during the construction field support operation, as required except work operations covered under JB 402T. The unit price bid shall also include alternate methods for construction field support, which may include changes in equipment and special operations, and sequencing and the use of only all hand-held tools due to existing field conditions, including potential delays and extended performance. Any and all Contractor method changes and operation modifications employed for construction field support are deemed to be included in the price bid for this item. Work under this item may be paid in combination with other City, utility or facility accommodation Items bid under other contract items except where expressly excluded from that item.

#### **F. References**

1. Sketches JB 100A, JB 100B

## **JB 603T - FURNISH AND INSTALL TELECOMMUNICATIONS CONDUITS**

### **A. Description**

Under this Section, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals required to procure and install conduit for the purpose of installing the facility operator's utilities. Conduit runs shall be as shown on the contract drawings or as specified by the facility operator in consultation with the Resident Engineer.

### **B. Materials**

Conduit shall consist of:

PVC – 2" and 4" diameter or 1 ¼" Quad, Type "C" as supplied by American Pipe and Plastics or approved equal

Steel - 4" diameter, ASTM A53, Schedule 40 or approved equal

All conduit including sleeves, couplings, bends, pulling lines, etc. shall be supplied by the Contractor and approved by the facility operator in consultation with the resident Engineer.

The Contractor shall supply all material (Mortar, Brick, etc.) to make repairs to opening(s) as approved by the facility operator in consultation with the Resident Engineer.

### **C. Method of Construction**

The Contractor shall install the specified conduit(s) then rod, mandrel and wire (install pulling line) the new conduits. When conduit pipes are to be connected to existing underground ducts, manholes, or boxes, the Contractor, using hand-held tools only, shall cut existing conduit, to pick-up existing underground conduits with new conduits, make openings into manholes or boxes, install/connect the conduit, and make repairs to seal the openings in the structure.

Steel pipe shall be used for shallow cover and crossing or paralleling steam mains as directed by the facility operator in consultation with the Resident Engineer.

When the facility operator required a combination of conduit types and materials the facility operator will define the configuration of the conduit system and the location of each type within the conduit bank. All conduit shall be spaced 1 ½" both vertically and horizontally from the adjacent conduit(s). All conduits shall be encased in lean concrete ( $f'c = 1200$  to  $1500$  psi maximum) which shall extend 2" beyond each face of the conduit formation, above and each side of the conduit formation.

If due to subsurface conditions, the cover is less than 20" from finished grade, the duct shall be protected with steel plates furnished by the facility operator(s) and measured for payment under Item JB 403.

The work shall be performed in accordance with the contract plans, specifications, and at the directions of the facility operator in consultation with the Resident Engineer.

**D. Methods of Measurement**

The quantity to be measured for payment shall be the number of linear feet (LF) of conduit trench for which conduit was furnished and installed:

1. 603T.1 - Install 1 ea. 2", 4" or 1 1/4" Quad" Conduit (PVC or Steel) in any combination
2. 603T.2 - Install 2 ea. 2", 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
3. 603T.3 - Install 4 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
4. 603T.4 - Install 6 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
5. 603T.5 - Install 8 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
6. 603T.6 - Install 12 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
7. 603T.7 - Install 15 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
8. 603T.8 - Install 24 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination
9. 603T.9 - Install 30 ea. 4" or 1 1/4" Quad Conduits (PVC or Steel) in any combination

A Quad, consisting of four 1 1/4" conduits shall be supplied as one unit. For purposes of measurement and payment each quad unit of four 1 1/4" ducts shall be counted as one duct.

For any equivalent combination not fitting the above categories payment shall be based on the next higher category.

**E. Price to Cover**

The unit price per linear foot of Conduit trench shall cover the cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, install, rod, rope, and perform any other associated work required to install the conduit completely in place. Where conduits are to be connected to ducts, manholes or boxes, the cost of cutting and/or breaking into the ducts, manholes or boxes, installing and sealing the conduit, including duct plugs; and making repairs to the openings in the structure shall be considered as included in the unit price bid for the installation of the conduit. All acceptance testing, including passing a mandrill with a diameter of 1/8" less than the inside diameter of the duct through the entire length of the duct, as required by the facility operator shall be considered as included in the unit price.

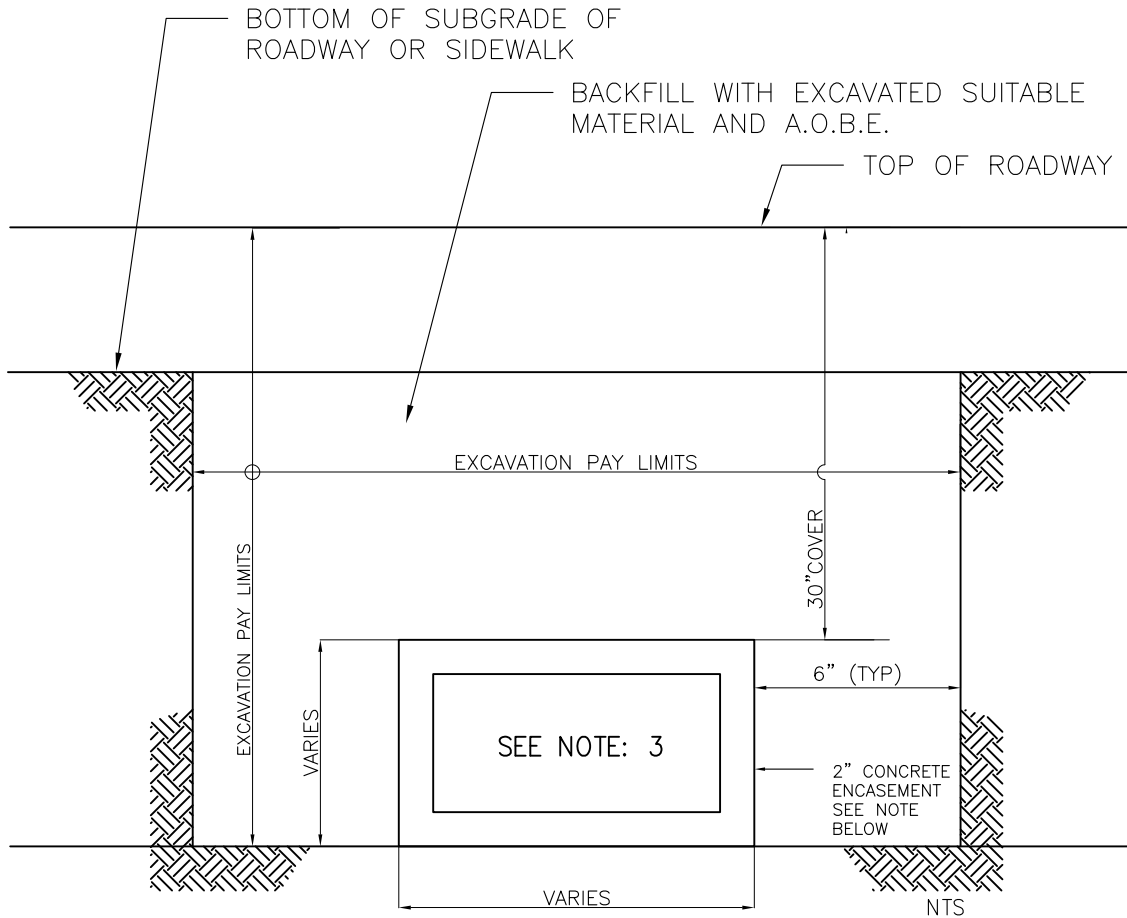
Payment for trench excavation shall be paid under Item JB 405.

Steel protection plates shall be paid for under Item JB 403T

**F. References**

1. Sketch JB 603T
2. Item JB 405
3. American Pipe and Plastics, P.O. Box 577, Binghamton, N.Y. 13902





**TYPICAL CONDUIT EXCAVATION AND BACKFILL**

NOTES:

**QUEENS, BROOKLYN & STATEN ISLAND**

1- CONCRETE ENCASE REQUIRED IF TOP OF DUCTS IS 20" OR LESS FROM SURFACE AND ALL BENDS, SWEEPS AND CHANGE OF GRADE. FOR COVER LESS THAN 20", 3/8" STEEL (A36M) COVER PLATES IN ADDITION TO THE CONCRETE ENCASEMENT SHALL BE PROVIDED.

**MANHATTAN & BRONX,**

2- FOR COVER LESS THAN 20", 1/4" STEEL (A36M) COVER COVER PLATES IN ADDITION TO THE CONCRETE ENCASEMENT SHALL BE PROVIDED.

3- CONDUIT CONFIGURATION TO BE DETERMINED BY ECS/VERIZON REPRESENTATIVE.

J.B. SKETCH			
TRENCH EXCAVATION FOR CONDUIT			
09/13/2017	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">CONTRACT NO.</td> <td style="width: 50%;">SKETCH NO. JB 603T</td> </tr> </table>	CONTRACT NO.	SKETCH NO. JB 603T
CONTRACT NO.	SKETCH NO. JB 603T		

## **JB 636E - ADJUSTMENT OF UTILITY HARDWARE**

Under this section the Contractor shall adjust existing utility street hardware including vault grates, valve boxes, etc., to the proposed grade by either building up or lowering the installation and resetting the castings, as and where directed by the facility operator.

### **A. Description**

Building up or lowering the installation and resetting the castings shall consist of removing the existing frame and cover, building up or decreasing the existing installation, replacing the frame and/or cover if damaged, as determined by the facility operator, with a new frame and/or cover furnished by the facility operator, and setting the frame and cover to the new elevation.

### **B. Materials**

Materials used shall comply with the Standards and specifications of the facility operator having jurisdiction over the installations. Where high-early strength concrete is required by the Resident Engineer to be placed adjacent to utility installations then the requirement for mortar shall be quick setting mortar capable of obtaining a minimum compressive strength of 1,500 psi in two (2) hours, and the requirement for concrete shall be high-early strength complying with current N.Y. State Department of Transportation, Standard Specifications for Class F concrete.

When castings and/or covers are deemed inadequate at a location as determined by the facility operator, the facility operators shall furnish new castings and/or covers to the Contractor for installation. The Contractor is required to inform the utility operator in advance of the need for the castings. Materials supplied by the facility operator shall be delivered to the contractor's designated storage area.

### **C. Methods of Construction**

The Contractor shall breakout and dispose of sidewalk, curb, pavement and/or pavement base around existing casting, excavate as required to remove casting and install existing or replacement casting, remove casting, protect opening, reinstall existing casting or install new casting to the proposed grades, backfill, grade and compact fill around casting, install base concrete and or sidewalk pavement and curb, tack coat around frame, install and remove temporary pavement around casting where directed by the facility operator; and install and compact asphalt binder and wearing course or other permanent pavement around casting and perform all work in accordance with the contract plans and the specifications.

Setting or resetting the castings shall be done with bricks plus mortar and/or by raising or lowering adjustable castings according to the standards of the utility owner having jurisdiction over the installation. Work shall be done in a workmanlike manner. Any damage resulting from the Contractor's operations to the existing installation which is to remain shall be satisfactorily corrected at the Contractor's own expense, as directed by the facility operator. Castings, which are deemed unacceptable for resetting, shall become the property of the Contractor and shall be removed and disposed of by him away from the site.

