

Department of Environmental Conservation

Division of Environmental Remediation

**Three Star Anodizing Site
Operable Unit 1 Remedial Construction
Site Number 314058
Contract D008793
Location: Wappingers Falls
Dutchess County, New York
Project Manual**

Contract Documents

Malcolm Pirnie, Inc.

April 2013

New York State Department of Environmental Conservation
ANDREW M. CUOMO, *Governor* JOE MARTENS, *Commissioner*

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

THREE STAR ANODIZING SITE
OPERABLE UNIT NUMBER 1
REMEDIAL CONSTRUCTION
NYSDEC SITE NUMBER 314058

WAPPINGERS FALLS,
DUTCHESS COUNTY,
NEW YORK

CONTRACT NUMBER D008793

PROJECT MANUAL
VOLUME 1 of 1

April 2013



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SECTION I

Advertisement and Notice to Bidders

New York State Department of Environmental Conservation

Project Name: **Three Star Anodizing Site, Operable Unit 1, Remedial Construction**

NYS Site Number: **314058**

Sealed bids for the **Three Star Anodizing Site, Operable Unit 1, Remedial Construction** ("project"), will be received by the New York State Department of Environmental Conservation, Division of Management and Budget Services, 10th Floor, 625 Broadway, Albany, New York, 12233-5027, Attn: Bureau of Expenditures until the time of **1:00 P.M. EST** and on the date of **Tuesday, June 4, 2013**. The bids will be publicly opened and read aloud at the above time and date. Telegraphic or other electronically transferred bids are not acceptable.

The project generally involves remedial construction at the **Three Star Anodizing Site located in the Market Street Industrial Park on McKinley Street in Wappingers Falls, Dutchess County, New York**. It includes, but is not limited to:

1. Site mobilization, demobilization, and general conditions as required for the execution of all Work throughout the duration of the Work.
2. Vat demolition and removal including, but not limited to, temporary building stabilization, construction of access roads, protection of utilities, removal and off-site disposal of fencing, storage tanks and utilities associated with the Vats, removal and off-site disposal of debris, sludge and liquids from the Vats, asbestos containing material (ACM) abatement or removal and off-site disposal of material as ACM, cleaning and decontamination of Vat concrete or removal and off-site disposal as contaminated concrete, removal and off-site disposal of contaminated soil, installation of new fencing, backfilling, and restoration of the Vat Area.
3. Lower Raceway remediation including, but not limited to, removal and off-site disposal of fencing, protection of utilities, cleaning of a culvert pipe, construction of access roads, removal and off-site disposal of storage tanks, excavation and off-site disposal of contaminated soil, backfill and restoration of the excavation areas with a soil cover, installation of fencing, and seeding of the soil cover.
4. Three Star Lagoon remediation including, but not limited to, protection of utilities and structures, installation of sediment control systems, construction, use and subsequent removal of a temporary dewatering and treatment facility, excavation, dewatering and off-site disposal of contaminated sediment, treatment of associated water, backfill of the Lagoon, regrading the Lagoon banks, restoration of Lagoon banks with a soil cover, and seeding the Lagoon banks.
5. MGP Area remediation including, but not limited to, construction of temporary access roads, excavation and off-site disposal of contaminated soil in the vicinity of former Gas Holders, demolition and off-site disposal of the Gas Holder foundations, excavation and off-site disposal of contaminated soil and debris from the MGP Area, backfill and regrading of the excavation areas, installation of a soil cover, and seeding of the soil cover.
6. Axton Cross Building Area remediation including, but not limited to, protection of structures and utilities, excavation and off-site disposal of contaminated soil from near the building and dry well/leach field, backfill and surface restoration with asphalt, regrading surface soil, installation of a soil cover, and seeding of the soil cover.

The estimate of probable construction cost for this work ranges from: **\$5,000,000 to \$10,000,000**.

Contract Documents are only available in electronic format at no charge. Access to electronic copies of biddable Contract Document drawings, specifications, proposal forms, addenda, and a separate Limited Site Data Document may be downloaded from the Department web site link:

<http://www.dec.ny.gov/chemical/59233.html>

Hard copies of the Contract Documents are available upon request from the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7012, Attn: Bureau of Program Management - Contracts and Payments Section at (518) 402-9711.

Proposals will be accepted only from bidders who attend the Pre-Bid Conference. All proposals must be made on the official proposal form and enclosed in the envelope which will be provided at the Pre-Bid Conference. Each proposal must be accompanied by a deposit or a bid bond in the amount of 5% of the bid amount. All Bidders must attend a Pre-Bid Conference to discuss special requirements for the contract, to be held on **Thursday, May 9, 2013 at the Site starting at 11:00 A.M. prevailing local time.**

ATTENDANCE IS MANDATORY AS A CONDITION OF BIDDING.

Minority and Women owned businesses are encouraged to submit bids in response to this solicitation. The New York State Department of Environmental Conservation is an Equal Opportunity/Affirmative Action Employer.

The Contractor shall adhere to the New York State Department of Environmental Conservation Guidelines Regarding Permissible Contacts During a Procurement and the Prohibition of Inappropriate Lobbying Influence. For the purpose of this Notice to Bidders, the Director of the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7011, shall be the Department's designated Representative. Any questions, however, shall be directed to Michael Mason, P.E., the Department's Project Manager and Designated Contact, at (518) 402-9814.

Bidders may receive announcements of future procurement opportunities by signing up for the NYSDEC-
DER's electronic mailing list ("GovDelivery") at:

<https://public.govdelivery.com/accounts/NYSDEC/subscriber/new>

Joe Martens
Commissioner

SECTION II

Terms and Definitions

Wherever used in the Contract Documents the following terms (or pronouns in place of terms) have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the date for opening of Bids which interpret or modify the Contract Documents by way of changes, clarifications, or corrections.

Administrative Agreement - A written explanation of the Contract Documents, signed by Department, Engineer and Contractor on or after the Effective Date of the Agreement and dealing with procedural or administrative aspects of the Contract Documents which do not change the contract price.

Agreement - The written agreement between Department and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment – Billing invoice in the form required by Department on which Contractor must request progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Bid - The written offer or proposal of the Bidder, submitted pursuant to Article 5 of Section III of the Bidding Documents on the form provided.

Bidder - The person, partnership, corporation, joint venture or other combination thereof, who has submitted a Bid.

Bid Security - The security designated in the Bidding Documents to be furnished by the Bidder as guarantee that he/she will enter into a Contract with Department for the performance of the Work, if the Work involved in the Bid is awarded to that Bidder.

Bidding Documents - The Advertisement and Notice to Bidders, Bidding Information and Requirements, the Bid Forms and Attachments, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

Bonds - Instruments of security furnished by Contractor and its surety in accordance with the Contract Documents. This refers to the labor and material payment Bond, performance Bond and those other instruments of security required by the Contract Documents.

Change Order - A document prepared and recommended by Engineer, which is reviewed by Department and has been signed by Contractor and Department and approved by Comptroller. It authorizes an addition, deletion or revision in the Work, or an adjustment in Contract Price or Contract Time, or any combination thereof, issued on or after the Effective Date of the Agreement.

Claim - Contractor=s demand or assertion seeking as a matter of right, adjustment, interpretation, additional money, extension of time or other relief with respect to terms of the Contract.

Commissioner - Commissioner of the New York State Department of Environmental Conservation.

Comptroller - The Comptroller of the New York State Office of the State Comptroller.

Contract Documents - The Agreement, Addenda (which pertain to the Contract Documents), Contractor's Bid including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award, all bid forms and attachments required by Section V, the General Conditions, the Supplementary Conditions, the Standard Specifications, the Supplementary Specifications, Appendix A, Appendix B, Measurement for Payment, Advertisement, Terms and Definitions, Bidding Information and Requirements, Supplementary Bid Information and Requirements, and the Drawings, together with all amendments, modifications and supplements issued pursuant to paragraphs 2.4 and 2.5 of Article 2 of the General Conditions on or after the Effective Date of the Agreement.

Contract Price - The money payable by Department to Contractor under the Contract Documents.

Contract Time - The number of days permitted by the Agreement for completion of Work. This number may be stated or implied by a requirement that all work be completed by a certain date.

Contractor - The person, partnership, corporation, joint venture, or other combination thereof, who has entered into the Contract with Department for the Work. The term "Contractor" means Contractor or its authorized representative.

Correction Period - The period of time within which Contractor shall promptly, without cost to Department and in accordance with Department's written instructions, either correct Defective Work or if it has been rejected by Department, remove it from the site and replace it with nondefective Work, pursuant to paragraph 12.12 of the General Conditions.

Cost and Pricing Data - Refers to all data available to and relied upon by Contractor in negotiating, pricing or performing Work covered by a Change Order or a Proposed Change Order, or involved in a claim. Sample Cost and Pricing Data include data and supporting documents pertaining to labor wages and material rates, crew mixes, labor productivity, payroll costs, price catalogs, quotations from and payments to Subcontractors, Suppliers or others, equipment production rates, equipment costs, sales and use taxes, cost of premiums for Bonds and Insurances, costs related to the determination of general and administrative overhead, site office overhead, profit, estimates and estimating guides, Contractor's computations and projections, and all of the relevant assumptions made by Contractor in pricing or figuring increases or decreases in Contract Price or Contract Time.

Cost of the Work Involved - The sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work involved.

Day - A calendar day of 24 hours lasting from midnight one day to midnight the next day.

Defective Work - Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Department at Substantial Completion in accordance with paragraphs 13.8 or 13.10).

Delivery - Shall be effected on the date of receipt by the addressee.

Department - New York State Department of Environmental Conservation.

Dispute - A Claim that is not resolved pursuant to Section VIII, Article 10 of the General Conditions becomes a Dispute to be resolved under Appendix B Article IX of the Agreement.

Department Representative(s) - Employee(s) of Department engaged in Department activities relating to the work but who is not responsible for day to day administration of the Project.

Design Engineer - The individual, partnership, corporation, joint venture, or any combination thereof, who prepared and sealed the Contract Documents that were bid by Department.

Designated Contact(s) - Individuals to whom all contacts can properly be made during the Restricted Period in relation to the Permissible Contacts during a Procurement and Prohibition of Inappropriate Lobbying Influence clause of the Contract Documents. The Project Manager shall serve as the Department's Designated Contact for the Contract.

Designated Representative to Resolve Disputes- Department employee responsible for resolving all disputes between Contractor and Project Manager, as identified in the Supplementary Bidding Information and Requirements.

Drawings, Plans - The Drawings, Plans or reproductions thereof, which show location, character, dimensions, and details of the Work to be performed and which are referred to in the Contract Documents.

Effective Date of the Agreement - The date on which the Agreement is approved and filed by Comptroller.

Employee - Any person working on the project mentioned in the Contract of which these specifications are a part, and who is under the direction or control, or receives compensation from Contractor or Subcontractor.

Engineer - The individual, partnership, corporation, joint venture, or any combination thereof, any entity named as Engineer in the Agreement who will have the rights and authority assigned to Engineer in the Contract Documents. The term "Engineer" means the Engineer or its authorized representative.

Equipment - All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the Work.

Field Order - A written order issued by Engineer to Contractor which orders minor changes in the Work in accordance with paragraph 9.2 of the General Conditions not involving an adjustment in the Contract Price or the Contract Time.

Law(s) - Applicable laws, rules, regulations, ordinances, codes or orders of a Federal or New York State court.

Material - Any approved material acceptable to Department and conforming to the requirements of the specifications.

Notice of Award - Department's written notice of Agreement approval and filing by the New York State Office of the State Comptroller and stating pertinent information with which Contractor must comply.

Notice of Intent to Award - The written notice by Department to a Bidder stating that upon compliance by that Bidder with the conditions precedent enumerated therein, within the time specified, Department intends to process contract through the appropriate New York State contract reviews.

Notice to Proceed - The written notice issued by Department to Contractor establishing the Date for Commencement of the Contract Time and, where applicable, authorizing Contractor to proceed with the Work at the site.

Overhead - General and administrative costs (whether at the site or in Contractor's principal or branch offices) and all other miscellaneous costs not assigned to a specific payment item as identified in Articles 9, 10 and 11 of the General Conditions.

Partial Utilization - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Physical Completion - The Work and all parts thereof have been completed to the satisfaction of Department.

Progress Schedule - Drawings, data computer reports, and narratives disclosing Contractor's approach to the Work; the associated Early Schedule, Late Schedule and Float times, as supported by the Critical Path Method (CPM) or Bar Chart Diagram; the Schedule of Values; and the Schedule of Shop Drawing submissions.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Project Field Representative - Department employee assigned responsibility for the day to day administration of the Project.

Progress Payment - Payment made to the Contractor as the result of a Application for Payment which accurately reflects the Contract work completed to date.

Project Manager - Department employee identified in the Supplementary Bidding Information and Requirements, responsible for administration of work required by Contract Documents and supervision of the Project Field Representative(s).

Proposed Change Order - A document prepared on a form furnished by Department which is to be used: 1) by Department when requiring that Contractor figure the potential effect on Contract Price or Contract Time of a proposed change, (the proposed change is ordered upon signing by Department), or 2) by Contractor to notify Department that in the opinion of Contractor a change is required to respond to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 3.11 or 3.12 of Article III of the General Conditions or to emergencies under paragraph 5.22 of Article V of the General Conditions, or has been ordered in a Field Order, or in Engineer's approval of a Shop Drawing or sample, or in Engineer's written interpretation or clarification of the requirements of the Contract Documents. When signed by Department, a Proposed Change Order may or may not fully adjust Contract Price or Contract Time, but is evidence that the change directed or documented by the Proposed Change Order will be incorporated in a subsequently issued Change Order following negotiations as to its effect, if any, on Contract Price or Contract Time.

Resident Engineer - The authorized representative of Engineer who is assigned to the site or any part thereof.

Resident Project Representative - Person acting as assistant to the Resident Engineer who is assigned to the site or any part thereof.

Resident Superintendent - The authorized representative of Contractor who is assigned to the site or any part thereof.

Restricted Period - The time period which runs from contract bid advertisement to contract approval by the New York State Office of the State Comptroller.

Retainage - A percentage of a Progress Payment withheld from a Contractor as assurance that all the contract requirements will be satisfactorily completed.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

Site - The area within the vertical boundaries of the location where the Contract Documents require Work by Contractor.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual, partnership, corporation, joint venture or other combination thereof, having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion - The Work, or a specified part thereof, has progressed to the point where in the opinion of Engineer as evidenced by Engineer's definitive Certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents (with the exception of the minor items identified during inspection described in paragraph 13.6 of the General Conditions), so that it can be utilized continuously for the purposes for which it is intended. Substantial Completion of the Work, or specified part thereof, may be achieved either upon completion of Pre-operational Testing or Start-up Testing, depending upon the requirements of the Contract Documents. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

Supplier - A manufacturer, fabricator, supplier, distributor, material man or vendor.

Testing, Pre-Operational - All testing, associated trimout activities and specified manufacturer or supplier training required prior to placing the facilities in service, including but not limited to manufacturer or supplier installation checks; leak, disinfection and pressure tests; removal or erection of temporary components; tie-ins; flushing and chemical/mechanical cleaning operations; specified performance tests; and other necessary non-operating adjustments, cold-alignment checks, corrections, housekeeping and spare parts stocking required of Contractor to demonstrate to Department and Engineer that individual components of the Work have been properly erected and do operate in accordance with the Contract Documents, and that they can be placed in service and utilized continuously for their intended purposes.

Testing, Start-Up - Follows Pre-operational Testing. Start-up Testing commences by placing portions of the Work in service under interim conditions, continues through initial utilization of the facilities under design media, and culminates with predefined trial utilization tests during which Contractor is to operate the Work, or specified parts thereof, under actual and simulated operating conditions and performing as defined in the Contract Documents, for the purposes of: a) making such minor adjustments and changes as may be found necessary to comply with the requirements of the Contract Documents, and b) complying with the Start-up Test requirements outlined in the Contract Documents.

Total Float - Number of working days by which a part of the Work identified in the progress schedule may be delayed without necessarily extending the corresponding Contract Time, or Contract Times.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, chemicals, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work - Any and all obligations, duties, responsibilities, labor, materials, equipment, temporary facilities, and incidentals, and the furnishing thereof necessary to complete the construction assigned to, or undertaken by Contractor pursuant to the Contract Documents. Also, the entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

SECTION III

Bidding Information and Requirements

ARTICLE 1 - Address for Notices

It is understood and agreed between the parties that **Department's** Representatives for the implementation of this Agreement, or for approval and direction called for therein, shall be the individuals named in Article 2 of Section IV, "Supplementary Bidding Information and Requirements."

Whenever it is provided in this Agreement that notice shall be given or other communications sent to **Department**, such notices or communications shall be delivered or sent to the Project Manager at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements." However, the Bid submittal should be addressed as stated in Article 3 below.

ARTICLE 2 - Interpretation of Bidding Documents

No interpretation of the meaning of the Bidding Documents will be made orally: all questions regarding the intent or meaning of the Bidding Documents shall be submitted in writing to the Project Manager at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements". The reply to the same, when deemed necessary, will be made available by Addenda. To be given consideration, all inquiries must be received in writing at the above address at least **ten** days prior to the date fixed for the opening of Bids. Any and all interpretations and any supplemental instructions will be in the form of written Addenda made available in electronic format. Failure of any Bidder to receive any such Addenda shall not relieve said Bidder from any obligation under its Bid as submitted. All Addenda so issued shall become part of the Bidding Documents.

All pre-bid inquiries answered by means other than Addenda shall not be binding.

ARTICLE 3 - Bid Instructions

Department invites sealed Bids on the forms attached hereto, and submitted in the envelopes provided to: Division of Management and Budget Services, New York State Department of Environmental Conservation, 10th Floor, 625 Broadway, Albany, New York, 12233-5027, **Attn.:** Bureau of Expenditures.

The outside of the envelopes must bear the name and address of the Bidder, the Project name and Project designation number from the cover of the specification book, and be clearly marked as "Bid."

Department may consider non-responsive any Bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or irregularities in or may reject any or all Bids. Bids that are illegible or that contain any omission, erasures, alterations, additions, conditions, or items not called for in the Bidding Documents or that contain other irregularities of any kind, may be rejected as non-responsive. The failure or omission of any Bidder to obtain or examine any form, instrument, document or Bidding Documents or any part thereof, shall in no way relieve any Bidder from any obligation in respect to its Bid. Complete sets of Bidding Documents shall be used in preparing Bids; neither **Department** nor **Engineer** assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

Department is responsible for providing Addenda only to those persons or firms listed as having attended the mandatory Pre-Bid Conference.

Department and **Engineer** make copies of Bidding Documents available only for the purpose of obtaining Bids on the Work and do not authorize any other use of the Bidding Documents.

Each Bid must be submitted on the official form which is furnished by **Department**. All blank spaces in the Bid must be filled in as noted, and no change shall be made in the phraseology of the Bid or in the items mentioned therein.

The Bidder shall sign, in the space provided in the Bid form, with his or her usual signature. An officer of a corporation or a member of a partnership signing for the Bidder, shall place his or her signature and title after the word "By" under the name of the **Contractor**. The same procedure shall apply to the Bid of a joint venture by two or more Bidders; however, if the signature is by an agent or attorney-in-fact for the joint venturers, then the Bid shall be accompanied by evidence of his or her authority to act on behalf of all of the joint venturers.

The Bidder shall complete that portion of the Bid form requesting a statement of the Addenda which have been received, by Addenda number and date. If no Addenda have been received, insert the word, "NONE." Failure to complete this portion of the Bid form may result in a bid being declared non-responsive at **Department's** option.

Each Bid shall specify in words and figures, the correct gross sum, in the manner hereafter described for which the Work shall be performed according to the Bidding Documents together with a unit price expressed in words and figures for each separate items for which such a price is required. The lowest Bid shall be determined by **Department** on the basis of the total sum for which the entire Work will be performed, arrived at by a correct computation of all items specified in the Bidding Documents at the prices stated in the Bid. **Department** reserves the right to reject any Bid in which the Bid prices appear to constitute an unbalanced Bid for the work.

In the event there is a discrepancy in any Bid between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy in any Bid between the prices written in figures and the unit or lump sum prices written in words, the prices written in words shall govern. **Department** may reject as non-responsive bids which do not contain a price for every numbered item contained in the Bid form, or may insert a zero for every numbered item that doesn't contain a price.

Unless **Department** gives instructions to the contrary, the Bidder shall use no more than three decimal places in the cents column under unit Bid price items. If Bidder uses more than three decimal places without such instructions, **Department** may round off the Bid item to three decimal places.

The Bidder is responsible for examining supplemental information which is available for inspection at the address for notices in Article 1 of this Section.

Department will not accept any Bid which has been transmitted via Facsimile, Telephone, Telegraph or which has been received after the designated bid opening time except where there is evidence that the bid arrived on time, but was mishandled by the **Department**. A late Bid will be returned unopened with notification of the reason for non-acceptance.

Bids will only be accepted from persons or firms who have attended the mandatory Pre-Bid Conference.

Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence - Pursuant to State Finance Law § 139-j and § 139-k, this contract includes and imposes certain restrictions on communications between a Governmental Entity and an Offerer/Bidder during the procurement process. An Offerer/bidder is restricted from making contacts from the earliest notice of intent to solicit bids through final award and approval of the Procurement Contract by the Department of Environmental Conservation

(Department) and, if applicable, Office of the State Comptroller (Restricted period) to other than designated staff unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law § 139-j(3)(a). Designated staff, as of the date hereof, is identified on page I-1 of Section I, Advertisement and Notice to Bidders. Department employees are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the Offerer/bidder pursuant to these two statutes. Certain findings of non-responsibility can result in rejection for contract award and in the event of two findings within a 4 year period, the Offerer/bidder is debarred from obtaining governmental Procurement Contracts. Further information about these requirements, including a copy of the new lobbying law, can be found at <http://www.ogs.state.ny.us/aboutogs/regulations/defaultAdvisoryCouncil.html>.

ARTICLE 4 - Modification or Withdrawal of Bid

Permission will not be given to modify or explain by letter, telegram, telephone or otherwise, any Bid after it has been deposited with **Department** except that a Bid may be withdrawn, modified, and resubmitted prior to the date and time for opening the Bids. After such date and time, no Bid may be withdrawn by a Bidder except as provided by law, and provided further that: 1) the Bidder files a duly signed written notice of a Bid mistake with **Department** within two business days after the day of the Bid opening, and 2) within 3 business days thereafter demonstrates to the reasonable satisfaction of **Department** that there has been a material and substantial mistake in the preparation of the Bid. If these two conditions are not met, then the bid bond would be forfeited.

Prior to submittal of Bid, a Bidder may alter or correct a unit price, or a lump sum item, which has been entered on the Bid form by crossing out the entry, entering the new figure above or below the crossed-out entry, and initialing on the line of change. The crossing out of entries shall be with ink, or typed. All new entries and initials shall be legibly handwritten with ink, or typed. Any ambiguity arising from entries altered or corrected on the Bid Form may be cause for **Department's** rejection of the Bid as non-responsive.

If the Bid is made by an individual, the business address shall be given. If made by a corporation, the names and business addresses of the president, secretary and treasurer shall be given. If made by a partnership, the names and business addresses of the partners shall be given.

Department reserves the right to disqualify Bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices upon the part of the Bidder.

All Bids submitted by an individual, firm or partnership, a corporation or association which submits more than one Bid for the same Work under the same or different name shall be rejected.

ARTICLE 5 - Required Bid Submittals

The following are to be submitted within the time periods indicated. At the option of **Department**, failure to make or amend a submittal will constitute proof that the Bidder has abandoned all rights and interests in the contract; that the Bid Security is forfeited to **Department** as liquidated damages; and that the Work may be awarded to another Bidder in a manner consistent with Law.

- a) The following items are to accompany Contractor's Bid submitted to the **Department** as required in Article 3:
- X Form of Bid filled out
 - X Bid Bond or Certified Check
 - X Non-Collusion Certificate
 - X MacBride Fair Employment Principles (signed)
 - X Offerer's Affirmation of Understanding of and Agreement pursuant to State Finance Law ' 139-j (3) and ' 139-j (6) (b) (signed)
 - X Use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD) Provision (signed)
 - X Offerer's Disclosure of Prior Non-Responsibility Determinations (signed)
- b) The following items shall be submitted to the Project Manager within **5 days** of notification that the Bidder is the apparent low Bidder:
- X Off-site permitted facility to receive material along with a copy of the facilities permit
 - X Plan of Operations (Work Plan) and Progress Schedule, Health and Safety Plan, Sampling Plan, and QA/QC Plan
 - X Statement of Surety's intent, complete and signed by and duly authorized surety company licensed to do business in the State of New York
 - X A copy of the proposed site Pollution Liability insurance policy demonstrating that the bidder has the required \$1 million of Pollution Liability insurance and the additional \$4 million (for a total of \$5 million) of Pollution Liability insurance if required by the **Department** on a specific project basis. If the Bidder is unable to obtain the \$4 million of site specific Pollution Liability insurance, Department requires letters from three (3) sureties stating that the additional Pollution Liability insurance is unavailable.
 - X A description of projects completed by Bidder documenting its experience in this type of work
 - X Proof of Availability of insurance or Certificate of insurance with endorsements including written verification that the insurance carrier(s) are licensed in New York State. Licensed insurance carriers can be verified at <http://www.ins.state.ny.us/>. If the Contractor proposes to use non-admitted carrier(s) for pollution or professional liability insurance, then three declinations on forms required by New York State Insurance Regulation 41 (i.e., Part A - Affidavit by Excess Line Broker or Part C - Affidavit by Producing Broker) must be submitted. Pollution or professional liability insurance provided by excess line carriers shall be from a carrier who is a member of the Excess Line Association of New York (ELANY). All other insurance must be through carriers licensed to do business in New York State. All carriers must be properly identified by complete name, address, National Association of Insurance Commissioners (NAIC) number and whether or not they are a member of ELANY (if applicable) in the submittal. Refer to Article 4, Bonds and Insurance, of the General Conditions for additional information.

- X Completed NYS Vendor Responsibility Questionnaire (CCA-2) or an affidavit of no change (if appropriate). If the forms are filed using OSC=s online VendRep System a letter, certifying that the forms have been so completed and submitted, must be sent to the Project Manager.
 - X M/WBE Work plan. If the forms are filed using the Department=s electronic M/WBE System a letter, certifying that the forms have been so completed and submitted must be sent to the Project Manager.
 - X Any other information that demonstrates the Bidder's ability to perform the work described herein
 - X Low bidders may be asked to submit additional information to demonstrate competency
- c) The following items shall be submitted to the Project Manager within **14 days** from the date of the Notice of Intent to Award letter from **Department**:
- X Executed Agreement (four copies with original signatures)
 - X Performance Bond with Power of Attorney & Surety Financial Statement (original and three copies)
 - X Labor & Materials Bond with Power of Attorney & Surety Financial Statement (original & three copies)
 - X Bid Breakdown of Items (original)
 - X Certificates of Insurance (original and three copies)
 - X Consultant/Contractor Detailed M/WBE-EEO Utilization Plan (original). If the forms are filed using the Department's electronic M/WBE System a letter, certifying that the forms have been so completed and submitted must be sent to the Project Manager.