No traffic shall be allowed on adjusted utility hardware until permitted by the facility operator.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of utility hardware units (EA) in each size group actually adjusted as specified under each item. The size of each utility hardware unit, measured in width, shall be defined as either, the diameter of the exposed edge of the casting, or the exposed edge of the longest side of rectangular frames as indicated in sketch JB 636.

JB 636 EA - Adjustment of Utility Hardware (Under 7" Width)

JB 636 EB - Adjustment of Utility Hardware (7" to under 14" Width)

JB 636 EC - Adjustment of Utility Hardware (14" to under 30" Width)

JB 636 ED - Adjustment of Utility Hardware (30" to under 34" Width)

JB 636 EE – Adjustment of Utility Hardware (34" to under 41" Width)

JB 636 EG - Adjustment of Utility Hardware (41" to under 75" Width)

JB 636 EH - Adjustment of Utility Hardware (75" to under 125" Width)

JB 636 EI - Adjustment of Utility Hardware (125" to under 170" Width)

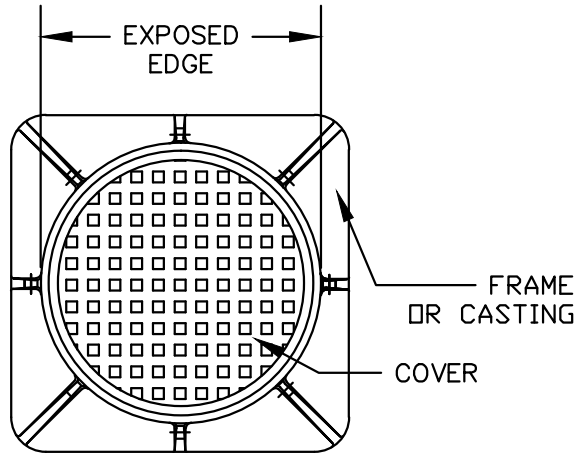
**E. Price to Cover**

The price for re-grading utility hardware shall be the unit price per each (EA.) and shall cover the cost of furnishing all labor, materials, plant, equipment, and incidentals required to remove existing frames and covers; build up the existing installations with brick and mortar, or lower the existing installations by removing bricks and mortar; replace damaged frames and/or covers with frames and/or covers furnished by others; break out pavement and/or pavement base; protect existing opening and installation; set the frames and covers to new elevations; grade and compact fill; install base concrete; tack coat frame; install, remove, and dispose temporary pavement; install and compact asphalt binder and wearing course or other permanent pavement; repair minor structural damage to existing installations prior to resetting frames; unloading of furnished castings at the Contractor's yard and transporting castings from the Contractor's yard to the job site as required; and complete the work in accordance with the plans, the specifications, and the directions of the facility operator.

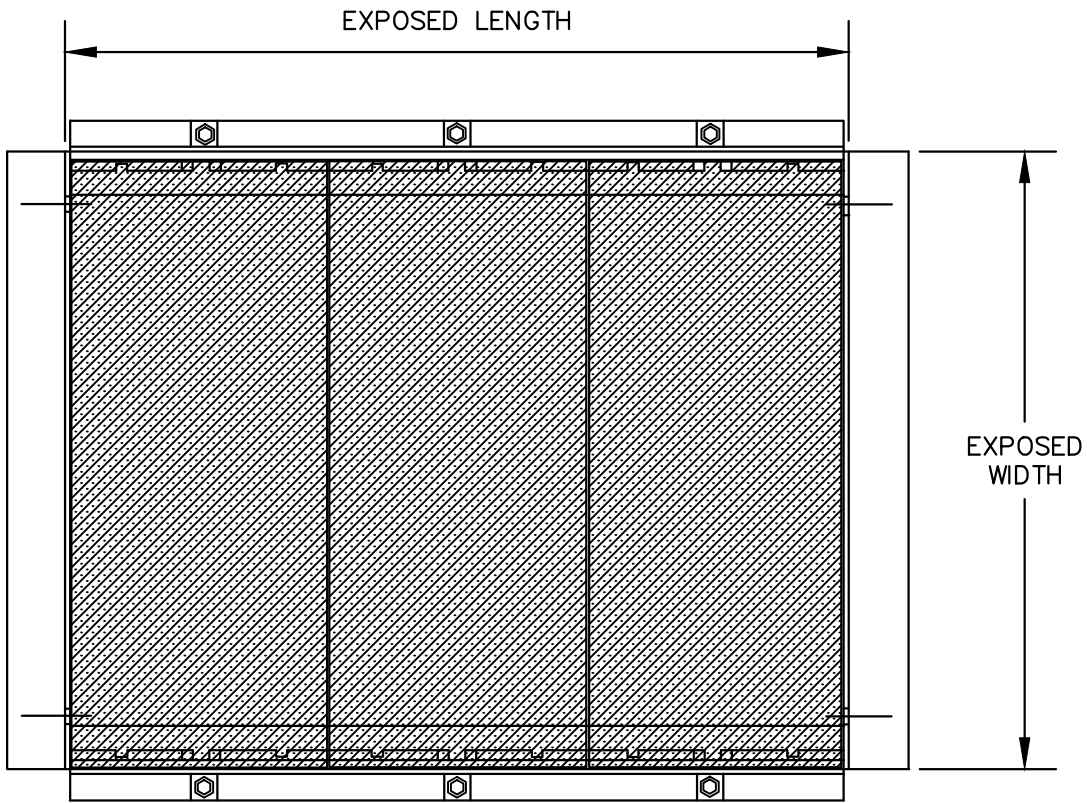
**F. References**

1. NYS DOT Standard Specs for Class F Concrete
2. Con Edison Specifications, latest revisions. EO-10321-B, latest revision – Chimneys, collars & grading blocks for manholes & vaults construction and installation
3. Sketch JB 636E

# ROUND COVERS



# RECTANGULAR COVERS/FRAMES



## PLAN VIEW

N.T.S.

ADJUSTMENT OF  
UTILITY HARDWARE

LAST REVISION  
6/30/2015

SKETCH NO.  
JB 636E

## **JB 636 M - MODIFICATION OF WORK METHODS TO ACCOMMODATE UTILITY HARDWARE DURING PAVEMENT MILLING AND RESURFACING OPERATIONS**

### **A. Description**

Under this section, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals required to maintain, protect, and accommodate the integrity of utility hardware during pavement milling and resurfacing operations. Hardware includes castings, frames, and covers on utility structures, valve box cover castings, concrete collars around steam castings, and all other hardware protecting utility facilities.

### **B. Materials** – N/A

### **C. Method of Construction**

Removal of existing pavement around utility hardware shall be performed by the Contractor with extreme caution by utilizing appropriate methods of operation, by employing specialized construction equipment, and by special operations and sequencing.

The Contractor shall not mill existing pavement within 12" of the perimeter of utility hardware. Removal of pavement within 12" of the perimeter of utility hardware shall be by cutting with pavement breakers or other methods as proposed by the Contractor. All methods shall be presented to the facility operator and the Resident Engineer by the Contractor prior to the start of construction and shall be approved by the facility operator in consultation with the Resident Engineer.

During removal of existing pavement and for the duration of project, the Contractor shall protect utility hardware from damage by the Contractor's operations and traffic. Contractor shall also provide all necessary protection to pedestrians to prevent injury to pedestrians when crossing utility hardware during the project. Utility street hardware damaged by the Contractor or others during the project shall be replaced by the Contractor at Contractor's expense.

The Contractor shall not place any paving materials over utility hardware during the project and shall maintain free and unobstructed access to all structures at all times. The contractor shall maintain all covers free of debris and protect the covers, if necessary, from residue that results from the paving operation.

### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of utility hardware units (ea) in each size group actually adjusted as specified under each item. The size of each hardware unit, measured in width, shall be defined as either, the diameter of the exposed edge of the casting, the exposed edge of elliptical castings measured along the major axis, or the exposed edge of the longest side of rectangular frames.

Item 636 MA – Modification of Work Methods to Accommodate Utility Hardware  
(Under 7" Width)

Item 636 MB – Modification of Work Methods to Accommodate Utility Hardware  
(7" to under 14" Width)

Item 636 MC – Modification of Work Methods to Accommodate Utility Hardware  
(14" to under 30" Width)

Item 636 MD – Modification of Work Methods to Accommodate Utility Hardware  
(30" to under 34" Width)

Item 636 ME – Modification of Work Methods to Accommodate Utility Hardware  
(34" to under 41" Width)

Item 636 MG – Modification of Work Methods to Accommodate Utility Hardware  
(41" to under 75" Width)

Item 636 MH – Modification of Work Methods to Accommodate Utility Hardware  
(75" to under 125" Width)

Item 636 MI – Modification of Work Methods to Accommodate Utility Hardware  
(125" to under 170" Width)

Item 636 SMB – Modification of Work Methods to Accommodate Utility Steam  
Hardware (Under and including 8" Width)

Item 636 SMC – Modification of Work Methods to Accommodate Utility Steam  
Hardware (Above 8" to 34" Width)

#### **A. Price to Cover**

The price to modify work methods to accommodate Utility Hardware during pavement milling and resurfacing operations shall include the cost of all incremental labor, materials, time, equipment, insurance and incidentals required for removal and disposal of existing pavement, installation and compaction of base and wearing course materials, installation and compaction and removal of temporary asphalt concrete mixture, tack coating; in accordance with the plans, the specifications and the directions of the facility operator in consultation with the Resident Engineer. The price to cover shall further include the cost of maintaining, protecting, and accommodating the integrity of utility street hardware during the project and during the performance of milling and resurfacing and the incremental additional work and effort made necessary to protect pedestrians from injury when crossing utility hardware during the project. The price to cover shall further include additional areas of modification of work methods beyond 12" of the perimeter of the utility street hardware due to the milling equipment and the location of other utility hardware, city street hardware, utility poles, street lights, traffic signals, curbs, sidewalks, medians, guide rails, pavement stops, cobblestones, and pavers. The price to cover for Items 636 SMB and 636 SMC shall also include modification of work methods due to existing concrete collars surrounding these castings.

Payment for all work herein specified shall be made on a one-time basis only; no payment for work herein specified shall be made for the same area more than one time. Adjustment to utility hardware shall be paid for under the appropriate JB 636E item.

#### **F. References**

## **JB 638NT – FIELD CONSTRUCTED TELECOMMUNICATIONS MANHOLE STRUCTURES**

Under this item the Contractor shall perform the complete installation of field constructed utility structures approved by the facility operator in consultation with the Resident Engineer. The utility structure shall be field constructed and installed in compliance with standard utility specifications and/or methods approved by the facility operator in consultation with the Resident Engineer.

### **A. Description**

Installation of field constructed utility structure shall comply with utility standard specifications and/or as directed by the facility operator in consultation with the Resident Engineer and shall include:

- Service Boxes (various sizes)
- Manholes (various sizes)

Where approved by the facility operator, telephone structures may as an alternate be constructed of precast reinforced concrete.