ARTICLE 6 - Bid Security and Bonds

Bid Security shall be made payable to **Department** in an amount not less than five percent (5%) of the Bidder's gross sum Bid. The Bid Security shall be in the form of either a certified or bank check upon an incorporated bank or trust company, or a Bid Bond issued by a surety satisfactory to **Department**.

Department will accept only Bonds from a surety company licensed to write Bonds of such character and amount under the laws of New York State and which are listed on the U.S. Treasury Department Circular 570.

Attorneys-in-fact who sign Bonds shall file with such Bonds a certified copy of their Power of Attorney to sign Bonds and to conduct business in the State of New York.

The Bid Security of a Bidder awarded a Contract for the Work will be retained until such Bidder has executed the Agreement and furnished the required bonds and insurance, whereupon the Bid Security will be returned. If the Bidder fails to execute and deliver the Agreement, other required documents and furnish the required bonds and insurance within fourteen (14) days after the Notice of Intent to Award, **Department** may annul the Notice of Intent to Award, and the Bid Security of that Bidder will be forfeited to **Department**. The Bid Security of any Bidder whom **Department** believes to have a reasonable chance of receiving the award may be retained by **Department** until the earlier of the 45th day after the Bid opening or seven (7) days after the Effective Date of the Agreement, whereupon Bid Security furnished by such Bidders will be returned. Bid Security of other Bidders will be returned after the Bid opening.

ARTICLE 7 - Approval of "or Equal" or Substitution Equipment, Systems or Items

There shall be no approval given by **Engineer** during the bidding period or prior to Award of Contract for any "or equal" or substitution equipment, systems or items.

ARTICLE 8 - Other Contracts and Occupancy

Department may award other contracts in connection with this Work. **Contractor** shall not have exclusive occupancy of the real property within or adjacent to the limits of the Work.

In case of interference between the operations of utility owners and different contractors, **Department** will be the sole judge of the rights of each contractor and the sequence of work necessary to expedite the completion of the entire Project. In all such cases, **Department's** decision shall be accepted as final.

ARTICLE 9 - Taxes

Department is exempt from the payment of sales and compensating use taxes of the State of New York and of cities and counties on all materials, equipment and supplies sold to **Department** pursuant to this Contract. Also exempt from such taxes are purchases by **Contractor** and its Subcontractors of materials, equipment and supplies to be sold to **Department** pursuant to this Contract, including tangible personal property to be incorporated in any structure, building or other real property forming part of the Project. These taxes are therefore not to be included in the Bid. The cost of all other taxes under the Contract shall be included in the Bid prices for the several items of the Contract.

ARTICLE 10 - Experience and Financial Statements

In accordance with New York State Executive Order No. 170, a Contract shall only be awarded to a responsible Bidder capable of performing and completing the Work in a satisfactory manner. The NYS Vendor Responsibility Questionnaire, instructions for which are included in Section V, "Bid Forms and Attachments " must be completed and submitted by the apparent low Bidder within five (5) days after the apparent low Bidder has been so notified.

Failure of the apparent low Bidder to timely submit the complete, properly executed questionnaire within five (5) days may result in disqualification.

Before **Department** will consent to any subcontracts over \$10,000, the proposed subcontractor must submit the complete, properly executed "NYS Vendor Responsibility Questionnaire" through **Contractor**. Any delay in the progression of work caused by the failure of a subcontractor to comply with these requirements will be attributable to **Contractor** and any additional costs will be **Contractor's** responsibility.

The low Bidder shall demonstrate its responsibility to perform and complete Work by submitting a statement of its experience and the experience of any Subcontractor which the low Bidder intends to use to perform the Work. **Department** may require the low Bidder to further demonstrate its responsibility to perform and complete Work by submitting an additional experience and financial statement or information seven (7) days after bid opening or within seven (7) days of **Department** request, which shall include at a minimum, information pertaining to the Bidder's financial resources. The submitted financial information shall be certified by a Certified Public Accountant, and shall be submitted in the form required by **Department**. This can also apply to **Contractor's** subcontractors.

ARTICLE 11 - Preliminary Progress Schedule

The Preliminary Progress Schedule shall consist of three copies of a narrative description and a time-scaled critical path method diagram or bar chart diagram as specified in the Contract Documents. The narrative in the Preliminary Progress Schedule shall describe the order in which Bidder proposes to perform the Work pursuant to the specified Contract Time(s) and Work sequence conditions indicated in or required by the Bidding Documents. It shall also indicate proposed starting and completion dates for Work expressed in terms of days elapsed from the Notice to Proceed associated with each division of the Specifications within each major structure or geographical area of Work. Activities shall further identify significant submittals, approvals and associated deliveries, significant testing, major **Department** responsibilities, and responsibilities of affected utilities and third parties. The narrative shall include monthly percentages of completion for the Work in relation to the rate of progress anticipated in the Preliminary Progress Schedule.

ARTICLE 12 - Bid Breakdown

The Bid breakdown shall be submitted by the apparent low Bidder within fourteen (14) days after the date of the Notice of Intent to Award letter. Discrepancies, ambiguities or conflicts in the Bid breakdown shall be resolved in accordance with the terms and conditions set forth in Article 8.10 of Section VIII the General Conditions.

A Bidder submitting a Bid breakdown and awarded a Contract for the Work agrees and understands that those prices for separable parts of the Work disclosed on the Bid breakdown, where they are applicable and determined to be reasonable by **Department** may be used for the purposes of: a) measurement and payment, b) increase(s) or decrease(s) in the Contract Price due to adjustments in quantities to the separable parts of the Work, and c) Change Orders or Proposed Change Orders which add or deduct like Work.

ARTICLE 13 - Subsurface and Technical Information

If boring logs and other subsurface information were made available for the inspection of Bidders, please note that such data were obtained with reasonable care and were recorded in good faith by **Department, Engineer** or the **Design Engineer**.

The soil and rock descriptions shown are as determined by a visual inspection of the samples from the various explorations unless otherwise noted. The observed water levels and/or water conditions indicated thereon are as recorded at the time of the exploration. These levels and/or conditions may vary considerably, according to the prevailing climate, rainfall and other factors, including the passage of time.

When reports showing data obtained by investigations and tests at the site by **Department, Engineer** or the **Design Engineer** are included with the Bidding Documents, or made available to Bidders as set forth in the Bidding Documents, it is expressly understood and agreed that technical data, but not any non-technical data, interpretations or opinions contained in such reports, are incorporated by reference into the Contract Documents. Bidders may rely upon the accuracy of all such technical data contained in such reports as to where (location) and when (exact time) such technical data was obtained, unless the Bidding Documents limit any other basis upon which such technical data may be relied upon. It is further expressly understood and agreed that the use of any technical data contained in such reports is subject to all of the conditions and limitations set forth in the Bidding Documents.

Subsurface and technical information is made available to Bidders in good faith so that they may be aware of the information utilized for design and estimating purposes. **Department** makes no representations or warranties, express or implied, as to the completeness of this information or data, nor is such disclosure intended as a substitute for personal investigations, interpretations, and judgment of the Bidder.

ARTICLE 14 - Underground Facilities

The locations of Underground Facilities were ascertained with reasonable care and recorded in good faith from various sources, including the records of municipal and other public service corporations, and therefore such locations may only be approximate. **Department** does not assume responsibility for the accuracy or completeness of such locations.

ARTICLE 15 - Examination of Bidding Documents and Site

It is the responsibility of each Bidder, before submitting a Bid to: a) examine the Bidding Documents thoroughly, b) visit and visually inspect the site during the Pre-Bid Conference required pursuant to Article 3 of Section IV, "Supplementary Bidding Information and Requirements," c) become familiar with local conditions that may affect cost, schedule, performance or furnishing of the Work, d) become familiar with applicable Laws that may in any manner affect cost, schedule, performance or furnishing of the Work, e) study and carefully correlate Bidder's observations with the Bidding Documents, and f) notify the Project Manager identified in Article 1 of this section promptly after discovering any conflicts, ambiguities, errors or inconsistencies in the Bidding Documents.

It is the responsibility of each Bidder to obtain any additional documents, information or data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site which may affect cost, schedule, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the Bidding Documents.

The submission of a Bid constitutes an incontrovertible representation by Bidder that Bidder has taken steps reasonably necessary to ascertain the nature and location of the Work, and that Bidder has investigated and accounted for in the preparation of the Bid: a) Governmental requirements and all reasonably foreseeable general and local conditions that may affect cost, schedule, performance or furnishing of the Work. Examples of such conditions include: 1) conditions bearing upon the transportation, disposal, handling and storage of materials, 2) the availability and suitability of labor, water, electric power, telephone, sanitary services, and roads, 3) weather, river stages, tides or similar conditions at or contiguous to the site, 4) physical conditions of the site, and 5) the character of equipment and facilities needed preliminary to and during Work performance, b) character, quality and quantity of surface, subsurface and Underground Facilities at or contiguous to the site insofar as this information is reasonably ascertainable from the Drawings and Specifications included as part of the Bidding Documents, from the reports referenced in the Supplementary Bid Information and from the documents, information and data regarding physical conditions at or contiguous to the site obtained by Bidder, and c) Bidding Documents to be sufficient in scope and detail to indicate and convey understanding of all terms and conditions affecting cost, schedule, performance and furnishing of the Work.

Any Failure to take the actions described in this Article will not relieve that Bidder from responsibility for estimating properly the difficulty, cost of, and schedule for successfully performing the Work, or from performing the Work successfully without an increase in Contract Price or an extension in Contract Time.

Department, Engineer, or Design Engineer do not assume any responsibility for any conclusions or interpretations made by any Bidder based on the information made available by the Bidding Documents. Nor does **Department, or Engineer** assume any responsibility for any understanding reached or representation made concerning conditions which can affect the cost, schedule, progress, furnishing and performance of the Work prior to execution of the Contract, unless that understanding or representation is expressly stated in the Bidding Documents.

In an itemized contract, the estimate of quantities of work to be done and materials to be furnished is approximate and is given only as a basis of calculation upon which the award of the contract is to be made. **Department** does not assume any responsibility that the quantities estimated will be the actual quantities

required; **Contractor** may not claim misunderstanding or deception because of such estimates of quantities or of the character of the work, location, or other condition pertaining thereto. **Department** may increase or diminish any or all of the quantities of work mentioned above or omit any of them, as deemed necessary.

ARTICLE 16 - Subcontractors, Suppliers or Others

Unless otherwise agreed in writing by **Department**, **Contractor** shall subcontract no more than the percentage (%) of the total cost of the work under its contract as may be provided by the Contract Documents in Article 6 of Section IV, "Supplementary Bidding Information and Requirements". Procedures for approval of Subcontractors, Suppliers or other persons or organizations, after execution of the Agreement, are set forth in the General Conditions and the Supplementary Conditions.

ARTICLE 17 - Award of Contract

The Contract(s) will be awarded to the lowest, responsive and responsible Bidder(s) that has prepared acceptable required submittals, in the opinion of **Department**, as stipulated in Article 5 of this Section.

To the extent permitted by applicable Law, **Department** reserves the right to reject any and all Bids, to waive any and all informalities or irregularities, to disregard all nonconforming, nonresponsive, or conditional Bids, or to re-advertise for Bids.

In order to be considered responsive, a Bid shall be completed, signed and be responsive in all respects to the Bidding Documents unless informalities are waived by **Department**.

In order to be considered responsible, a Bidder must establish to the complete satisfaction of **Department** and **Engineer**, as a minimum, that it has adequate and satisfactory experience and financial resources to meet the obligations under the Contract and award of the Contract would be in the best interest of the State. A Bidder's prior experience shall be considered satisfactory when among other factors, its performance of prior work was timely, of good quality, in compliance with any contract requirements including contracted costs and schedule, and in compliance with applicable Law. The Bidder must have a minimum of three (3) years satisfactory experience in construction of the work to be performed.

Department may conduct such investigations as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility in terms of satisfactory experience and financial ability of the Bidder, and of any proposed subcontractors. **Department** may reject the Bid of any Bidder which it deems not to be responsible and may reject performance of Work by any Subcontractor which it deems is not responsible.

It is the intention of **Department** that the work will be awarded within 45 calendar days after the opening of bids to the lowest responsive, responsible Bidder whose bid conforms to the requirements of the Contract Documents. Bids may not be withdrawn, altered or revoked during this 45 day period except as provided by law and specified within Article 4. Even after the expiration of such 45 day period, **Department** may accept a Bid and award the work to any Bidder whose bid has not been unequivocally withdrawn or revoked prior to the mailing of written Notice of the Award to the successful Bidder. For purposes of the preceding sentence, withdrawal or revocation of a Bid shall not occur until **Department** receives an unequivocal written statement to that effect.

ARTICLE 18 - Time is of the Essence

Time is of the essence for the performance of Work required by the Contract Documents.

ARTICLE 19 - Applicability of Federal, State and Local Law

Any Bid and any contract awarded pursuant to a Bid shall be subject to and governed by applicable Law.

It is the responsibility of each Bidder to be informed of and comply with Federal, State and local Laws, affecting the cost, schedule, progress, performance or furnishing of the Work. This requirement includes, but is not limited to, applicable regulations concerning minimum wages, nondiscrimination in employment, affirmative action, protection of public and employee safety and health, environmental protection, fire protection and permits, and fees and licensing.

ARTICLE 20 - M/WBE and EEO Requirements

The M/WBE and EEO provisions of Appendix B are required provisions for this contract. The Bidder is required to comply with State regulations 9NYCRR Part 543 entitled, "Requirements and Procedures Regarding Business Participation Opportunities for Minorities and Women on State Contracts."

The selected Bidder shall be required to make good-faith efforts to subcontract at least the percentage stipulated in Section VII Appendix B, of the contract price to NYS Certified Minority Business Enterprise(s) (MBE) and Women Business Enterprise(s) (WBE), respectively.

In accordance with Executive Law Article 15-A, **Department** is required to make available the NYS Directory of Certified Minority and Women Owned Business Enterprises. Empire State Development has put the Minority and Women=s Business Development Directory on the Internet at www.empire.state.ny.us. Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed call (518) 474-1979. For additional information and assistance regarding NYS Certified M/WBE's, please contact the Department=s Minority and Women's Business Programs Unit at (518) 402-9311.

Pursuant to New York State Executive Law Article 15-A and the attending rules and regulations, an approvable M/WBE and EEO Work plan shall be required within two weeks of the award of a contract. The work plan is requested to state the M/WBE and EEO goals, the areas of work to be considered for solicitation of M/WBE firms, and a listing of M/WBE firms to be used to supply identified subcontracting work/supplies. A Contractor Detailed EEO and M/WBE Work plan form is included and shall be incorporated into the contract.

Contractor shall be required to provide equal opportunities to minorities and women with regard to all jobs necessary for the performance of work or contracts required by the project. In doing so, **Contractor** agrees to make good-faith efforts to employ minorities and women for at least the percentage stipulated in Section VII Appendix B, of the work force hours required for the completion of the project. Different occupational category work force participation goals may be used to meet these overall goals for work force participation. **Contractor** shall not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability, or marital status, and shall undertake or continue existing programs of affirmative action to ensure that minority group persons and women are afforded equal opportunity without discrimination. Such programs shall include, but not be limited to, recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.

As required by **Department**, **Contractor** shall request of each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding and which is involved in the performance of the contract with the Agency to furnish a written statement that such employment agency, labor union, or representative shall not discriminate because of race, creed, color, national origin, sex, age, disability, or marital status, and that such union or representative will cooperate in the implementation of **Contractor's** obligations hereunder.

Contractor shall include the provisions of Appendix B (VII) in every subcontract or purchase order in such a manner that the subcontractor shall be required to comply with such provisions with respect to its work in conjunction with the contract with **Department**.

ARTICLE 21 - Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence

Chapter 1 of the Laws of 2005, as amended by Chapter 596 of the Laws of 2005 (collectively referred to as the Lobbying Law), makes major changes to the Legislative Law and State Finance Law relative to lobbying on government procurements. More specifically, the Lobbying Law creates two new sections in the State Finance Law: Section 139-j addresses restrictions on contacts during the procurement process; and Section 139-k addresses the disclosure of contacts and the responsibility of offerers¹ during the procurement process. The Lobbying Law applies to all procurements initiated on or after January 1, 2006. In this regard, a procurement means a contract or agreement involving an annual expenditure in excess of \$15,000 for a commodity, service, technology, public work, or construction; purchase, sale or lease of real property; or revenue contract.

In conformity with the Lobbying Law, during procurement's restricted period² the only New York State Department of Environmental Conservation (Department) officer(s) or employee(s) that the offerer may contact is/are the Department designated contact person(s) for that procurement. In this regard, contact means any oral, written, or electronic communication under circumstances where a reasonable person would infer that the communication was intended to influence a procurement. Exceptions to this rule include:

- submission of a written proposal in response to an RFP, IFB or any other solicitation method;
- submission of written questions as part of an RFP, IFB or other solicitation method where all written questions and written responses will be provided to all offerers;
- participation in a pre-proposal or pre-bid conference scheduled as part of an RFP, IFB or other solicitation process;
- written complaints by an offerer that the Department designated contact for a procurement fails to respond to in a timely manner;
- negotiations with the Department following tentative award;
- contacts between designated Department staff and offerer to request the review of a contract award; and
- communications with the Department regarding an appeal, protest or other review of a procurement, participation in an administrative or judicial proceeding regarding a procurement, and complaints regarding a procurement made to the Attorney General, Inspector General, District Attorney, or State Comptroller.

An offerer shall not, under any circumstances, attempt to influence a Department procurement in a way that violates or attempts to violate: Public Officers Law Section 73(5), relating to gifts intended to influence; or Public Officers Law Section 74, relating to the code of ethics for employees of state agencies, public authorities and public benefit corporations, members of the New York State Legislature, and Legislative employees.

An offerer who contacts the Department designated contact person for a procurement during the restricted period must be prepared to provide the following information: name, address, telephone number, place of principal employment and occupation of the person or organization making the contact, and whether the person/organization making the contact is the offerer or is retained, employed or designated by or on behalf of the offerer to appear before or contact the Department about the procurement.

¹ Individual or entity, or any employee, agent, consultant or person acting on behalf of such individual or entity, that contacts the Department about a procurement during the restricted period.

² The period of time commencing with the earliest public notice, advertisement or solicitation of a Request for Proposals (RFP), Invitation for Bids (IFB), solicitation of proposals or any other method for soliciting responses from offerers intending to result in a procurement contract by the Department, and ending with the final contract award and approval by the Department, and the Office of the State Comptroller (if required).

An offerer that submits a proposal, bid or other response to a Department RFP, IFB or other solicitation method must: certify that it understands and agrees to comply with these guidelines regarding permissible contacts during a procurement and the prohibition of inappropriate lobbying influence; and disclose whether any governmental entity has, within the prior four years, found the offerer non-responsible due to a violation of the Lobbying Law or the intentional provision of false or incomplete information. Further, all Department procurement contracts will contain: a certification by the offerer that all information provided to the Department with respect to the Lobbying Law is complete, true and accurate; and a provision authorizing the Department to terminate the contract in the event such information is found to be intentionally false or incomplete.

The Department will investigate all allegations of violations of the Department guidelines regarding permissible contacts during a procurement and the prohibition of inappropriate lobbying influence. A finding that an offerer has knowingly and willfully committed such a violation may result in a determination that the offerer and its subsidiaries are non-responsible and therefore ineligible for award of the procurement contract. A second determination of non-responsibility for such a violation within four (4) years of the first such determination may render the offerer and its subsidiaries ineligible to submit a bid or proposal or be awarded a procurement contract for four (4) years from the date of the second determination. The Department will notify the New York State Office of General Services (OGS) of any determination of non-responsibility or debarments due to violations of the Lobbying Law.

If you require further guidance on the new Lobbying Law, you are encouraged to visit the Advisory Council on Procurement Lobbying website at the following address:

<http://www.ogs.state.ny.us/aboutOgs/regulations/defaultAdvisoryCouncil.html>, where Frequently Asked Questions (FAQs) and answers adopted by the council have been posted. A copy of the new Procurement Lobbying Law is also available on this website.

SECTION IV

Supplementary Bidding Information and Requirements

ARTICLE 1 - Location and Description of Project

The Site Number of this project is 314058. The Project is located in Wappingers Falls in Dutchess County, New York. Access to the site is from McKinley Street.

This Project includes: The Operable Unit 1 Remedial Construction at the Three Star Anodizing Site as generally described in Paragraph 1.2 of Section XI – 01 11 13.

ARTICLE 2 - Department Representatives

NAME

ADDRESS

Michael J. Cruden, Designated Representative, **Rem. Bur. E, 625 Broadway, 12 Fl., Albany, NY 12233-7017**

Gerard W. Burke, Section Chief, Rem. Bur. E, **625 Broadway, 12 Fl., Albany, NY 12233-7017**

Michael Mason, Project Manager, Rem. Bur. E, **625 Broadway, 12 Fl., Albany, NY 12233-7017**

To Be Determined, Project Field Representative, **Rem. Bur. E, 625 Broadway, 12 Fl., Albany, NY 12233-7017**

ARTICLE 3 - Pre-Bid Conference

A pre-bid conference will be held on **Thursday May 9, 2013, at the Site at 11:00 A.M.** to view the Project area. The pre bid conference is held to discuss the requirements of the Bidding Documents, the protocols for performing the work and the conditions existing at the work site, and to provide for visual inspection of the Site by Bidders. Bidders will be required to sign an attendance sheet to document their presence at the mandatory pre-bid conference. **Department will accept Bids only from those bidders who attend this conference.**

ARTICLE 4 - Additional Bid Submittals

None

ARTICLE 5 - Other Available Documents

1. Limited Supplemental Site Data Document – April 2013.
2. Three Star Anodizing Site Remedial Investigation – October 2007.
3. Three Star Anodizing Site Supplemental Remedial Investigation of Former Metal Plating Vats – October 2007.
4. Three Star Anodizing Site Feasibility Study – November 2007.
5. Three Star Anodizing Site SRI Asbestos survey – July 2006.
6. Record of Decision Three Star Anodizing Site – March 2009.

ARTICLE 6 - Subcontracting

The maximum subcontracting allowed for this contract is **40 percent** unless a higher percentage is approved by **Department** in writing.

ARTICLE 7 - Type of Schedule

Contractor shall provide a critical path type of schedule as described in Section X, Spec 00001 - Progress Schedule.

ARTICLE 8 - Wage Rates

The Department requires, for the work under this contract, that the Contractor and its subcontractor pay at least the prevailing wage rate and pay or provide the prevailing supplements, including premium rates for overtime pay, as issued by the State Labor Department. The current wage rates are included within the contract documents, Section XIII.

The Contractor is responsible for any additional costs related to new determinations of the wage rates. The annual determination of the prevailing rates of wages and supplements are usually published on May 31st of each year and are in effect July 1st through June 20th. New determinations will supersede the original schedule or any prior issued annual determination. Any rate change from a previously issued determination becomes effective July 1st, regardless of whether the new determination has been received by the Contractor.

Every contractor and subcontractor shall submit to the Engineer within thirty days after issuance of its first payroll, and every thirty days thereafter, a transcript of the original payroll records, subscribed and affirmed as true under penalty of perjury, as provided by Article 8, Section 220, of the NYS Labor Law. The Engineer shall receive and maintain such payroll records. The original payrolls and transcripts must be preserved for three years from the date of completion of the project. The current prevailing wage rate schedule must be posted in a prominent and accessible place on the site of the public work project.

SECTION V

ARTICLE 1(a) - Contract Bid Form and Acknowledgment for:

Remedial Construction at the Three Star Anodizing Site

Contract Number: D008793, NYS Site Number: 314058

To The New York State Department of Environmental Conservation

The Bidder hereby declares that either personally or through authorized representative(s), Bidder has carefully examined all Bidding Documents and has personally or through authorized representative(s) inspected the actual location of the work, together with the local sources of supply; and understands all terms and conditions of Bidding Documents. Bidder further understands that in signing this Bid, the right to plead any misunderstanding regarding the same is waived.

Pursuant to and in compliance with the Bidding Documents, the Bidder hereby offers to furnish all labor, materials, supplies, equipment and other facilities and things necessary or proper for, or incidental to the construction and completion of this Contract, as required by and in strict compliance with the applicable provisions of all Contract Documents, for the following unit and/or lump sum prices.

The undersigned shall meet the required submittal time periods listed in Article 5 - Required Bid Submittals of the Bidding Information and Requirements, Section III.

The undersigned hereby designates the following office as the office to which such Notice of Intent to Award and Notice of Award may be mailed, telegraphed or delivered:

Attn:- _____
Company _____
Address 1 _____
Address 2 _____
City, State, Zip Code+4 _____
Fax Number () _____ - _____

E-mail Address _____

Bid
New York State Department of Environmental Conservation
Contract Number: D008793, NYS Site Number: 314058
UNIT PRICE ITEMS

Payment Item Number	Description	Unit	Estimated Quantity	Unit Price		Total Amount (\$)
				Words	Figures	
UP-1	Temporary Services	Day	400			
UP-2	Implement the Storm Water Pollution Prevention Plan	Day	360			
UP-3	Implement the Health and Safety Plan	Day	420			
UP-4	Clearing	Acre	5			
UP-5	Load, Transport and Dispose Non-Hazardous Solid Waste	Ton	11,000			
UP-6	Load, Transport and Dispose Non-Hazardous Solid Waste Classified as ACM	Ton	750			
UP-7	Load, Transport and Dispose Hazardous Solid Waste	Ton	13,500			
UP-8	Remove, Transport and Dispose Hazardous Liquids	Gallon	135,000			
UP-9	Remove, Transport and Dispose Hazardous Sludge	Ton	150			

New York State Department of Environmental Conservation
Contract Number: D008793, NYS Site Number: 314058

UNIT PRICE ITEMS

Payment Item Number	Description	Unit	Estimated Quantity	Unit Price		Total Amount (\$)
				Words	Figures	
UP-10	Remove and Dewater Material from the Lagoon	Cubic Yard	2,120			
UP-11	Collect, Treat and Discharge Water	Gallon	20,000			
UP-12	Excavation	Cubic Yard	6,700			
UP-13	Provide General Fill	Cubic Yard	7,700			
UP-14	Provide Select Fill NYSDOT Type 4	Cubic Yard	2,500			
UP-15	Soil Cover System	Square Foot	110,000			
UP-16	Provide Asphalt Pavement System	Square Foot	10,000			

New York State Department of Environmental Conservation
Contract Number D008793, NYS Site Number 314058
LUMP SUM ITEMS

<i>Payment Item Number</i>	<i>Description</i>	<i>Lump Sum Price</i>		<i>Total Amount (\$)</i>
		<i>Words</i>	<i>Figures</i>	
LS-1	Mobilization			
LS-2	Demolition			
LS-3	Provide Fencing and Gates			
LS-4	Regrade the MGP Area			
LS-5	Demobilization			

GRAND TOTAL OF BID _____ \$ _____
Words Figures

COMPANY SIGNATURE Date

The undersigned acknowledges the receipt of the following Addenda and agrees to be bound by all Addenda whether or not listed herein.