### **B. Materials**

The facility operator will furnish cable racks, pulling-in irons, sump castings, hardware, manhole steps/ladder supports and cast iron frames and covers. All other materials required for a complete manhole installation including concrete, reinforcing steel and structural steel shall be supplied by the Contractor and shall comply with the standards of the facility operator.

The Contractor shall notify the facility operator a minimum of 30 days prior to manhole construction for scheduling materials to be furnished by the utility company. The Contractor shall pick up said materials at the facility operator's yard.

All concrete shall have a minimum compressive strength of 4,000 psi at 28 days.

Reinforcing steel shall be deformed bars conforming to ASTM, Grade 60.

Structural steel shall conform to the requirements of ASTM A-36. Bolts shall conform with the requirements of ASTM A-325.

The Contractor shall supply all necessary materials (mortar, concrete, brick, etc.) for sealing duct entrance windows in manholes and for constructing chimneys and bricking up castings to grade.

### **C. Method of Construction**

All work shall comply with the utility specifications, plans, and standards of the facility operator.

Refer to specification JB 406 for excavation and sheeting requirements associated with telephone manhole construction. Where replacement manholes are indicated on the plans, the demolition

and removal of the existing manhole structure and the protection of existing cables and splices will be paid separately under JB 638R.

The Contractor shall perform the necessary field construction of the floor, walls, and roof of the utility structure as shown on the Plans and as directed by the facility operator in consultation with the Resident Engineer. No traffic shall be allowed on the structure until permitted by the facility operator in consultation with the Resident Engineer.

Field conditions may require the contractor to modify the design of the manhole structure, as directed by the facility operator in consultation with the Resident Engineer.

Refer to specification JB 636E for guidelines relating to the installation of new frames and covers.

All structural steel roof beams shall be ground free of burrs and painted with one shop coat and two field coats of finish paint. The Contractor shall make provisions for and incorporate into the manhole all required materials as shown on the Plans, standard utility details or as directed by the facility operator in consultation with the Resident Engineer.

The Contractor shall provide duct entry windows in the new manhole as shown on the Plans and as directed by the facility operator. All windows shall be properly sealed around new ducts per utility company requirements.

All cable racks and wall brackets shall be supported on walls with 1/2" dia. X 2-1/2" long galvanized steel machine bolts using 1/2" concrete inserts or expansion bolts. Vertical spacing of inserts shall not exceed 18" o.c. (typ).

The Contractor shall confirm placement of concrete inserts for cable rack supports, pulling-in irons, and other embedments shown on the Plans with the facility operator, in consultation with the Resident Engineer, prior to manhole construction.

All work shall be done in a workmanlike manner and any damage resulting from the Contractor's operations shall be satisfactorily corrected as directed by the facility operator in consultation with the Resident Engineer and at the Contractor's expense. The contractor shall perform the installation of the utility structure while maintaining, supporting, and protecting and accommodating the integrity of all utility facilities (without disruption of service) located within the areas of the excavation and the field constructed structure.

This item shall also apply when partially or totally rebuilding or modifying an existing utility structure.

The Contractor is advised that in lieu of poured-in-place structures the substitution of Precast Reinforced Concrete Structures that comply with Utility Specifications, will be permitted only when approved by the facility operator in consultation with the Resident Engineer, along with the following provisions:

1. Precast telephone manholes shall be constructed to the interior manhole dimensions and details shown on the Plans.



2. The Contractor shall submit shop drawings and design calculations for each precast manhole structure for review and approval by the facility operator and the Resident Engineer prior to fabrication. Shop drawings shall show the overall structure dimensions, roof openings, window sizes and locations, sump locations, reinforcing steel and details, construction joint types and locations including sealant material proposed. The inside face of all windows (4 sides) shall be beveled and provisions made for all inserts and hardware for a complete manhole installation, including cable pulling iron embedments and cable rack insert embedments in accordance with the standards and requirements of the facility operator.
3. Precast manhole design criteria shall be as follows:
  - Concrete Minimum Compressive Strength: 4,000 psi or greater at 28 days.
  - Steel Reinforcement: ASTM A-615, Grade 60.
  - Design Loading: AASHTO HS20-44
  - Shop drawings and calculations shall state design methodology used and all design assumptions including soil pressures and ground water levels used in the design.
4. A 9-inch thick compacted stone ballast leveling pad shall be provided as a foundation for all precast manholes.

#### **D. Method of Measurement**

The quantity to be measured for payment shall be the number of cubic yards (CY) of concrete, cast on site or pre-cast, as specified, concrete, brick, and mortar in place to the nearest hundredth of a cubic yard. No deductions will be made for the spaces occupied by steel reinforcement.

#### **E. Price to Cover**

The unit price under this item shall be a unit price per cubic yard (CY) of concrete, cast on site or pre-cast, as specified, concrete, brick, and mortar placed in the field constructed utility structure. The unit price shall cover the cost of all labor, materials, plant, equipment, insurance and incidentals required to field construct partially or totally, rebuild or modify, a utility structure. The unit price shall also include all formwork installation and removal, installation of concrete, bricks, mortar, steel reinforcement, structural steel beams, furnish and install pre-cast concrete, chimney, and installation of interior and exterior hardware, including frames and covers. The Contractor shall also install pipes, conduits, sumps, drains, sleeves, related steel or cast iron materials or equipment through the structures as shown on the drawings. Upon removal of forms, the Contractor shall remove debris and face off the entire interior of the structure. The unit price includes necessary realignment of existing ducts into the new structure up to five feet from the outside face of the new structure; any additional duct realignment required shall be paid under a separate JB item. The unit price shall further include the cost of maintaining, supporting, protecting and accommodating the integrity of all utility facilities (without disruption of service) during the work within the areas of excavation and the field constructed structure, and the furnishing of samples, as required. All work shall comply with the plans, specifications, standards, and directions of the facility operator in consultation with the Resident Engineer.

All pavement breaking, pavement removal and disposal, excavation, haul away, and disposal, furnish and install backfill, temporary pavement, sheeting, bracing, and all necessary incidentals shall be paid under item JB 406, only if required. All required break out and disposal of all types of conduits/duct banks in new structure area, including maintenance and support of cable shall be included in JB 638R. Where precast reinforced concrete manholes are used in lieu of poured in place manholes, the cost for furnishing, delivery and installation of the precast reinforced structures, additional excavation associated with the widening and deepening of trench due to increased width of precast structures and due to the placement of a stone ballast leveling pad; stone ballast; connections; and all work incidental thereto all in accordance with the Plans, Specification and Standards, shall be deemed included under this item. No additional or separate payments will be made for any work associated with the installation of precast reinforced structures.

The cost of providing an anti-freeze additive in concrete, when required, shall be paid for under Item 9.04 HW.

#### **F. References**

1. JB 406
2. JB 636E
3. JB 638R
4. Standard Utility Specifications and Drawings

## **JB 638RT – BREAK OUT AND REMOVE TELEPHONE/COMMUNICATIONS UTILITY STRUCTURE CONTAINING ACTIVE FACILITIES**

### **A. Description**

Under this section the Contractor shall provide all labor, materials, equipment, insurance and incidentals necessary to partially or totally break out and remove existing utility structures using methods approved by the facility operator. Breaking out and removing existing utility structures shall be performed while maintaining and protecting all subsurface facilities, at locations approved by the Facility Operator. The Contractor will encounter various underground facilities, located both inside and outside the utility structure, while partially or totally breaking out and removing existing utility structures and will be required to excavate and perform work over, under, adjacent to, around, in between and in close proximity of various congested configurations of multiple facilities, conduits, pipes and cables.

All work required to partially or totally break out and remove existing utility structures shall comply with standard utility specifications and/or as directed by the facility operator and shall include but not be limited to:

- Service Boxes (various sizes)
- Manholes (various sizes)
- Vaults (various sizes)
- Valve Boxes (various sizes)
- Concrete encased conduits containing cables

### **B. Materials**

All materials used shall be supplied by the Contractor and comply with the standards of the facility operator.

### **C. Method of Construction**

The Contractor shall perform the necessary breaking out and removal of the existing utility structure while maintaining and protecting all subsurface facilities. The Contractor will encounter various underground facilities located both inside and outside the utility structure, while partially or totally breaking out and removing existing utility structures and will be required to excavate and perform work over, under, adjacent to, around, in between and in close proximity of various congested configurations of multiple facilities, conduits, pipes and cables, as directed by the facility operator. All work shall be done in a workmanlike manner and any damage resulting from the Contractor's operations shall be satisfactorily corrected as directed by the facility operator and at the Contractor's expense.

This item shall also apply when partially or totally breaking out and removing an existing utility structure.

The rebuilding of the utility structure is covered under JB 638NT.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of cubic yards (CY) of concrete, reinforced concrete, brick, and mortar of the existing utility structure broken out, removed and disposed to the nearest hundredth of a cubic yard. No deductions will be made for the spaces occupied by steel reinforcement.

**E. Price to Cover**

The unit price bid under this item shall be a unit price per cubic yard (CY) of concrete, reinforced concrete, brick, and mortar of the existing utility structure broken out, removed and disposed. The unit price shall also cover the cost of all labor, materials, plant, equipment, insurance, and incidentals required to partially or totally break out, remove and dispose of existing utility structure. The unit price shall also include demolition of the existing utility structure, haul away and disposal of demolished materials, formwork, concrete, bricks, mortar, steel reinforcement, structural steel beams, interior hardware, exterior hardware, including frames and covers. The unit price shall further include the cost of maintaining, supporting, protecting and accommodating the integrity of all utility facilities (without disruption of service) during the work within the areas of excavation and the existing structure. All work shall comply with the plans, specifications and standards, provided by and at the directions of the facility operator.

The unit price shall include providing access to the facility operator tenants to verify and test cables before, during and after breaking out and removal of the utility and after conduit removal by the Contractor. The unit price shall include, but not limited to, opening and closing of fences; removal and replacement of temporary timber curb and opening and closing of traffic plates. Access to adjacent manholes impacted by the run is included in this item. JB 450 shall not be used in conjunction with JB 638RT as JB 638RT covers access to the work site at all times.

All pavement breaking, pavement removal and disposal, excavation, haul away, and disposal, furnish and install backfill, temporary pavement, sheeting, bracing, and all necessary incidentals shall be paid under item JB 406, only if required.

**F. References**

1. JB 406
2. Standard Utility Specifications and Drawings

**JB 798 - MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES  
REMOVAL WHEN CROSSING UTILITY FACILITIES****A. Description**

This JB item shall only be applied to trolley structure systems that do not contain concrete yoke foundations. This JB item shall only be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits;
2. Conductors;
3. Concrete encased Conduit banks;
4. Steel Pipes; Steam Facilities;
5. Oil-o-static Facilities;
6. Non-cost Sharing Gas Facilities;
7. Steam Facilities;

of various sizes and configurations crossing trolley structures at various angles located within a zone of protection, as indicated on Sketch JB 798, during the removal of trolley structures and subsequent backfilling operations. Utility facilities that run parallel to trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator.