Addendum Number

Date of Addendum

Accompanying this proposal is bid security in the amount of \$_____; said security is in the form of \$_____
certified check or checks, and \$_____ Bid Bond which shall become the property of the **Department** if
this proposal shall be accepted by **Department**, and the undersigned shall fail to execute and return the contract in
a timely manner or fail to comply with the requirements of the Bidding Documents.

Corporate Seal

(If no seal, write "No Seal" and sign)

Legal Name of Person, Partnership or Corporation

By _____

Print Name

Signature

Date _____

Please Complete Information Requested Below:

The P.O. address of the bidder is: _____

Federal Identification Number is: _____

If a Corporation

Name

Address

_____, President
_____, Secretary
_____, Treasurer

If a Partnership

Name

Address

_____, President
_____, Secretary
_____, Treasurer

Bidder's/Proposer's Certification (Page 1 of 2)

**Non-Collusive Bidding and Nondiscrimination in Employment in Northern Ireland
MacBride Fair Employment Principles**

BY SUBMISSION OF THIS BID AND BY SIGNING HEREUNDER THE BIDDER/PROPOSER, AND EACH PERSON SIGNING ON BEHALF OF SUCH PARTY CERTIFIES, AND IN THE CASE OF A JOINT BID/PROPOSAL, EACH PARTY THERETO CERTIFIES AS TO ITS OWN ORGANIZATION, UNDER PENALTY OF PERJURY, THAT TO THE BEST OF HIS/HER KNOWLEDGE AND BELIEF:

Article 1(b) - Non Collusion, State Finance Law §139-d

- 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 which have been 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.

Article 1(c) - MacBride Fair Employment Principles, State Finance Law §165(5)

- 1) it or any individual or legal entity in which the Bidder/Proposer holds a 10% or greater ownership interest, or any individual or legal entity that holds a 10% or greater ownership in the Bidder/Proposer, either: (answer yes or no to one or both of the following, as applicable).
- 2) Has business operations in Northern Ireland:

Yes ☐ or No ☐ (check answer) If yes, complete #3
- 3) Shall take lawful steps in good faith to conduct any business operations that it has in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to non-discrimination in employment and freedom of workplace opportunity, regarding such operations in Northern Ireland and shall permit independent monitoring of its compliance with such Principles. (Check Answer):

Yes ☐ or No ☐ (check answer)

NOTE: All references to “bid” “bidder” shall be deemed to include “proposer” “proposal”

Date

Print Name and Title

Signature

Bidder's/Proposer's Certification (Page 2 of 2)

Offerer's Affirmation of Understanding of and Agreement Pursuant to State Ethics Law Provision and State Finance Law §139-j (3) and §139-j (6) (b)

BY SUBMISSION OF THIS BID AND BY SIGNING HEREUNDER THE BIDDER/PROPOSER, AND EACH PERSON SIGNING ON BEHALF OF SUCH PARTY CERTIFIES, AND IN THE CASE OF A JOINT BID/PROPOSAL, EACH PARTY THERETO CERTIFIES AS TO ITS OWN ORGANIZATION, UNDER PENALTY OF PERJURY, THAT TO THE BEST OF HIS/HER KNOWLEDGE AND BELIEF:

Article 1(d) - State Ethics Law Provision

By submittal of this bid, the undersigned hereby certifies, for and on behalf of the bidder, that he is familiar with the following provisions of the State Ethics Law provisions applicable to post employment restrictions affecting former state employees: POL §73(8)(a)(i) the two year ban, and §73(8)(a)(ii), the life time bar, and that submittal of this bid is not in violation of either provision, and that no violation will occur by entering into a contract or in performance of the contractual services, and further that the bidder recognizes that the Department may rely upon this certification.

Except as follows: (attach information if needed)

(Proposer is to make full disclosure of any circumstances which could affect its ability to perform in complete compliance with the cited laws. Any questions as to the applicability of these provisions should be addressed to the New York State Ethics Commission, 39 Columbia Street, Albany, NY 12207:telephone #1-800-87-ETHICS.)

Article 1(e) - Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence, State Finance Law §139-j and §139-k

Offerer affirms that it understands and agrees to comply with the procedures of the New York State Department of Environmental Conservation relative to permissible contacts as required by State Finance Law §139-j (3) and §139-j (6) (b).

Use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD) Pursuant to Environmental Conservation Law Section 19-0323

Article 1(f) - Use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD) Provision

The Contractor certifies and warrants that all heavy duty vehicles, as defined in New York State Environmental Law (ECL) section 19-0323, to be used under this Contract, will comply with the specifications and provisions of ECL section 19-0323 and any regulations promulgated pursuant thereto, which requires the use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD), unless specifically waived by the Department. Qualification for a waiver under this law will be the responsibility of the Contractor.

NOTE: All references to "bid" "bidder" shall be deemed to include "proposer" "proposal."

Date

Print Name and Title

Signature

ARTICLE 1(g) - Page to Attach

Bid Security

If Bid Security is a Bid Bond, use Bid Bond form and provide certified power of attorney.

ARTICLE 1(h) - Bid Bond

Know all men by these presents, that we, the undersigned, _____, as Principal, and _____, as Surety, are hereby held and firmly bound unto New York State Department of Environmental Conservation in the penal sum of _____ for the payment of which, will and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. Signed this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted to New York State Department of Environmental Conservation certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

Now, Therefore

- a) If said Bid shall be rejected, or in the alternate,
- b) If said Bid shall be accepted and the principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for the faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bids; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

(Seal)

Principal

Surety

By _____

(ACKNOWLEDGMENT BY SURETY COMPANY)

State of _____)

County of _____) s.s.:

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 in _____, that he/she is the _____ (*title*) of the _____ (*firm*), the corporation described in and which executed the within 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 order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Seal)

Notary Public

(ACKNOWLEDGMENT)

State of _____)

County of _____) s.s.:

On the ____ day of _____ in the year _____, before me, the undersigned notary public, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

ARTICLE 1(i) - Offerer Disclosure of Prior Non-Responsibility Determinations
(Page 1 of 2)

Name of Individual or Entity Seeking to Enter into the Procurement Contract:

Address: _____

Name and Title of Person Submitting this Form: _____

Contract Procurement Number: D008466

Date: _____

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years? (Please circle):

Yes ☐ No ☐

If yes, please answer the questions 2 - 4, if no, go to question 5:

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j? (Please circle):

Yes ☐ No ☐

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please circle):

Yes ☐ No ☐

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.

Governmental Entity: _____

Date of Finding of Non-responsibility: _____

Basis of Finding of Non-Responsibility: _____

(Add additional pages as necessary)

ARTICLE 1(i) - Offerer Disclosure of Prior Non-Responsibility Determinations (Continued)
(Page 2 of 2)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named individual or entity due to the intentional provision of false or incomplete information? (Please circle):

Yes ☐ No ☐

6. If yes, please provide details below.

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: _____

(Add additional pages as necessary)

Offerer Certification:

Offerer certifies that all information provided to the New York State Department of Environmental Conservation with respect to State Finance Law §139-k is complete, true and accurate.

By: _____ Date: _____
Signature

ARTICLE 2(a) - Corporate Resolution and Certification

"This Article 2(a) is not applicable"

ARTICLE 2(b) - Statement of Surety's Intent

To: **New York State Department of Environmental Conservation**

We have reviewed the Bid of _____ (Contractor)
of _____ (Address)
for _____ (Project)

Contract Number: D008793

NYS Site Number: 314058

Bids for which will be received on _____ (insert Bid Opening Date) and wish to advise that should this Bid of Contractor be accepted and the Contract awarded to Contractor, it is our present intention to become surety on the Performance Bond and Labor and Material Payment Bond required by the Contract.

Any arrangement for the Bonds required by the Contract is a matter between Contractor and ourselves and we assume no liability to Department or third parties if for any reason we do not execute the requisite bonds.

We are duly licensed to do business in the State of New York.

Attest:

Corporate Seal

(If no seal, write "No Seal" and sign)

Surety's Authorized Signature(s)

Telephone Number for Bonding Company

Telephone Number for Bonding Broker

Attach Power of Attorney

Article 2(c) - M/WBE-EEO Workplan and Utilization Plan

Contractor must submit a M/WBE Workplan after being announced the apparent low bidder in accordance with Section III, Article 5.b. Contractor must submit M/WBE-EEO Utilization Plan after being issued Notice of Intent to Award in accordance with Section III, Article 5.c. Quarterly reporting is required throughout the term of the contract.

Contractors are invited to file the required forms online or may choose to complete and submit paper forms. Instructions are available at: <http://www.dec.ny.gov/about/48854.html>

If submitting paper forms, The M/WBE-EEO Utilization Plan and/or quarterly reports shall be sent directly to:

NYS Department of Environmental Conservation
Division of Management and Budget Services
Minority and Women's Business Programs Unit, 10th Floor
625 Broadway
Albany, New York 12233-5028

Contractors opting to file electronic forms can obtain the appropriate forms from the website and certify to the Department, via a letter, within the timeframes designated in the Instructions to Bidders, that the forms have been completed and submitted. The Contractor will be able to supply any additional information requested by the Department, by updating the online forms and notifying the Department via letter, that it has been re-submitted.

M/WBE Directory on the Internet

Empire State Development has put the Minority and Women-Owned Business Directory on the Internet. The Internet address is www.empire.state.ny.us, just follow the links to the M/WBE Directory. Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed, call (518) 474-1979.

Article 2 (d) - Instructions for Completing the New York State Vendor Responsibility Questionnaire CCA-2

***Please Read Before Completing Questionnaire**

Contractors must submit a Vendor Responsibility Questionnaire CCA-2 form after being announced the low bidder for any competitively bid contract of \$10,000 or more, or when proposed for subcontract work valued at \$10,000 or more. The Department may require additional information deemed necessary for its review.

Contractors are invited to file the required Vendor Responsibility Questionnaire online via the New York State VendRep System or may choose to complete and submit a paper questionnaire. To enroll in and use the New York State VendRep System, see the VendRep System Instructions available at <http://www.osc.state.ny.us/vendrep/systeminit.htm> or go directly to the VendRep System online at <https://portal.osc.state.ny.us>. For direct VendRep System user assistance, the Office of the State Comptroller's Help Desk may be reached at 866-370-4672 or 518-408-4672 or by email at helpdesk@osc.state.ny.us. Contractors opting to file a paper questionnaire can obtain the appropriate questionnaire from the VendRep website www.osc.state.ny.us/vendrep or contact the Office of the State Comptroller's Help Desk.

The enrollment process in the VendRep System can take several days. Contractors are encouraged to enroll prior to submitting bids to ensure meeting the timeframes for certification.

Contractors electing to file the Vendor Responsibility Questionnaire online shall certify to the Department, via a letter, within the timeframe designated in the Instructions to Bidders, that the questionnaire has been updated. The Contractor will be able to supply any additional information requested by the Department, by updating the online questionnaire and notifying the Department via letter, that it has been recertified.

Throughout the contract term, the Contractor is required to notify the Department in writing of any changes in Contractor's vendor responsibility disclosure related to the Contractor commencing bankruptcy proceedings; filings against the Contractor for relief under bankruptcy; Contractor making general assessment for benefit of creditors; a Court appointing a party to take charge of the Contractor's property; Contractor's inability to pay debts; or the Contractor being found in violation of laws and regulations of any public body having jurisdiction.

If the Contractor elects to file a paper copy directly with the Department, a completed original CCA-2 Form must be submitted within the timeframe designated in the Instructions to Bidders. Submit completed questionnaires marked "CONFIDENTIAL" to:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Michael Mason, P.E., Project Manager
625 BROADWAY 12th FLOOR
ALBANY, NY 12233-7017
(518)402-9814

ARTICLE 3(a) - Instructions for Certificate of Insurance

Use this form to certify insurance coverage and provide policy information.

Contractor must fill out Section 1 in its entirety before sending to the insurance agent.

Contractor is encouraged to send a copy of Section VIII, "General Conditions," Article 4, along with the Certificate of Insurance Form to its insurance agent in order that all required coverages and provisions are accounted for.

Insurance Agency

- 1) Complete Section 2 of the form.
- 2) Enter N/A if No Excess Umbrella (9) policy is in effect.
- 3) All insurance certificates must have a policy number entered otherwise it will result in rejection of the certificate.
- 4) Certificates must be signed by an authorized representative of the firm.
- 5) Specify policy if Other (10) is in effect, otherwise enter N/A.

Contractor

- 1) Complete Section 1 of the form.
- 2) At the top of the form, check "New" if you are submitting proof of coverage for a new contract. Check "Renewal" if you are submitting proof of renewals.
- 3) Submit original certificate and subsequent renewals to Division of Environmental Remediation, New York State Department of Environmental Conservation, 12th Floor, New York State Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-7017, **Attention: “Michael Mason, P.E., Project Manager.”** (Also see Section IV, Article 2 for name of project manager).

ARTICLE 3(b)**Certificate of Insurance**

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E, 12th Floor
625 Broadway, Albany, NY 12233-7017**

**NYSDEC-DER Site 314058
Contract No D008793
Certificate of Insurance
☐ New ☐ Renewal**

SECTION 1

Name and Address of Insured Contractor
(for Coverages 1,2,3,4,6,7,8,9,10)

Name of Insured or Additional Insured (for Coverage 5,6,7 & 10)
State of New York & NYS Dept. of Environmental Conservation

Location and Description of Work: Former Paulsen-Holbrook Site, Site No. 411046

SECTION 2

This is to certify that policies of insurance listed below have been issued to the contractor, named above, and are in force at this time.

Insurance	Policy #	Name of Company Affording Coverage	Expir. Date	Limits of Liability (in thousands)	
				Each Occurrence	Aggregate
1. Contractor's Liability					
2. Contractor's Protective Liability					
3. Complete Operations/Products					
4. Contractual Liability					
5. Owner's Protective Liability					
6. Automobile Liability					
7. Pollution Liability					
8. Worker's Comp. Disability Benefits				Limits as required by Law Limits as required by Law	
9. Excess Umbrella					
10. Other					

Such insurance as is herein certified: 1) applies to all operations of said insured in connection with the work required by the provisions of the documents forming this contract, 2) applies whether or not the contract documents between the insured contractor and the State of New York Department of Environmental Conservation have been executed, and 3) is written in accordance with the company's regular policies and endorsements, subject to the company's applicable manuals or rules and rates in effect as modified by this certificate and the insurance article of the contract.

No policy referred to herein shall be changed, cancelled or coverage terminated for any reason including expiration of the policy or non-payment of premiums until thirty (30) days written notice has been received by the Division of Environmental Remediation, Remedial Bureau E, NYS Dept. of Environmental Conservation, 12th floor, 625 Broadway, Albany, NY 12233-7017. Such notice shall be mailed via certified or registered mail.

(Date Issued)

By _____
(Signature of Authorized Representative)

(Print Insurance Agency Name)

Policy coverages must agree with coverages stated on the Certificate. False statements of coverage are punishable under Section 117 of the New York State Insurance Law.

ARTICLE 3(c) - Instruction for Performance Bond and Labor and Material Payment Bond

- 1) The performance bond and the labor and material payment bond are to be only submitted by the bidder who receives the Notice of Intent to Award letter from **Department**.
- 2) Use the forms that are included in the Contract Documents. **DO NOT RETYPE THE FORMS.**
- 3) Attach a **SEPARATE** certified power of attorney and surety financial statement to **EACH** bond (i.e., one set attached to performance bond and one set attached to labor and material payment bond).

ARTICLE 3(d) - Performance Bond

Date Bond Executed _____

NYSDEC-DER Site Number: 314058

Date Contract Executed By Principal _____

Principal (Name and Address)

Surety (Name and Address - Indicate State of incorporation and location of principal office)

Full and Just Sum of Bond (Express in words) _____

(Express in figures) _____

Know all men by these presents, That we, the **Principal** and **Surety**, above named, are held and firmly bound unto the Department of Environmental Conservation for and on behalf of the People of the State of New York, hereinafter called the Department, in full and just sum of the amount stated above, good and lawful money of the United States of America, to the payment of which said sum, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the **Principal** has entered into a certain written contract with the Department, covering the project and specification above;

Now, Therefore, the condition of this obligation is such, that if the **Principal** shall well, truly and faithfully comply with and perform all of the terms, covenants and conditions of said contract on their (his, its) part to be kept and performed, according to the true intent and meaning of said contract, and shall protect the Department and the People of the State of New York against, and pay any and all amounts, damages, costs and judgments which may or shall be recovered against the Department or the State of New York may be called upon to pay to any person or corporation by reason of any damages arising or growing out of the doing of said work, or the repair or maintenance thereof, or the manner of doing the same, or the neglect of the **Principal**, or their (its) agents or servants, or the improper performance of the work by the **Principal**, or their (its) agents or servants, or the infringement of any patent or patent rights by reason of the use of materials furnished or work done as aforesaid or otherwise, then this obligation shall be null and void, otherwise to remain in full force and virtue.

And the **Surety**, for value received, hereby stipulates and agrees, if requested to do so by the department to fully perform and complete the work mentioned and described in the contract and specifications, pursuant to the terms, conditions and covenants thereof, if for any cause, the **Principal** fails or neglects to so fully perform and complete the work; and the **Surety** further agrees to commence the work of completion within twenty days after notice thereof from the Department, and to complete the work with all due diligence.

And the **Surety**, for value received hereby stipulates and agrees that no change, extension, alteration or addition to the terms of this contract or specifications, accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

In Testimony Whereof, the **Principal** and the President and Secretary of the **Surety** have caused this instrument to be signed and sealed on the date shown above.

Signed, sealed and delivered in the presence of

Corporate Seal of Principal
if a Corporation

Name of Corporation

By _____

Print Name _____

Signature L.S.

Date _____

Corporate Seal of Surety Company

Corporation Surety

Business Address

By (President) _____

Attest (Secretary)

Date _____

(ACKNOWLEDGMENT BY SURETY COMPANY)

State of _____)
County of _____) s.s.:

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 in _____, that he/she is the _____ (**title**) of the _____ (**firm**), the corporation described in and which executed the within 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 order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Seal)

Notary Public

(ACKNOWLEDGMENT)

State of _____)
County of _____) s.s.:

On the _____ day of _____ in the year _____, before me, the undersigned notary public, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

ARTICLE 3(e) - New York State Department of Environmental Conservation

Labor and Material Payment Bond

Date Bond Executed: _____

NYSDEC-DER Site Number: 314058

Date Contract Executed By Principal _____

Principal (Name and Address) _____

Surety (Name and Address - Indicate State of incorporation and location of principal office)

Full and Just Sum of Bond (Express in words) _____

(Express in figures) _____

Know all men by these presents, That We, the **Principal** and the **Surety** above named, are held and firmly bound unto the Department of Environmental Conservation for and on behalf of the People of the State of New York, in full and just sum of the amount stated above, good and lawful money of the United States of America, to the payment of which said sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the **Principal** has entered into a certain written contract with the Department of Environmental Conservation, covering the project and specification indicated above.

Now, Therefore, the condition of this obligation is such, that if the **Principal** shall promptly pay all moneys due to all persons furnishing labor and materials to him or his subcontractors in the prosecution of the work provided for in the contract, then this obligation shall be void, otherwise to remain in full force and effect;

Provided, however, that the Comptroller of the State of New York having required the **Principal** to furnish this bond in order to comply with the provisions of Section 137 of the State Finance Law, all rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance with the provisions, conditions and limitations of said Section to the same extent as if they were copied at length herein; and

Further, provided, that the place of trial of any action on this bond shall be in the county in which the contract was to be performed, or if the contract was to be performed in more than one county, then in any such county, and not elsewhere.

In Testimony Whereof, the **Principal** and the President and Secretary of the **Surety** have caused this instrument to be signed and sealed on the date shown above.

Signed, sealed and delivered in the presence of

Name of Corporation

**Corporate Seal of Principal
if a Corporation**

By

Print Name

Signature

L.S.

Date _____

Corporation Surety

Business Address

By (President) _____

Attest (Secretary) _____

Date _____

(ACKNOWLEDGMENT BY SURETY COMPANY)

State of _____)

County of _____) s.s.:

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 in _____, that he/she is the _____ (*title*) of the _____ (*firm*), the corporation described in and which executed the within 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 order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

Seal

Notary Public

(ACKNOWLEDGMENT)

State of _____)

s.s.:

County of _____)

On the ____ day of _____ in the year _____, before me, the undersigned notary public, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

SECTION VI

Agreement

This Agreement by and between the **New York State Department of Environmental Conservation**, (hereinafter referred to as Department) having offices at 625 Broadway, Albany, New York 12233 and

_____ a corporation organized and existing under the laws of the State of _____

_____ a partnership, consisting of

_____ an individual conducting business as

the location of whose principal office is _____ hereinafter called "Contractor."

WITNESSETH

Whereas, Department is empowered by law to obtain services; the performance of these services is essential to Department; and Department, after fully examining all of its internal capabilities and thoroughly investigating all possible alternative approaches, has determined that certain tasks can best be accomplished through a contract;

Whereas, Contractor hereby represents that it is capable of providing the services which are the subject matter of this Contract;

Now Therefore, Department **and** Contractor, in consideration of the mutual covenants hereinafter set forth agree as follows:

ARTICLE 1 - Defined Terms

Terms used in the Agreement which are defined in the Contract Documents have the intent and meanings assigned to them in the Contract Documents.

ARTICLE 2 - Work

As indicated or specified in the Contract Documents, Contractor shall complete in a timely and workmanlike manner, any and all obligations, duties and responsibilities, and provide any and all labor, materials, equipment, temporary facilities, and incidentals necessary to complete the construction generally identified and shown on the plans and Contract Documents entitled:

New York State Department of Environmental Conservation
Site Name: Three Star Anodizing Site, OU-1, Remedial Construction
Contract Number: D008793
Date: April 2013

ARTICLE 3 - Engineer

Malcolm Pirnie, Inc./ARCADIS, U.S., Inc., shall assume all duties and responsibilities of and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - Contract Documents

The Documents which comprise the entire Contract between Department and Contractor concerning the Work consist of the following:

- 4.0 Appendices A and B
- 4.1 Engineer's written clarifications and interpretations
- 4.2 Change Orders
- 4.3 Administrative Agreements
- 4.4 Field Orders
- 4.5 Proposed Change Orders signed by Department
- 4.6 Approved Shop Drawings
- 4.7 Addenda
- 4.8 Agreement
- 4.9 Measurement for Payment
- 4.10 Bid Forms and Attachments Exclusive of Bonds and Insurance Certificates
- 4.11 Drawings, Plans
- 4.12 Supplementary Specifications
- 4.13 Supplementary Conditions
- 4.14 Standard Specifications
- 4.15 General Conditions
- 4.16 Supplementary Bidding Information and Requirements
- 4.17 Bidding Information and Requirements
- 4.18 Terms and Definitions
- 4.19 Advertisement
- 4.20 Bonds and Insurance Certificates

In the event of a conflict between the documents set forth above, they shall be entitled to priority according to the order in which they are listed.

ARTICLE 5 - Contractor's Representations

In order to induce Department to enter into this Agreement, Contractor makes the following representations:

- 5.1 Contractor has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and applicable Laws that in any manner may affect cost, schedule, progress, performance or furnishing of the Work.
- 5.2 Contractor has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in Information to Bidders, as provided in the General Conditions, and accepts the determination set forth in said Section to the extent of the technical data contained in such reports and drawings upon which Contractor is entitled to reply.
- 5.3 Contractor has obtained and carefully studied all such examinations, investigations, explorations, tests, reports and studies which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, schedule, progress, performance or furnishing of the Work as Contractor

considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

- 5.4 Contractor has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by Contractor in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions.
- 5.5 Contractor has correlated (or assumes responsibility for correlating) the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 5.6 Contractor has given Engineer written notice of all conflicts, errors or discrepancies that he (she) has discovered in the Contract Documents and any written resolution thereof is acceptable to Contractor.

ARTICLE 6 - Contract Term

The number of days within which, or alternatively, the dates by which, the Work, or any specified part thereof, is to be completed (the Contract Times) are set forth as follows:

- 6.1 The Work will be Substantially Completed within **three hundred eighty (380) calendar days** from the Effective Date of the Agreement plus twenty (20) calendar days.
- 6.2 Separable parts of the Work, if specified in an Attachment A to this Agreement, will be Substantially Completed within the number of days stated in Attachment A from the Effective Date of the Agreement plus twenty (20) calendar days.
- 6.3 The Work will be completed and ready for final payment in accordance with the General Conditions within **four hundred forty (440) calendar days** from the Effective Date of the Agreement plus twenty (20) calendar days or within 60 days of substantial completion, whichever is sooner.
- 6.4 Department and Contractor recognize that the Contract Time(s) specified in paragraphs 6.1, 6.2, and 6.3 above are of the essence of this Agreement, and that Department may suffer financial loss if the Work is not completed within the Contract Time(s) specified above, plus any extensions thereof allowed in accordance with the General Conditions, as amended or supplemented in the Supplementary Conditions.
- 6.5 Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of **one thousand one hundred forty dollars (\$1,140)** for each day that expires after the Contract Time specified in paragraph 6.1 above for Substantial Completion until the Work is Substantially Complete. Contractor further agrees to pay Department as liquidated damages, and not as a penalty, each of the amounts set forth in Attachment A if applicable to this agreement for each day that expires after each of the contract times specified in paragraph 6.2 above for substantial completion until the each of the separable parts of the work is substantially complete. After substantial completion of the work, if Contractor shall neglect, refuse or fail to complete the remaining work within the contract time or any proper extension thereof granted by Department, Contractor shall pay Department as liquidated damages, and not as a penalty, the amount of **five hundred seventy dollars (\$570)** for each day that expires after the Contract Time specified in paragraph 6.3 above for completion and readiness for payment. These liquidated damages are additive and represent a reasonable estimate, in lieu of any such

proof, of Department's extra expenses for Inspection, engineering services, administrative costs, and Interim excess operating costs for each day that expires after the associated Contract Time.