**B. Materials – N/A****C. Method of Construction**

The Contractor shall maintain, protect, and accommodate the integrity of all utility facilities of various sizes and configurations crossing trolley structures within a zone of protection as indicated in Sketch JB 798, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits at locations determined by the facility operator to expose utility as specified in JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with care to remove existing trolley structure within the zone of protection whose limit shall be defined as a distance of 24 inches from the outside face of each utility crossing.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on JB Sketch 798, measured along the centerline of trench. The trench is defined as one track set containing two rails. The zone of protection shall be defined, for the purpose of this agreement, as the boundary/area designated on the plans or a boundary/area 24 inches to either side of each of the designated facilities, based upon available records and/or information obtained from prior or new test pits, or any combination thereof. Where overlapping of the zones occurs due to multiple facilities, the boundary/area shall be modified to one zone measured from the outside limits. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities during the removal of trolley structures (including rails, timber ties, trolley conduits and main conduit), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator.

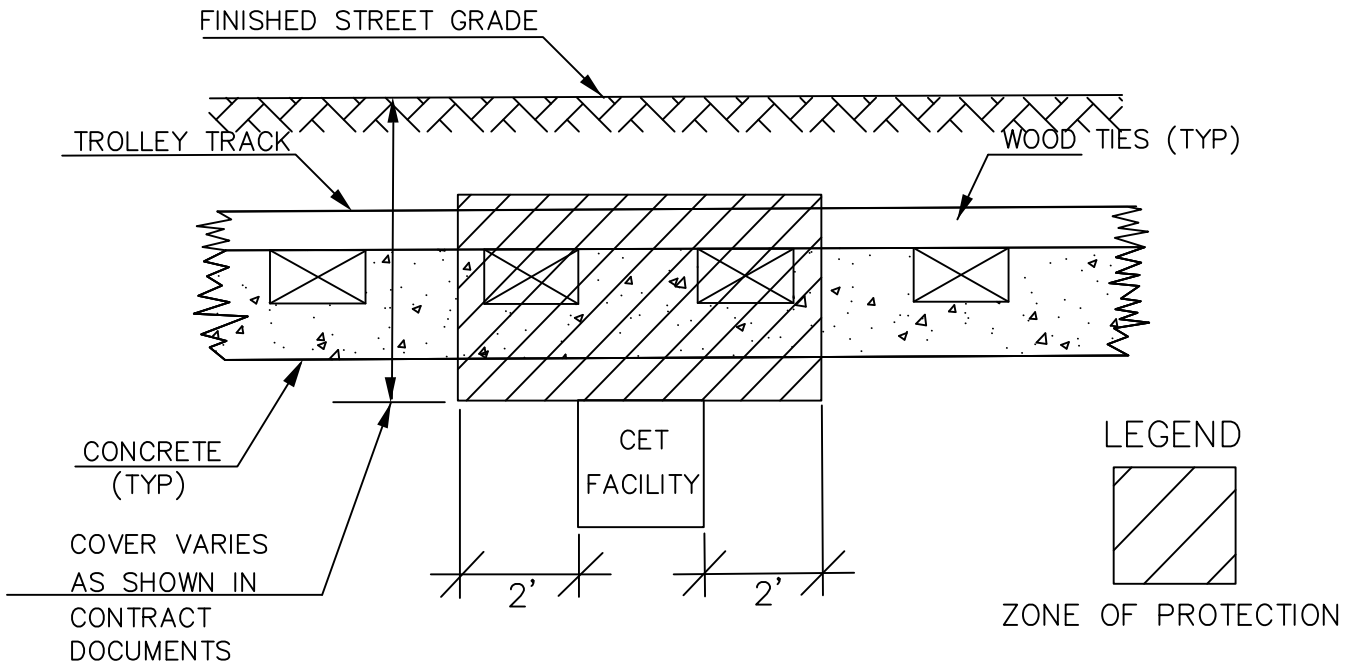
The price shall include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include means to ascertain the numerical relationship between utility and the trolley structure and the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

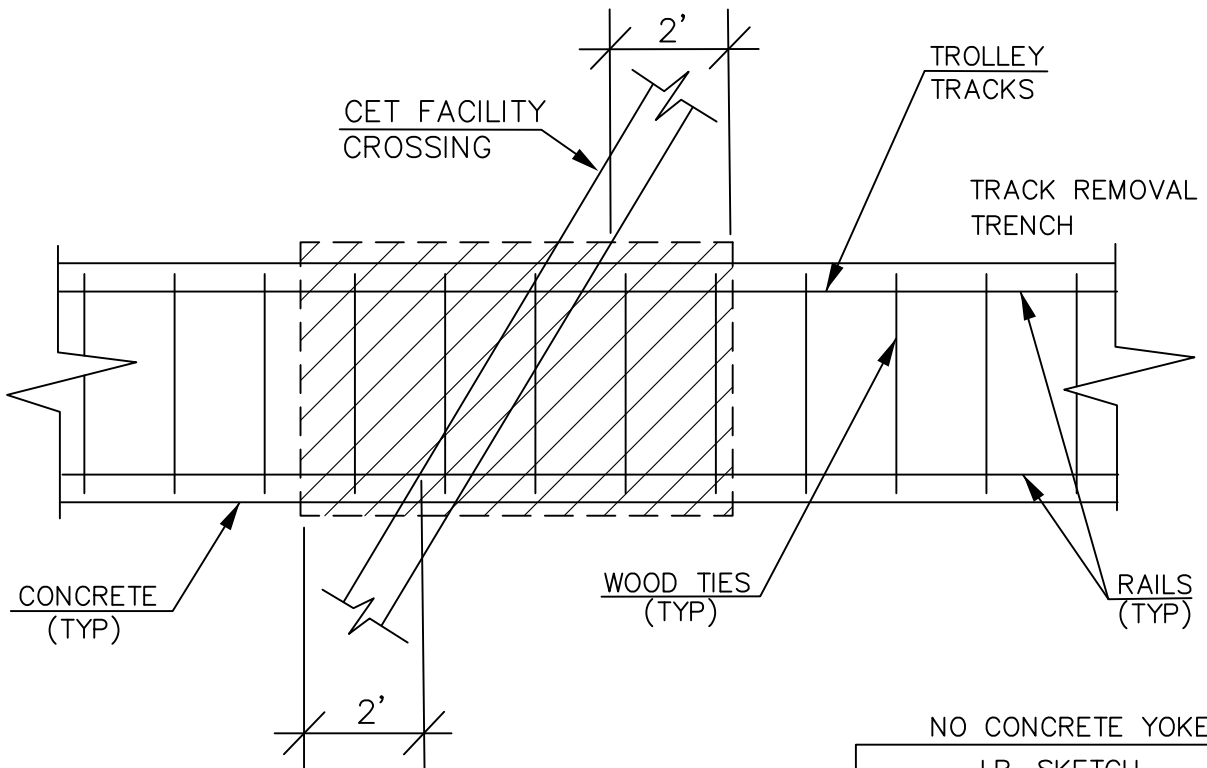
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

**F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 798



SECTION OF CET FACILITIES CROSSING  
TROLLEY TRACKS



PLAN OF CET FACILITIES  
CROSSING TROLLEY TRACKS

NO CONCRETE YOKE	
J.B. SKETCH	
CET ACCOMODATION SECTIONS CROSSING TROLLEY RAILROAD STRUCTURES	
REVISIONS	CONTRACT NO.
09/13/2017	SKETCH NO. JB 798

## **JB 799 - MODIFICATION OF NON CONCRETE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that do not contain concrete yoke foundations. This JB item shall only be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits;
2. Conductors;
3. Concrete encased Conduit banks;
4. Steel Pipes; Steam Facilities;
5. Oil-o-static Facilities; and
6. Non-cost Sharing Gas Facilities;
7. Steam Facilities.

of various sizes and configurations paralleling or encroaching trolley structures located within a zone of protection, as indicated on the Plans or as directed by the field representative, during all trolley structure removal operations and subsequent backfilling operations. Utility facilities which cross over, under and between the trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator(s).

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or encroaching trolley structures within a zone of protection as indicated on the Plans or as directed by the field representative, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits at locations determined by the facility operator to expose utility as specified in JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator(s) to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with care to remove existing trolley structure within the zone of protection whose limit shall be defined as a distance of 24 inches from the outside face of each utility to the edge of the trolley structure.



**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on the plans, measured along the centerline of trench. The trench is defined as one track set containing two rails. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or encroaching trolley structures during the removal of trolley structures (including rails, timber ties, trolley conduits, and main conduits), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator(s).

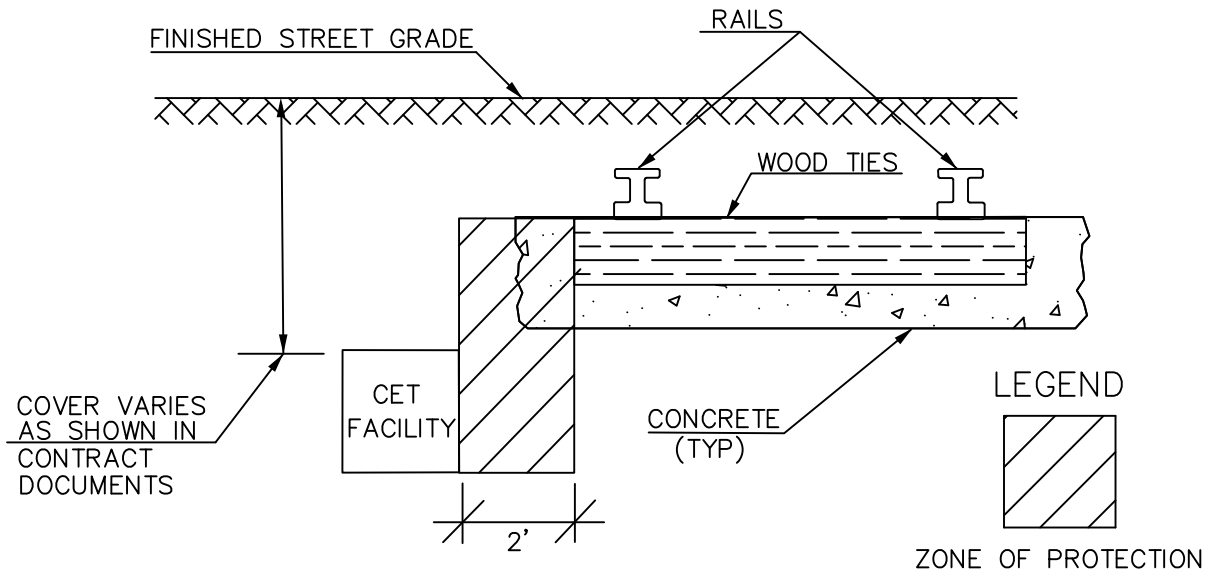
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include means to ascertain the numerical relationship between utility and the trolley structure, and the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