- 6.6 In addition to the liquidated damage amounts set forth in paragraph 6.5 above, Contractor agrees to pay Department's additional actual damages arising out of the types of expenses itemized below for each day that expires after each of the Contract Times specified in paragraph 6.1 above for Completion of each of the designated parts of the Work until each of the designated parts of the Work achieves the specified completion. These actual damages are additive and shall equal Department's expenditures for costs other than those itemized in paragraph 6.5, including, but not limited to, delay damage settlements or awards related to other separate contracts, delay penalties or fines imposed by regulatory agencies, contract damage and loss of use, excess financing costs, and professional fees and related expenses incurred thereto.

ARTICLE 7 - Alterations and Omissions

Department reserves the right, at any time during the progress of the work, to alter the plans or omit any portion of the work as it may deem reasonably necessary for the public interest; making allowances for additions and deductions with compensation made in accordance with the Contract Documents.

ARTICLE 8 - Determinations as to Variances

In case of any ambiguity in the Contract Documents, the matter must be immediately submitted to the Representative of Department designated in the Contract Documents, who shall adjust the same, and his (her) decision in relation thereto shall be final and conclusive upon the parties.

ARTICLE 9 - Payment Procedures

Contractor shall submit Applications for Payment on standard form in accordance with the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions, as amended or supplemented in the Supplementary Conditions and in accordance with Section 139-f of the State Finance Law.

- 9.1 **Progress Payments.** Contractor shall submit Applications for Payments to Engineer for review no more frequently than monthly in accordance with paragraph 13.2 of the General Conditions from the date when the Contract Time commences to run. Department shall make progress payments against the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer as provided below. All progress payments will be calculated on the basis of the progress of the Work measured by the schedule of values established pursuant to paragraph 1.4.3 of the General Conditions. Progress payments will also be made for materials pertinent to the Contract in accordance with the General Conditions. Contractor shall provide complete and accurate billing invoices to the Department in order to receive payment. Billing invoices submitted to the Department must contain all information and supporting documentation required by the Contract, the Department, and the State Comptroller. Payment for invoices submitted by the Contractor shall only be rendered electronically unless payment by paper check is expressly authorized by the Commissioner, in the Commissioner's sole discretion, due to extenuating circumstances. Such electronic payment shall be made in accordance with ordinary State procedures and practices. The Contractor shall comply with the State Comptroller's procedures to authorize electronic payments. Authorization forms are available at the State Comptroller's website at www.osc.state.ny.us/epay/index.htm, by email at epunit@osc.state.ny.us, or by telephone at 518-486-1255. Contractor acknowledges that it will not receive payment on any invoices submitted under this Contract if it does not comply with the State Comptroller's payment procedures, except where the Commissioner has expressly authorized payment by paper check as set forth above.

- 9.1.1 Prior to Substantial Completion of the Work, progress payments will be made less five percent (5%) the aggregate of payments (i.e. retainage) previously made and less an amount necessary to satisfy any claims, liens, or judgments against Contractor which have not been suitably discharged.
- 9.2 **Payment upon substantial completion.** When the work or major portions thereof, as contemplated in the Contract Documents, is substantially completed, Contractor shall submit to Department, an Application for Payment in accordance with the General Conditions for the remaining amount of the contract balance or amount due for that major portion completed. Department will pay the remaining Contract balance, or amount due for that major portion completed, less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens, judgments against Contractor which have not been suitably discharged. Payment for remaining items will be made upon their completion.
- 9.3 **Final Payment.** Upon final completion of the physical Work and acceptance of the Work in accordance with the General Conditions, Department shall pay the remainder of the Contract Price as recommended by Engineer.

ARTICLE 10 - No Estimate on Contractor's Noncompliance

It is further agreed that so long as Contractor has not complied with any lawful or proper direction concerning the work or material given by Department, Contractor shall not be entitled to have any estimate made for the purpose of payment, nor shall any estimate be rendered on account of work done or material furnished until Contractor has fully and satisfactorily complied with such direction.

ARTICLE 11 - Delays, Inefficiencies, and Interference

Contractor agrees to make no claim for any consequential damages attributable to any delays, or act in the performance of this contract which are not directly occasioned by any act or omission to act by the State or any of its representatives. In the event Contractor completes the work prior to the contract completion date set forth in the proposal, Contractor hereby agrees to make no claim for extra costs due to delays, interferences or inefficiencies in the performance of the work.

- 1) Contractor further agrees that it has included in its bid prices for the various items of the contract any additional costs for delays, inefficiencies, or interferences affecting the performance or scheduling of contract work caused by, or attributable to, the following instances:
 - a) The work or the presence on the Site of any third party, including but not limited to that of other contractors or personnel employed by the State, or by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises, or any delay in progressing such work by any third party.
 - b) The existence of any facility or appurtenance owned, operated, or maintained by any third party.
 - c) The act, or failure to act, of any other public or governmental body, including, but not limited to, approvals, permits, restrictions, regulations or ordinances.
 - d) Restraining orders, injunctions, or judgments issued by a court.
 - e) Any labor boycott, strike, picketing or similar situation.
 - f) Any shortages of supplies or materials required by the contract work.

- g) Any situation which was, or should have been within, the contemplation of the parties at the time of entering into the contract.

ARTICLE 12 - Postponement, Suspension or Termination

- 12.1 Department shall have the right to postpone, suspend or terminate this Contract in whole or in part for the convenience of Department. If, after termination for cause of Contractor it is determined that no cause existed for termination of Contractor, such termination shall be deemed to have been made for the convenience of Department.
- 12.2 If this Contract is terminated by Department for convenience or cause, Department shall make payment on an equitable basis for all work performed in accordance with the Contract Documents prior to termination in accordance with paragraphs 12.3 and 12.4 below.
- 12.3 If this contract is terminated for cause, no payment shall be made for anticipated profit on unperformed work or services. Additionally, Department may adjust any payment due to Contractor at the time of termination to account for any additional costs to Department because of Contractor's default.
- 12.4 If this contract is terminated for convenience, payment shall be made for any services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by Contractor which had become firm prior to the termination.
- 12.5 Upon termination of this Contract under this Agreement, Department may take over the work or may award or negotiate a contract with another party to complete work required by these Contract Documents.

ARTICLE 13 - Completion of Physical Work and Final Acceptance

The time within which Department may bring an action on the Contract against Contractor shall be computed from the date of completion of the physical Work. In accordance with Section 138-a of the State Finance Law, Contractor shall notify Department in writing that the physical Work has been completed. The date of completion must be no more than thirty days prior to the date of the notice. This notice must be delivered personally or by either registered or certified mail, return receipt requested to the exact address given below.

If Department disagrees with the date set forth in the notice, it will so advise Contractor in writing within 30 days of receipt of the notice. This notice will be delivered by either registered or certified mail, return receipt requested to Contractor's address as shown in this Agreement.

If Department accepts Contractor's date of completion of physical Work, Department's final acceptance of work shall be as of that date.

When, in the opinion of Department, Contractor has fully performed the physical Work under the Contract, Department shall notify Contractor in writing of final acceptance.

ARTICLE 14 - Final Payment

After the final acceptance of the work, Engineer shall prepare a final agreement of the work performed and the materials placed and shall compute the value of such work and materials under and according to the terms of the

contract. This agreement shall be certified, as to its correctness, by Engineer and submitted for final approval to Department. The Representative of Department designated in the Contract Documents shall have the right to reject the whole or any portion of the final agreement, should the said certificate of Engineer be found or known to be inconsistent with the terms of the agreement or otherwise improperly given and upon failure of Contractor to provide requested documentation including but not limited to that regarding payment of wages, suppliers or subcontractors. All certificates upon which partial payments may have been made being merely estimates, shall be subject to correction in the final certificate or final agreement.

ARTICLE 15 - Disposition of Documents and Data

Upon final acceptance of work under this Contract or termination of this Contract pursuant to this Agreement, or upon written demand of Department, Contractor shall promptly deliver or otherwise make available to Department all data, drawings, reports, estimates, and such other information and materials as may have been accumulated by Contractor in performing this Contract.

All final documents are to be submitted in an electronic format that complies with the most recent DER's Electronic Document Standards. Final documents are to be submitted as an Adobe PDF document. Final data sets shall be provided in the electronic data deliverable (EDD) that complies with the most recent DER's Electronic Data Warehouse Standards. Until such time as the Department establishes an EDD, the Division of Environmental Remediation is using the USEPA Region 2 MEDD: <http://www.epa.gov.region02/superfund/medd.htm>

ARTICLE 16 - Applicable Law; Jurisdiction; Service of Legal Process

Contractor agrees:

- 16.1 That this Agreement is subject to and governed by all applicable federal and New York State law.
- 16.2 To procure all necessary licenses and permits.
- 16.3 To voluntarily and irrevocably submit to the jurisdiction of a New York State Court of competent jurisdiction, to resolve any dispute or controversy arising out of this Contract.
- 16.4 That the venue of any action at law or in equity commenced against Department arising out of a Project in one of Department's regions, shall be in the county in that Region where Department regional headquarters is located.
- 16.5 That the service of legal process or any notices in connection with a dispute or controversy arising out of this Contract, by United States registered mail, postage prepaid, addressed to the Designated representative of Department at the address stated in the Contract. Documents shall constitute good and valid service of process upon Engineer.
- 16.6 To waive any defense based on or alleging lack of jurisdiction, improper venue, or invalid service, if there is compliance with paragraphs 16.3 and 16.4 in this Article.
- 16.7 This Contract may be presented in court as conclusive evidence of the foregoing agreement.

ARTICLE 17 - Sales and Use Tax Exemption

Contractor represents that this project has been bid in such a manner that Department has full advantage of available exemptions from sales and compensating use taxes. Accordingly, Contractor agrees to make all payment requests in a manner which affords Department full advantage of such exemptions. Further, Contractor agrees to complete and to require all subcontractors and material men to complete a Contractor Exempt Purchase Certificate in the name of the New York State Department of Environmental Conservation, which shall be furnished to all persons, firms or corporations from whom they purchase materials, equipment or supplies which are tax exempt by reason of the fact that they will be sold to Department, or will be used as an integral component in the construction, rehabilitation, or improvement of any structure of building required by the Contract Documents.

Contractor agrees to maintain and keep, and to contractually require all subcontractors and material men to maintain and keep, records relating to the tax exemption of material, equipment and Supplies for a period of six years. The six year period shall commence to run as of the date of final payment.

ARTICLE 18 - Effective Date

This Agreement and all Contract Documents shall take effect as of the date it is approved and filed by the Comptroller.

ARTICLE 19 - Contract Price

The maximum payment which Department shall pay to Contractor, and which Contractor agrees to accept as full payment for its work under this Contract, is the total of:

Bid \$ _____

Plus change order(s)

CONTRACT NUMBER: D008793

IN WITNESS WHEREOF, representatives of the Department and the Contractor have executed this Contract on the day and year written beneath their respective signatures. The signatory for the Department provides the following Agency Certification: "In addition to the acceptance of this contract, I also certify that original copies of this signature page will be attached to all other exact copies of this contract."

FOR DEPARTMENT

By: _____

Title: _____

Date: _____

FOR CONTRACTOR

By: _____

Title: _____

Date: _____

Approved as to Form:

By: _____

For Attorney General

Date: _____

Approved:

**Thomas P. DiNapoli
State Comptroller**

By: _____

Date: _____

This contract is not effective until it is approved by the State Comptroller and filed in his office (Section 112, State Finance Law).

(ACKNOWLEDGMENT)

State of)

S.S.:

County of)

On the ____ day of _____ in the year _____, before me, the undersigned notary public, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

SECTION VII

Appendix A and Appendix B

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STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law Section 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor

understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years

thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.

In accordance with Section

312 of the Executive Law and 5 NYCRR 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract;

or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this

law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES.

In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992. It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
email: opa@esd.ny.gov

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
email: mwbecertification@esd.ny.gov
<http://esd.ny.gov/MWBE/directorySearch.html>

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable,

Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS.

Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of

the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.

To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

APPENDIX B

Standard Clauses for All New York State Department of Environmental Conservation Contracts

The parties to the attached contract, license, lease, grant, amendment or other agreement of any kind (hereinafter "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract. The word "Contractor" herein refers to any party to the contract, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. **Postponement, suspension, abandonment or termination by the Department:**

The Department shall have the right to postpone, suspend, abandon or terminate this contract, and such actions shall in no event be deemed a breach of contract. In the event of any termination, postponement, delay, suspension or abandonment, the Contractor shall immediately stop work, take steps to incur no additional obligations, and to limit further expenditures. Within 15 days of receipt of notice, the Contractor shall deliver to the Department all data, reports, plans, or other documentation related to the performance of this contract, including but not limited to source codes and specifications, guarantees, warranties, as-built plans and shop drawings. In any of these events, the Department shall make settlement with the Contractor upon an equitable basis as determined by the Department which shall fix the value of the work which was performed by the Contractor prior to the postponement, suspension, abandonment or termination of this contract. This clause shall not apply to this contract if the contract contains other provisions applicable to postponement, suspension or termination of the contract.