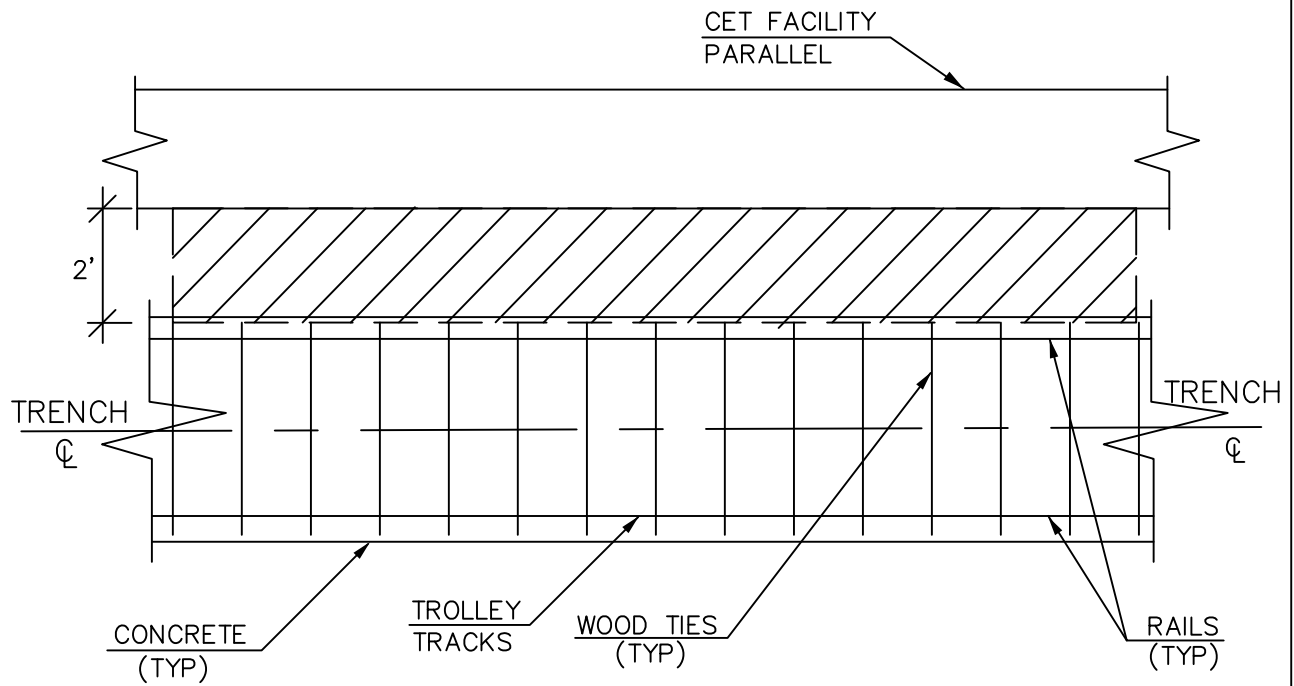
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

**F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 799



SECTION OF CET FACILITIES PARALLELING TROLLEY TRACKS



PLAN OF CET FACILITIES PARALLELING TROLLEY TRACKS

NO CONCRETE YOKE

J.B. SKETCH

CET ACCOMODATION  
FACILITIES PARALLEL  
TROLLEY RAILROAD  
STRUCTURES

REVISIONS
09/13/2017

CONTRACT NO.

SKETCH NO.  
JB 799

## **JB 800 - MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that contain concrete yoke foundations. This JB item shall not be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits
2. Conductors
3. Concrete encased conduit banks
4. Steel pipes
5. Oil-o-static facilities
6. Non-cost Sharing Gas Facilities and
7. Steam Facilities

of various sizes and configurations crossing trolley structures at various angles located within a zone of protection, as indicated on Sketch JB 800, during the removal of trolley structures and subsequent backfilling operations. Utility facilities that run parallel to trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator.

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, and accommodate the integrity of all utility facilities of various sizes and configurations crossing trolley structures within a zone of protection as indicated in Sketch JB 800, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits to expose the utilities as specified under JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with hand held power tools to remove existing trolley structure within the zone of protection whose limit shall be defined as a perimeter located 24 inches from the outside face of each utility crossing.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on JB Sketch 800, measured along the centerline of trench. The trench is defined as one track set containing two rails. The zone of protection shall be defined, for the purpose of this agreement, as the boundary/area designated on the plans or a boundary/area 3 feet to either side of each of the designated facilities, based upon available records and/or information obtained from prior or new test pits, or any combination thereof. Where overlapping of the zones occurs due to multiple facilities, the boundary/area shall be modified to one zone measured from the outside limits. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain and protect and accommodate the integrity of utility facilities during the removal of trolley structures (including rails, timber ties, yokes, trolley conduits, main conduit, rail and yoke foundations), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator.

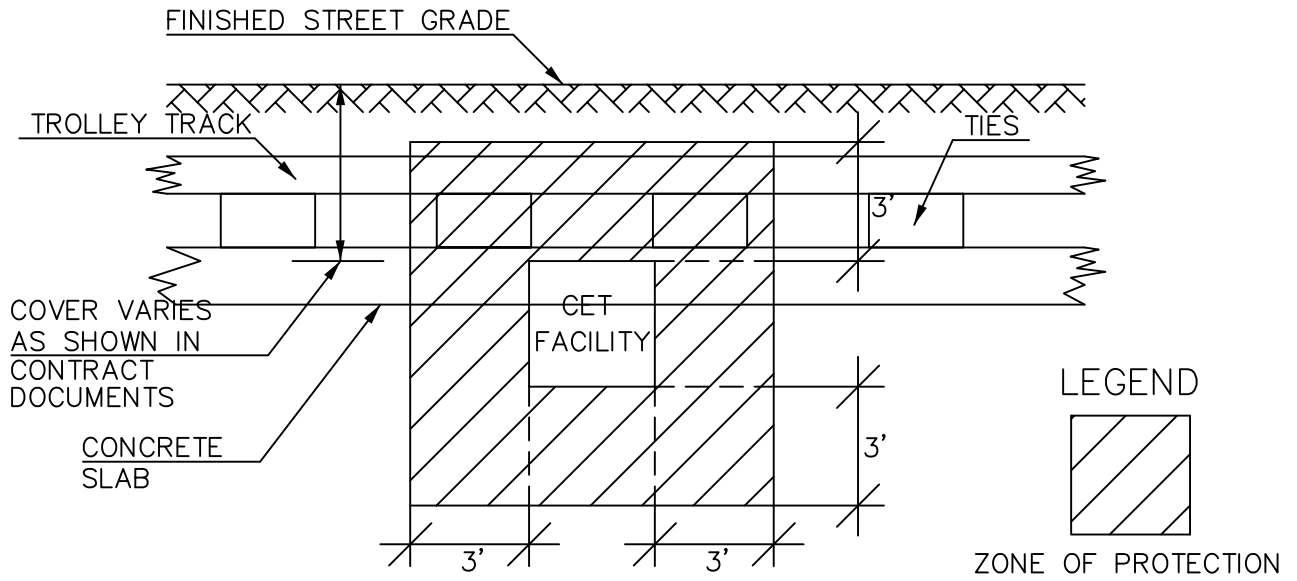
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The unit price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

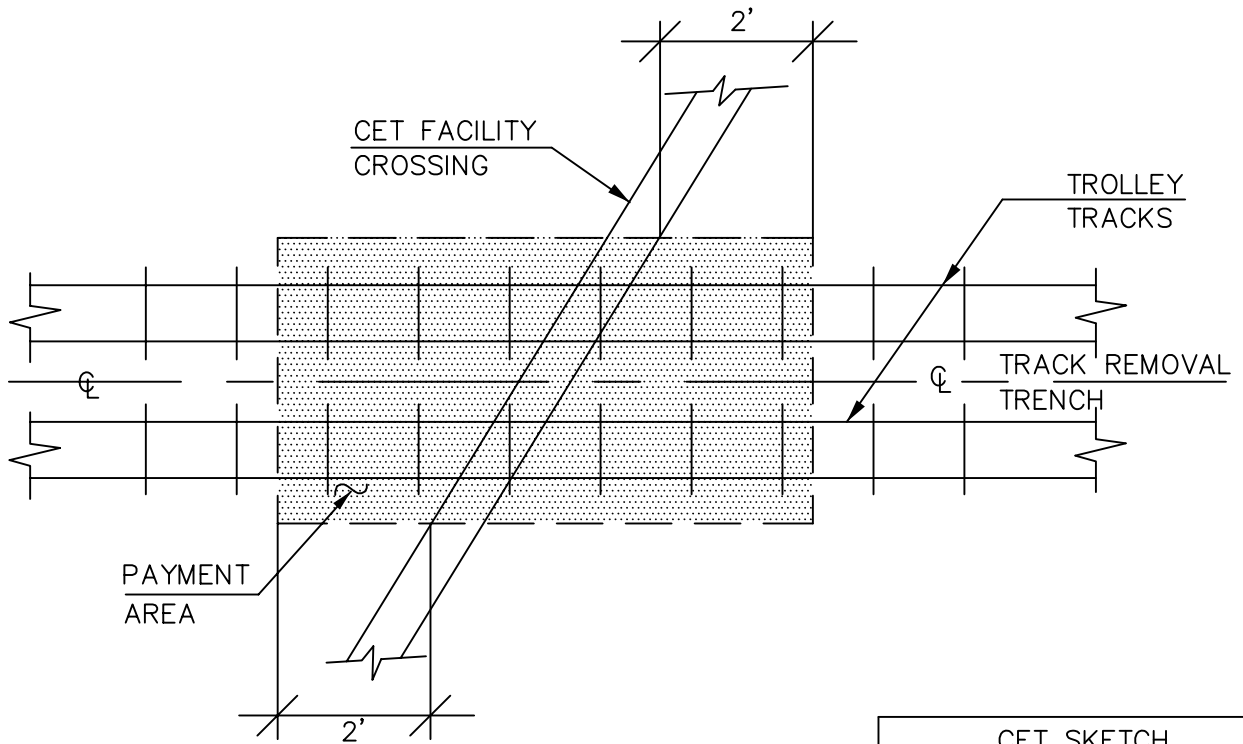
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

**F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 800



SECTION OF CET FACILITIES CROSSING TROLLEY TRACKS



PLAN OF CET FACILITIES CROSSING TROLLEY TRACKS

CET SKETCH	
CET ACCOMODATION SECTIONS AT TROLLEY RAILROAD STRUCTURES	
REVISIONS	CONTRACT NO.
09/13/2017	SKETCH NO. JB 800

## **JB 801 - MODIFICATION OF CONCRETE YOKE TROLLEY STRUCTURES REMOVAL PARALLEL TO UTILITY FACILITIES**

### **A. Description**

This JB item shall only be applied to trolley structure systems that contain concrete yoke foundations. This JB item shall not be used for trolley systems that have rails and wood ties only.

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to:

1. Conduits
2. Conductors
3. Concrete encased conduit banks
4. Steel pipes
5. Oil-o-static facilities
6. Non-cost sharing gas facilities and
7. Steam facilities

of various sizes and configurations paralleling or encroaching trolley structures located within a zone of protection, as indicated in sketch JB 801 or as directed by the field representative, during all trolley structure removal operations and subsequent backfilling operations. Utility facilities which cross over, under and between the trolley structures are not included within this item and will be paid for under the appropriate JB item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and directed by the facility operator(s).

### **B. Materials – N/A**

### **C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or encroaching trolley structures within a zone of protection as indicated in sketch 801 or as directed by the field representative, during removal of trolley structures and subsequent backfilling and compaction operations under other contract item(s). The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the utility and ascertain the numerical relationships and/or dimensions of these utilities with respect to the proposed excavation. Contractor shall perform test pits to expose the utilities as specified under JB 400. Upon exposing the affected utilities sufficiently, and at the sole discretion of the facility operator(s) to determine relationships and/or dimensions, the Contractor shall be permitted to proceed with hand held power tools to remove existing trolley structure within the zone of protection whose limit shall be defined as a perimeter located 24 inches from the outside face of each utility.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of modified trolley structure removal within the zone of protection as indicated on the plans, measured along the centerline of trench. The trench is defined as one track set containing two rails. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or encroaching trolley structures during the removal of trolley structures (including rails, timber ties, yokes, trolley conduits, main conduit, rail and yoke foundations), and backfilling and compacting within a zoned area designated for protection of utilities by the facility operator(s).

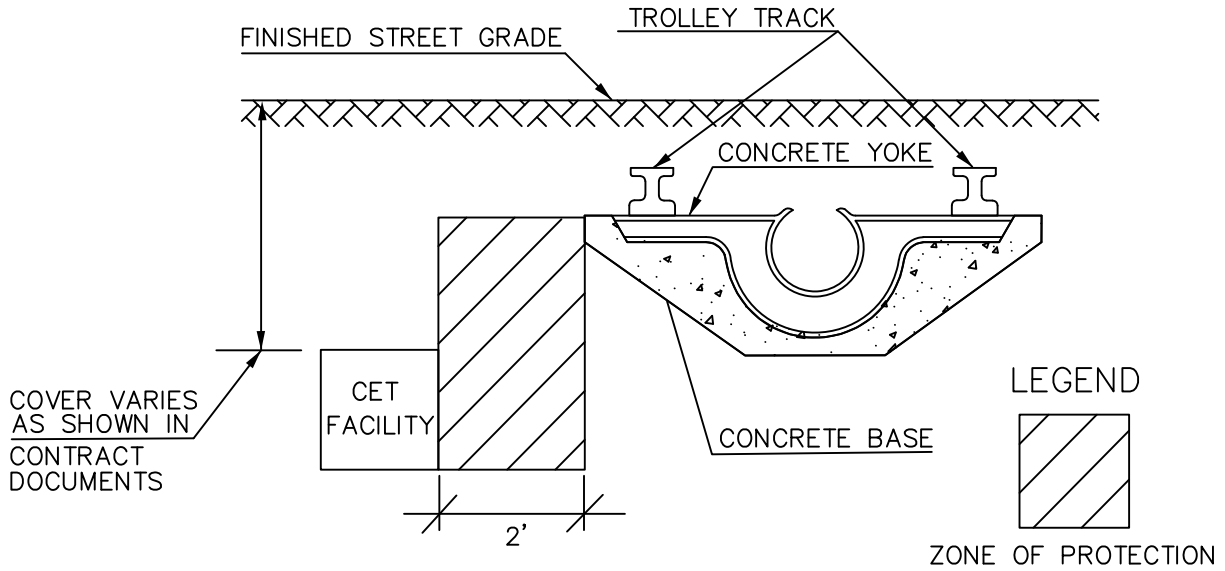
The unit price shall also include any additional cutting, removing and disposing of roadway materials; hand or machine excavation; trucking and disposing of excavated materials, installation and removal of sheeting; and furnishing, installing and compacting backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The unit price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to trolley demolition operations that are not performed in accordance with the specifications.

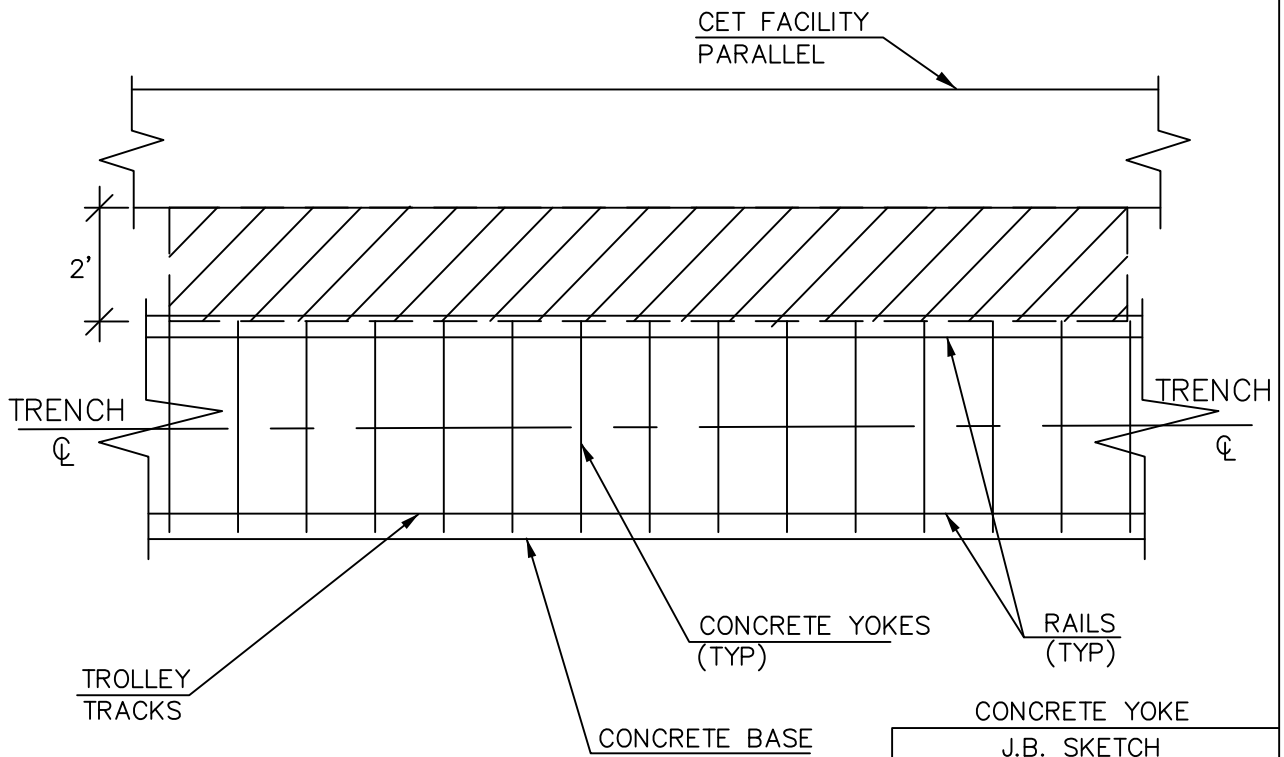
When this work is performed within a mass excavation area, a credit will be taken for the removed trolley structure.

**F. References**

1. NYS Industrial Code Rule 753
2. Sketch JB 801



SECTION OF CET FACILITIES PARALLELING TROLLEY TRACKS



PLAN OF CET FACILITIES PARALLELING TROLLEY TRACKS

CONCRETE YOKE	
J.B. SKETCH	
CET ACCOMODATION FACILITIES PARALLEL TROLLEY RAILROAD STRUCTURES	
REVISIONS	CONTRACT NO.
09/13/2017	SKETCH NO. JB 801



## **JB 802 - SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS AND SIDEWALKS**

### **A. Description**

Under this Section, the Contractor shall be required to modify work methods of installing new curb and sidewalk in order to maintain, protect and accommodate the integrity of private Utility Facilities located within a zone of protection immediately beneath existing sidewalk and curb designated to be replaced under other Contract items. The zone of protection shall define an area of curb and sidewalk where: work is within the vicinity of private Utility Facilities as shown on the Special Care Excavation Plan or where utilities are encountered during construction that are within 18 inches of either face of curb and/or 12 inches of the base material of proposed curb and/or sidewalk.

### **B. Materials – N/A**

### **C. Method of Operation/Construction**

Once clearances have been verified by available records to the satisfaction of the facility operator, the Contractor shall exercise extreme caution to install new curb and sidewalks within zoned areas of protection. Exercising extreme caution shall mean utilizing appropriate methods of operation/construction, special operations and sequencing, and by employing hand labor, using hand held tools only, under the personal direction of the appropriate facility operator. The work shall incorporate, but not be limited by, the following restrictions:

#### **1. Removal of Existing Curb and Sidewalk**

Removal of existing curb and sidewalk material shall be performed by saw cutting the curb and sidewalk, for a depth of not less than 2", to assist the Contractor in breaking up the concrete curb and sidewalk for removal by hand. Curb and sidewalk removal shall be done with hand labor, using hand held tools only while working from adjacent undisturbed sidewalk and/or pavement. Furthermore, it shall be understood to mean that digging and/or excavating directly with power-mechanized earth moving equipment will not be permitted. Power mechanized earth moving equipment may only be used as a depository of material removed from the excavation by hand as described above. All equipment, methods, and maintenance and protection provisions shall require full authorization by the facility operator.

#### **2. Preparation and Installation of New Curb and Temporary and New Sidewalk**

Backfilling, filling, grading of sub base, and installation of new curb and both temporary and new sidewalk, as required under other Contract Items, shall be performed utilizing materials, equipment and methods of construction that will insure the integrity of the private utility facilities and at the same time meet all requirements for this work as specified in other sections of this contract.

### **3. Compaction**

The Contractor shall compact all sub-grade and new sub-base materials by utilizing native and/or blended fill material, equipment and methods of construction that will ensure integrity of private Utility Facilities and at the same time meet all requirements for compaction as specified in Section 4.11 of the Standard Highway Specifications.

### **4. Powered Excavating Equipment Limitations**

The Contractor shall not employ powered or mechanical excavating equipment within the zone of protection. Powered or mechanical excavating equipment may only be used as a depository for material removed from the excavation by hand as described above.

The Contractor shall not be permitted to store, stand and/or travel equipment/vehicles on specified unpaved zoned protection areas.

### **D. Method of Measurement**

#### **1. ITEM JB 802A**

The quantity of "Special Care Excavation and Restoration for Sidewalk Work" to be measured for payment shall be the number of square feet (SF) of new sidewalk actually installed under other contract items within the zone of protection areas requested by the facility operator. For payment purposes, the horizontal limits for a zone of protection area shall be defined as the area designated on the plans or an area equal to the length of the designated facility multiplied by its width plus 18 inches on each side. Where overlapping of zones occur due to multiple facilities, the area will be modified to one zone measured from the outside limits. Where the 18-inch area falls beyond the curb line the outside boundary shall be the curb line.

#### **2. ITEM JB 802B**

The quantity of "Special Care Excavation and Restoration for Curb Work" to be measured for payment shall be equal to the number of linear feet (LF) of new curb actually installed under other contract items within the zone of protection areas requested by the facility operator.

**E. Price to Cover****1. ITEM JB 802A**

The contract price per square foot for "Special Care Excavation and Restoration for Sidewalk Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required for excavation and disposal of pavement, base and all other material to new sub-grade within and adjacent to zone of protection areas; saw cutting, grading, preparation of sub-grades, backfilling and compaction within zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting and accommodating the integrity of private Utility Facilities during the performance of sidewalk reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

**2. ITEM JB 802B**

The contract price per linear foot for "Special Care Excavation and Restoration for Curb Work" shall be the incremental cost difference of all labor, materials, equipment, insurance and incidentals required to install new curbs and temporary restoration material under other Contract items, within and adjacent to zone of protection areas; all in accordance with the plans, the specifications and the directions of the facility operator. The price shall further include the cost of maintaining, protecting, and accommodating the integrity of private Utility Facilities during the performance of curb reconstruction (under other Contract Items) within zone of protection areas designated on the plans or as directed by the facility operator.

Payment for all work specified herein shall be made on a one-time basis only; no payment will be made for the same area of sidewalk or length of curb more than one time. In addition, work under these items shall not be paid in combination with other utility items.

**F. References**

1. Section 4.11 Standard Highway Specification

**JB 803 - LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED WITH ROADWAY REMOVAL OPERATIONS****A. Description**

Under this section, the Contractor shall provide all incremental labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities that include but are not limited to oil or static facilities, and any other facilities of various sizes and configurations paralleling or crossing proposed saw cut areas located within a zone of protection associated with roadway removal operations, as determined by the utility operator. Utility facilities which cross under and between the saw cut area are included within this item. The work shall be performed in accordance with the contract plans, the specifications, and as encountered during construction and determined by the facility operator(s).

**B. Materials – N/A****C. Method of Construction**

The Contractor shall maintain, protect, support and accommodate the integrity of all utility facilities of various sizes and configurations paralleling or crossing the saw cut area within a zone of protection as determined by the Facility Operator, during the roadway saw cut. The facility operator(s) shall identify the locations of all utilities within the contract area as required by New York State Industrial Code Rule 753. As provided by the Rule, the Contractor shall use pneumatic tools to line cut the pavement in lieu of saw cut by machine. It is the sole discretion of the facility operator(s) to determine relationships and/or dimensions, and advise the Contractor to proceed with pneumatic tools to line cut existing roadway structure.

**D. Method of Measurement**

The quantity to be measured for payment shall be the number of linear feet of line cut performed by pneumatic tools measured along the length of cut. The contract item specified under this section shall not be measured for payment in conjunction with other types of utility items. Modifications to work methods required in areas between zones of protection for multiple utilities or JB facilities shall not be measured for payment and are included in the price bid for this item.

JB 803.1 Line cut Asphalt Roadway (LF)

JB 803.2 Line cut any combination of Asphalt and Concrete Roadway (LF)

JB 803.3 Line cut any combination of Asphalt, Concrete, and Belgium Block (LF)

**E. Price to Cover**

The unit price per linear foot shall include the incremental cost for all labor, equipment, insurance and incidentals required to maintain, protect, support and accommodate the integrity of utility facilities paralleling or crossing the saw cut area associated with the removal of roadway designated for protection of utilities by the facility operator(s).

The unit price shall also include any additional cutting, removing and disposing of roadway materials; and any backfill that may be required to support, protect, maintain and accommodate the integrity of utility facilities. The price shall also include the incremental cost for providing all vehicular and pedestrian traffic maintenance necessary to perform the work.

The Contractor shall be responsible for any and all damages resulting from and/or due to saw cutting operations that are not performed in accordance with the specifications.

**F. References**

1. NYS Industrial Code Rule 753

**END OF JB-PAGES SECTION C  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION D. PRIVATE UTILITIES  
PARTICIPATING LIST**

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**LISTING OF COMPANIES NAMED FOR THIS CONTRACT****HWQ274F2  
RECONSTRUCTION OF STREETS IN  
ROSEDALE AREA - PHASE 2  
BOROUGH OF QUEENS**

<b><u>COMPANY NAME</u></b>	<b><u>CONTACT NAME</u></b>	<b><u>CONTACT</u></b>	<b><u>E-MAIL</u></b>
<b>CON- EDISON</b>	<b>DENNIS BRADY</b>	<b>(917) 608-3435</b>	<b>BRADYD@CONED.COM</b>
<b>VERIZON</b>	<b>AUBREY MAKHANLALL</b>	<b>(516) 758-3705</b>	<b>AUBREY.N.MAKHANLALL@VERIZON.COM</b>
<b>NATIONAL GRID</b>	<b>NEVILLE JACOBS</b>	<b>(718) 963-5612</b>	<b>NEVILLE.JACOBS@NATIONALGRID.COM</b>



**END OF JB-PAGES SECTION D  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION E. PRIVATE UTILITIES SCOPE  
OF WORK**

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**JOINT BID WORKSHEET**  
**ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE**  
**FOR CONSOLIDATED EDISON COMPANY OF NEW YORK**  
**HWQ274F2**  
**RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2**  
**BOROUGH OF QUEENS**

JOINT BID ITEM NUMBER	DESCRIPTION	UNITS	ESTIMATED QUANTITY
JB 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)	EA	6
JB 111.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .1)	EA	1
JB 225.2A	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	4
JB 300.1	SPECIAL CARE EXCAVATION AND BACKFILLING IN TRENCH LESS THAN 5' DEEP	CY	189
JB 330E	SUPPORT AND PROTECTION OF UTILITY FACILITIES DURING EXCAVATION	LF	135
JB 351	INSTALL AND REMOVE "A" FRAME ON UTILITY POLES	EA	10
JB 400	TEST PITS FOR UTILITY FACILITIES	CY	50
JB 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	CY	119
JB 402.2	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	LF	200
JB 450.1	CONSTRUCTION FIELD SUPPORT - SURVEY CREW (TYPE .1)	CRHRS	8
JB 450.2	CONSTRUCTION FIELD SUPPORT - SMALL SIZE CREW (TYPE .2)	CRHRS	8
JB 450.3	CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .3)	CRHRS	100
JB 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	LF	100
JB 638 R	BREAK OUT AND REMOVE UTILITY STRUCTURE	CY	10
JB 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	CY	69
JB 781	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	EA	2
JB 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	SF	1,240

**JOINT BID WORKSHEET**  
**ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE**  
**FOR CONSOLIDATED EDISON COMPANY OF NEW YORK**  
**HWQ274F2**  
**RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2**  
**BOROUGH OF QUEENS**

JOINT BID ITEM NUMBER	DESCRIPTION	UNITS	ESTIMATED QUANTITY
JB 802B	SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK	LF	190

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWQ274F2  
RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2  
BOROUGH OF QUEENS**

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**JB 108.1** UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1) EA

*At the following locations:*

Francis Lewis Blvd. Between 147th Ave. and 257th St.  
Hook Creek Blvd. Between 149th Ave. and 148th Dr.  
Hungry Harbor Rd. Between Hook Creek Blvd. Between 262nd Pl.  
147th Ave. Between 259th St. and Francis Lewis Blvd.

**Total Quantity for JB 108.1 = 6**

**JB 111.1** UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .1) EA

*At the following locations:*

Hook Creek Blvd. Between 149th Ave. and 148th Dr.

**Total Quantity for JB 111.1 = 1**

**JB 225.2A** INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES EA

*At the following locations:*

Francis Lewis Blvd. Between 147th Ave. and 257th St.  
262nd Pl. Between Hungry Harbor Rd. and 149th Rd.

**Total Quantity for JB 225 = 4**

**JB 300.1** SPECIAL CARE EXCAVATION AND BACKFILLING IN TRENCH LESS THAN 5' DEEP CY

*At the following locations:*

Hook Creek Blvd. Between 149th Ave. and 148th Dr.  
Various Locations

**Total Quantity for JB 300 = 189**

**JB 330E** SUPPORT AND PROTECTION OF UTILITY FACILITIES DURING EXCAVATION LF

*At the following locations:*

Hook Creek Blvd. Between 149th Ave. and 148th Dr.  
Various Locations

**Total Quantity for JB 330E = 135**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWQ274F2  
RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2  
BOROUGH OF QUEENS**

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<b>JB 351</b>	<b>INSTALL AND REMOVE "A" FRAME ON UTILITY POLES</b>  <i>At the following locations:</i> Various Locations  <b>Total Quantity for JB 351 = 10</b>	<b>EA</b>
<b>JB 400</b>	<b>TEST PITS FOR UTILITY FACILITIES</b>  <i>At the following locations:</i> Various Locations  <b>Total Quantity for JB 400 = 50</b>	<b>CY</b>
<b>JB 401</b>	<b>TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES</b>  <i>At the following locations:</i> Francis Lewis Blvd. Between 147th Ave. and 257th St.  <b>Total Quantity for JB 401 = 119</b>	<b>CY</b>
<b>JB 402.2</b>	<b>EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT</b>  <i>At the following locations:</i> Francis Lewis Blvd. Between 147th Ave. and 257th St.  <b>Total Quantity for JB 402.2 = 200</b>	<b>LF</b>
<b>JB 450.1</b>	<b>CONSTRUCTION FIELD SUPPORT - SURVEY CREW (TYPE .1)</b>  <i>At the following locations:</i> Various Locations  <b>Total Quantity for JB 450.1 = 8</b>	<b>CRHRS</b>
<b>JB 450.2</b>	<b>CONSTRUCTION FIELD SUPPORT - SMALL SIZE CREW (TYPE .2)</b>  <i>At the following locations:</i> Various Locations  <b>Total Quantity for JB 450.2 = 8</b>	<b>CRHRS</b>

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**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWQ274F2  
RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2  
BOROUGH OF QUEENS**

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**JB 450.3**      **CONSTRUCTION FIELD SUPPORT - MEDIUM SIZE CREW (TYPE .3)**      **CRHRS**

*At the following locations:*

Various Locations

**Total Quantity for JB 450.3      =    100**

**JB 500**      **REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)**      **LF**

*At the following locations:*

Various Locations

**Total Quantity for JB 500      =    100**

**JB 638 R**      **BREAK OUT AND REMOVE UTILITY STRUCTURE**      **CY**

*At the following locations:*

Various Locations

**Total Quantity for JB 638 R      =    10**

**JB 700**      **SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER**      **CY**

*At the following locations:*

147th Ave. Between 259th St. and Francis Lewis Blvd.

AS SHOWN ON CONTRACT DRAWINGS AND DIRECTED BY A CON EDISON REP.

**Total Quantity for JB 700      =    69**

**JB 781**      **REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS**      **EA**

*At the following locations:*

Francis Lewis Blvd. Between 147th Ave. and 257th St.

**Total Quantity for JB 781      =    2**

**CON EDISON JOINT BIDDING SCOPE OF WORK  
SUPPORT AND PROTECTION  
HWQ274F2  
RECONSTRUCTION OF STREETS IN ROSEDALE AREA - PHASE 2  
BOROUGH OF QUEENS**

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**JB 802A**                    **SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK**                    **SF**

*At the following locations:*

Francis Lewis Blvd. Between 147th Ave. and 257th St.  
Hook Creek Blvd. Between 149th Ave. and 148th Dr.  
Hungry Harbor Rd. Between Hook Creek Blvd. Between 262nd Pl.  
147th Ave. Between 259th St. and Francis Lewis Blvd.  
147th Ave. Between 259th St. and Francis Lewis Blvd.

**Total Quantity for JB 802A            =    1,240**

**JB 802B**                    **SPECIAL CARE EXCAVATION AND RESOTRATION FOR CURB WORK**                    **LF**

*At the following locations:*

Francis Lewis Blvd. Between 147th Ave. and 257th St.  
Hook Creek Blvd. Between 149th Ave. and 148th Dr.  
Hungry Harbor Rd. Between Hook Creek Blvd. Between 262nd Pl.  
147th Ave. Between 259th St. and Francis Lewis Blvd.  
262nd Pl. Between Hungry Harbor Rd. and 149th Rd.

**Total Quantity for JB 802B            =    190**



**JOINT BID WORKSHEET**  
**HWQ274F2 - RECONSTRUCTION OF THE ROSEDALE**  
**AREA STREETS PHASE 2**  
**BOROUGH OF QUEENS**

**ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE**

**FOR VERIZON**

JOINT BID ITEM NUMBER	DESCRIPTION	Unit of Measure	Estimated Quantity
JB 351	INSTALL AND REMOVE "A" FRAME ON UTILITY POLES	EACH	5

VERIZON JOINT BIDDING SCOPE OF WORK  
SUPPORT & PROTECTION  
HWQ274F2 - RECONSTRUCTION OF THE ROSEDALE  
AREA STREETS PHASE 2  
BOROUGH OF QUEENS

<b>JB 351</b>	<b>INSTALL AND REMOVE "A" FRAME ON UTILITY POLES</b>	<b>EACH</b>
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	5
Total quantity for	JB 351 =	5

**UTILITY CONTRACT INCLUSION ANALYSIS**  
**BID ITEM ACCOMMODATION**  
**HWQ274F2 - RECONSTRUCTION OF THE ROSEDALE**  
**AREA STREETS PHASE 2**  
**BOROUGH OF QUEENS**

**ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE**  
**FOR VERIZON**

<b>BID ITEM NUMBER</b>	<b>DESCRIPTION</b>	<b>Unit of Measure</b>	<b>Estimated Quantity</b>
51.21S0A3000V	STANDARD SHALLOW MANHOLE TYPE A-3	EA.	1

**UTILITY INCLUSION SCOPE OF WORK**  
**BID ITEM ACCOMMODATION**  
**HWQ274F2 - RECONSTRUCTION OF THE ROSEDALE**  
**AREA STREETS PHASE 2**  
**BOROUGH OF QUEENS**

51.21S0A3000V STANDARD SHALLOW MANHOLE TYPE A-3 EA.

At the following locations:

W/S OF HOOK CREEK BOULEVARD, N/O 145TH AVENUE 1

Total quantity for 51.21S0A3000V = 1

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Support & Protection  
CONTRACT NO. HWQ274F2  
Reconstruction of Streets in Rosedale Area  
Borough of Queens

JB Item Number	Description	Unit of Measure	Estimated Quantity
802A	Special Care Excavation And Restoration For Sidewalk Work	SF	3600
802B	Special Care Excavation And Restoration For Curb Work	LF	52

**JB Item Nr. Description**

- 802A Special Care Excavation And Restoration For Sidewalk Work**  
3600 @ AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID  
**Quantity - 3600 SF**
  
- 802B Special Care Excavation And Restoration For Curb Work**  
52 @ AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID  
**Quantity - 52 LF**

**END OF JB-PAGES SECTION E  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION F. PRIVATE UTILITIES TEST  
PITS AND SKETCHES**

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SHEET NO. 1 OF 1

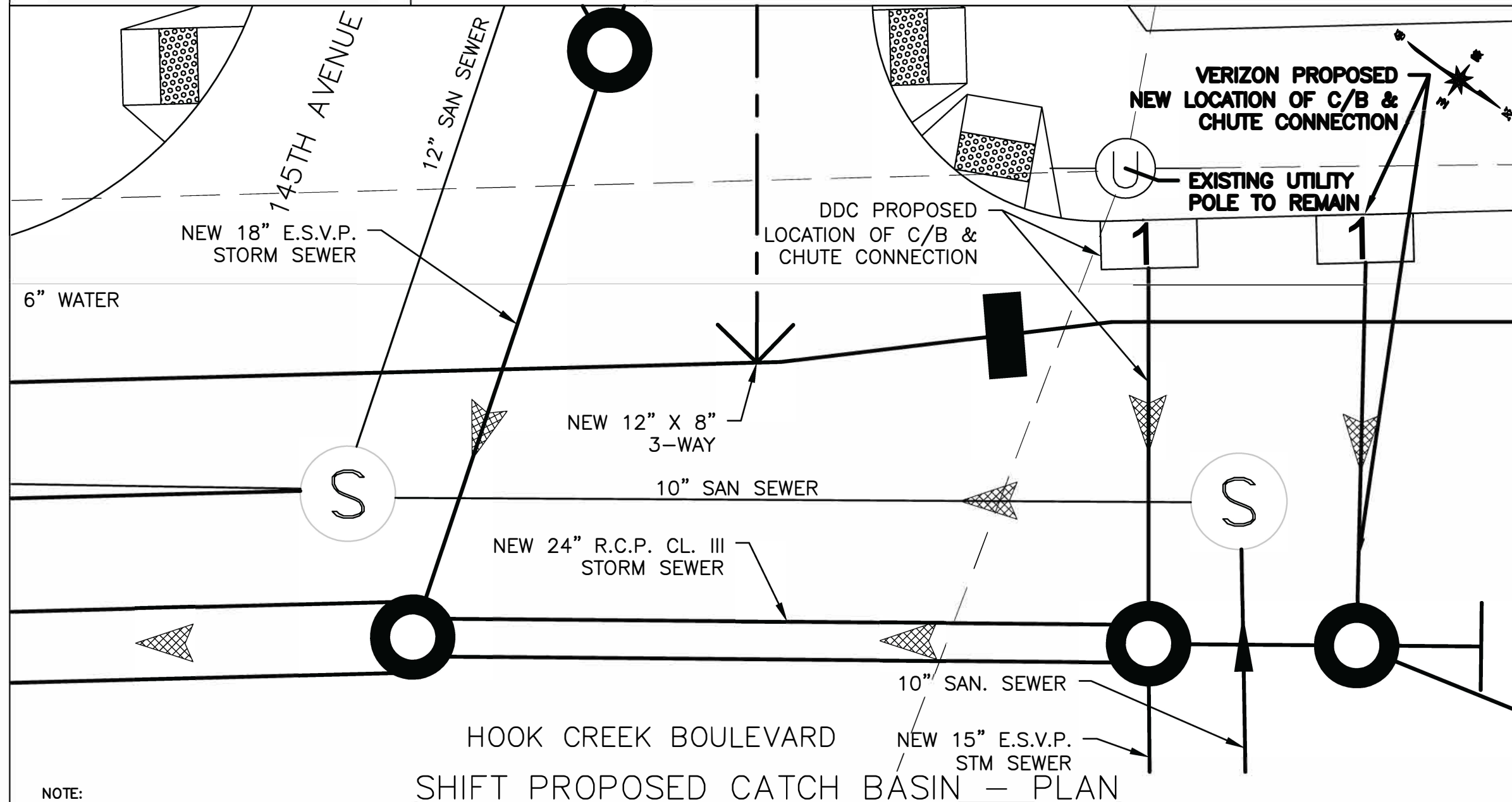
JOB: RECONS. OF THE ROSEDALE AREA ST. PH.-2.  
BOROUGH OF QUEENS

PREPARED BY: MB  
CHECKED BY: PM

DATE: 11/04/2022  
DATE: 11/04/2022  
DDC SHT.#: U15

JOB NO: HWQ274F2

LOCATION: W/S OF HOOK CREEK BOULEVARD, N/O 145TH AVENUE



**END OF JB-PAGES SECTION F  
(NO FURTHER TEXT ON THIS PAGE)**

**SECTION G. PRIVATE UTILITY DRAWING  
LIST**

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**UTILITY DRAWING LIST****GENERAL:**

<b>DRAWING TITLE</b>	<b>DRAWING NO.</b>	<b>NO. OF SHEETS</b>
GENERAL NOTES AND CONDITIONS FOR UTILITY WORK	JB-U1	1

**CON EDISON:**

<b>DRAWING TITLE</b>	<b>DRAWING NO.</b>	<b>NO. OF SHEETS</b>
OVERHEAD ELECTRICAL CONDITIONS REPORT	JB-U2 TO JB-U23	22
CONDUIT AND DUCT OCCUPANCY PLATE	JB-U24 TO JB-U27	4
LOW TENSION MAINS AND SERVICE PLATE	JB-U28 TO JB-U35	8

**VERIZON:**

<b>DRAWING TITLE</b>	<b>DRAWING NO.</b>	<b>NO. OF SHEETS</b>
OVERHEAD MAIN LINES PLANS 1 - 11	JB-U36 TO JB-U46	11

**TOTAL NUMBER OF DRAWINGS FORTY SIX (46)**

(Please refer to the contract drawings)

**END OF JB-PAGES SECTION G  
(NO FURTHER TEXT ON THIS PAGE)**

(NO TEXT ON THIS PAGE)



# Department of Design and Construction

## DIVISION OF INFRASTRUCTURE BUREAU OF DESIGN VOLUME 3 OF 3

PROJECT ID: HWQ274F2

### RECONSTRUCTION OF STREETS IN ROSEDALE AREA-PHASE 2

- Hook Creek Boulevard from 257th Street to 149th Avenue
- Francis Lewis Boulevard from 257th Street to Hook Creek Boulevard
- Frankton Street from Francis Lewis Boulevard to Nassau County Line
- 145th Avenue from Francis Lewis Boulevard to Nassau County Line
- 259th Street from 147th Avenue to 149th Road
- 259th Street from 149th Road to Craft Avenue
- 147th Avenue from 258th Street to Francis Lewis Boulevard
- 147th Road from 258th Street to Francis Lewis Boulevard
- 147th Drive from 257th Street to Hook Creek Boulevard
- 148th Avenue from 259th Street to Hook Creek Boulevard
- 148th Road from 259th Street to Hook Creek Boulevard
- 148th Drive from 259th Street to Hook Creek Boulevard
- 149th Road from 259th Street to 262nd Street
- Hungry Harbor Road from Hook Creek Boulevard to Nassau County Line
- 262nd Place from Hungry Harbor Road to Station 10+00

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND TRAFFIC WORK TOGETHER WITH ALL WORK INCIDENTAL THERETO TOGETHER**

**BOROUGH OF QUEENS  
CITY OF NEW**

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*Contractor*

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Dated \_\_\_\_\_, 20\_\_\_\_

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