II. **Indemnification and Hold harmless** The Contractor agrees that it will indemnify and save harmless the Department and the State of New York from and against all losses from claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any omission or tortious act of the Contractor, its agents, employees, suppliers or subcontractors in the performance of this contract. The Department and the State of New York may retain such monies from the amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like, which is asserted against the Department and/or the State of New York.

III. **Conflict of Interest**

(a) Organizational Conflict of Interest. To the best of the Contractor's knowledge and belief, the Contractor warrants that there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as herein defined, or that the Contractor has disclosed all such relevant information to the Department.

(1) An organizational conflict of interest exists when the nature of the work to be performed under this contract may,

without some restriction on future activities, impair or appear to impair the Contractor's objectivity in performing the work for the Department.

(2) The Contractor agrees that if an actual, or potential organizational conflict of interest is discovered at any time after award, whether before or during performance, the Contractor will immediately make a full disclosure in writing to the Department. This disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Department, to avoid, mitigate, or minimize the actual or potential conflict.

(3) To the extent that the work under this contract requires access to personal, proprietary or confidential business or financial data of persons or other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect such data from unauthorized use and disclosure and agrees not to use it to compete with such companies.

(b) Personal Conflict of Interest: The following provisions with regard to management or professional level employee personnel performing under this contract shall apply until the earlier of the termination date of the affected employee(s) or the duration of the contract.

(1) A personal conflict of interest is defined as a relationship of an employee, subcontractor employee, or consultant with an entity that may impair or appear to impair the objectivity of the employee, subcontractor employee, or consultant in performing the contract work. The Contractor agrees to notify the Department immediately of any actual or potential personal conflict of interest with regard to any such person working on or having access to information regarding this contract, as soon as Contractor becomes aware of such conflict. The Department will notify the Contractor of the appropriate action to be taken.

(2) The Contractor agrees to advise all management or professional level employees involved in the work of this contract, that they must report any personal conflicts of interest to the Contractor. The Contractor must then advise the Department which will advise the Contractor of the appropriate action to be taken.

(3) Unless waived by the Department, the Contractor shall certify annually that, to the best of the Contractor's knowledge and belief, all actual, apparent or potential conflicts of interest, both personal and organizational, as defined herein, have been reported to the Department. Such certification must be signed by a senior executive of the Contractor and submitted in accordance with instructions provided by the Department. Along with the annual certification, the Contractor shall also submit an update of any changes in any conflict of interest plan submitted with its proposal for this contract. The initial certification shall cover the one-year period from the date of contract award, and all subsequent certifications shall cover successive annual periods thereafter. The certification is to be submitted no later than 45 days after the close of the previous certification period covered.

(4) In performing this contract, the Contractor recognizes that its employees may have access to data, either provided by the Department or first generated during contract performance, of a sensitive nature which should not be released without Department approval. If this situation occurs, the Contractor agrees to obtain confidentiality agreements from all affected employees working on requirements under this contract including subcontractors and consultants. Such agreements shall contain provisions which stipulate that each employee agrees not to disclose, either in whole or in part, to any entity external to the Department, Department of Health or the New York State Department of Law, any information or data provided by the Department or first generated by the Contractor under this contract, any site-specific cost information, or any enforcement strategy without first obtaining the written permission of the Department. If a Contractor, through an employee or otherwise, is subpoenaed to testify or produce documents, which could result in such disclosure, the Contractor must provide immediate advance notification to the Department so that the Department can authorize such disclosure or have the opportunity to take action to prevent such disclosure. Such agreements shall be effective for the life of the contract and for a period of five (5) years after completion of the contract.

(c) Remedies - The Department may terminate this contract in whole or in part, if it deems such termination necessary to avoid an organizational or personal conflict of interest, or an unauthorized disclosure of information. If the Contractor fails to make required disclosures or misrepresents relevant information to the Department, the Department may terminate the contract, or pursue such other remedies as may be permitted by the terms of Clause I of this Appendix or other applicable provisions of this contract regarding termination.

(d) The Contractor will be ineligible to make a proposal or bid on a contract for which the Contractor has developed the statement of work or the solicitation package

(e) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder (except for subcontracts or consultant agreements for well drilling, fence erecting, plumbing, utility hookups, security guard services, or electrical services) provisions which shall conform substantially to the language of this clause, including this paragraph (e), unless otherwise authorized by the Department.

If this is a contract for work related to action at an inactive hazardous waste site, the following paragraph shall apply to those Contractors whose work requires the application of professional judgment: It does not apply to construction contracts.

(f) Due to the scope and nature of this contract, the Contractor shall observe the following restrictions on future hazardous waste site contracting for the duration of the contract.

(1) The Contractor, during the life of the work assignment and for a period of three (3) years after the completion of the work assignment, agrees not to enter into a contract with or to represent any party with respect to any work relating to remedial activities or work pertaining to a site where the Contractor previously performed work for the Department under this contract without the prior written approval of the Department.

(2) The Contractor agrees in advance that if any bids/proposals are submitted for any work for a third party that would require written approval of the Department prior to entering into a contract because of the restrictions of this clause, then the bids/proposals are submitted at the Contractor's own risk, and no claim shall be made against the Department to recover bid/proposal costs as a direct cost whether the request for authorization to enter into the contract is denied or approved.

IV. Requests for Payment All requests for payment by the Contractor must be submitted on forms supplied and approved by the Department. Each payment request must contain such items of information and supporting documentation as are required by the Department, and shall be all-inclusive for the period of time covered by the payment request.

V. **Compliance with Federal requirements** To the extent that federal funds are provided to the Contractor or used in paying the Contractor under this contract, the Contractor agrees that it will comply with all applicable federal laws and regulations, including but not limited to those laws and regulations under which the Federal funds were authorized. The Contractor further agrees to insert in any subcontract hereunder, provisions which shall conform substantially to the language of this clause.

VI. **Independent Contractor** The Contractor shall have the status of an independent contractor. Accordingly, the Contractor agrees that it will conduct itself in a manner consistent with such status, and that it will neither hold itself out as, nor claim to be, an officer or employee of the Department by reason of this contract. It further agrees that it will not make any claim, demand or application to the Department for any right or privilege applicable to an officer or employee of the Department, including but not limited to worker's compensation coverage, unemployment insurance benefits, social security coverage, or retirement membership or credit.

VII. **Compliance with applicable laws**(a) Prior to the commencement of any work under this contract, the Contractor is required to meet all legal requirements necessary in the performance of the contract. This includes but is not limited to compliance with all applicable federal, state and local laws and regulations promulgated thereunder. It is the Contractor's responsibility to obtain any necessary permits, or other authorizations. By signing this contract, the Contractor affirmatively represents that it has complied with said laws, unless it advises the Department otherwise, in writing. The Department signs this contract in reliance upon this representation.

(b) During the term of this contract, and any extensions thereof, the Contractor must remain in compliance with said laws. A failure to notify the Department of noncompliance of which the Contractor was or should have been aware, may be considered a material breach of this contract.

VIII. **Dispute Resolution** The parties agree to the following steps, or as many as are necessary to resolve disputes between the Department and the Contractor.

(a) The Contractor specifically agrees to submit, in the first instance, any dispute relating to this contract to the designated individual, who shall render a written decision and furnish a copy thereof to the Contractor.

(1) The Contractor must request such decision in writing no more than fifteen days after it knew or should have known of the facts which are the basis of the dispute.

(2) The decision of the designated individual shall be the

final DEC determination, unless the Contractor files a written appeal of that decision with the designated appeal individual ("DAI") within twenty days of receipt of that decision.

(b) Upon receipt of the written appeal, the DAI, will review the record and decision. Following divisional procedures in effect at that time, the DAI will take one of the following actions, with written notice to the Contractor.

(1) Remand the matter to the program staff for further negotiation or information if it is determined that the matter is not ripe for review; or

(2) Determine that there is no need for further action, and that the determination of the designated individual is confirmed; or

(3) Make a determination on the record as it exists.

(c) The decision of the DAI shall be the final DEC decision unless the Contractor files a written appeal of that decision with the Chair of the Contract Review Committee ("CRC") within twenty days of receipt of that decision.

The designated individual to hear disputes is:

Laura Zeppetelli, Bureau Director

(Name and Title)

NYS DEC, 625 Broadway, Albany, NY 12233

(Address)

(518) 402-9764

(Telephone)

The designated appeal individual to review decisions is:

Michael Ryan, Asst. Director

(Name and Title)

NYS DEC, 625 Broadway, Albany NY 12233

(Address)

(518) 402-9706

(Telephone)

The Chair of the Contract Review Committee is:

Department of Environmental Conservation

Nancy W. Lussier Chair

Contract Review Committee

625 Broadway

Albany, NY 12233-5010

Telephone: (518) 402-9237

(d) Upon receipt of the written appeal, the Chair of the CRC, in consultation with the members of the CRC and the Office of General Counsel, will take one of the following

actions, or a combination thereof, with written notice to the Contractor.

- (1) Remand the matter to program staff for additional fact finding, negotiation, or other appropriate action; or
 - (2) Adopt the decision of the DAI; or
 - (3) Consider the matter for review by the CRC in accordance with its procedures.
- (e) Following a decision to proceed pursuant to (d) 3, above, the Chair of the CRC shall convene a proceeding in accordance with the CRC's established contract dispute resolution guidelines. The proceeding will provide the Contractor with an opportunity to be heard.
- (f) Following a decision pursuant to (d) 2 or (d) 3, the CRC shall make a written recommendation to the Assistant Commissioner for Administration who shall render the final DEC determination. (g) At any time during the dispute resolution process, and upon mutual agreement of the parties, the Office of Hearings and Mediation Services (OHMS) may be requested to provide mediation services or other appropriate means to assist in resolving the dispute. Any findings or recommendations made by the OHMS will not be binding on either party.
- (h) Final DEC determinations shall be subject to review only pursuant to Article 78 of the Civil Practice Law and Rules.
- (i) Pending final determination of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract in accordance with the decision of the designated individual. Nothing in this Contract shall be construed as making final the decision of any administrative officer upon a question of law.
- (j) (1) Notwithstanding the foregoing, at the option of the Contractor, the following shall be subject to review by the CRC: Disputes arising under Article 15-A of the Executive Law (Minority and Women Owned Business participation), the Department's determination with respect to the adequacy of the Contractor's Utilization Plan, or the Contractor's showing of good faith efforts to comply therewith. A request for a review before the CRC should be made, in writing, within twenty days of receipt of the Department's determination.
- (2) The CRC will promptly convene a review in accordance with Article 15-A of the Executive Law and the regulations promulgated thereunder.

IX. Labor Law Provisions

(a) When applicable, the Contractor shall post, in a location designated by the Department, a copy of the New York State Department of Labor 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 Department of Labor notice that this project is a public work project on which each worker is entitled to receive the prevailing wages and supplements for their occupation, and all other notices which the Department directs the Contractor to post. The Contractor shall provide a surface for such notices which is satisfactory to the Department. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. 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.

(b) When appropriate, contractor shall distribute to each worker for this Contract a notice, in a form provided by the Department, that this project is a public work project on which each worker is entitled to receive the prevailing wage and supplements for the occupation at which he or she is working. Worker includes employees of Contractor and all Subcontractors and all employees of suppliers entering the site. Such notice shall be distributed to each worker before they start performing any work of this contract. At the time of distribution, Contractor shall have each worker sign a statement, in a form provided by the Department, certifying that the worker has received the notice required by this section, which signed statement shall be maintained with the payroll records required by the following paragraph (c).

(c) Contractor shall maintain on the site the original certified payrolls or certified transcripts thereof which Contractor and all of its Subcontractors are required to maintain pursuant to the New York Labor Law Section 220. Contractor shall maintain with the payrolls or transcripts thereof, the statements signed by each worker pursuant to paragraph (b).

(d) Within thirty days of issuance of the first payroll, and every thirty days thereafter, the Contractor and every subcontractor must submit a transcript of the original payroll to the Department, which transcript must be subscribed and affirmed as true under penalty of perjury.

X. Offset In accordance with State Law, the Department has the authority to administratively offset any monies due it from the Contractor, from payments due to the Contractor under this contract. The Department may also (a) assess interest or late payment charges, and collection fees, if applicable; (b) charge a fee for any

dishonored check; (c) refuse to renew certain licenses and permits.

XI. Tax Exemption Pursuant to Tax Law Section 1116, the State is exempt from sales and use taxes. A standard state voucher is sufficient evidence thereof. For federal excise taxes, New York's registration Number 14740026K covers tax-free transactions under the Internal Revenue Code.

XII. Litigation Support In the event that the Department becomes involved in litigation related to the subject matter of this contract, the Contractor agrees to provide background support and other litigation support, including but not limited to depositions, appearances, and testimony. Compensation will be negotiated and based on rates established in the contract, or as may otherwise be provided in the contract.

XIII. Equipment Any equipment purchased with funds provided under this contract, shall remain the property of the Department, unless otherwise provided in the contract. The Contractor shall be liable for all costs for maintaining the property in good, usable condition. It shall be returned to the Department upon completion of the contract, in such condition, unless the Department elects to sell the equipment to the Contractor, upon mutually agreeable terms.

XIV. Inventions or Discoveries Any invention or discovery first made in performance of this Contract shall be the property of the Department, unless otherwise provided in the contract. The Contractor agrees to provide the Department with any and all materials related to this property. At the Department's option, the Contractor may be granted a non-exclusive license.

XV. Patent and Copyright Protection

If any patented or copyrighted material is involved in or results from the performance of this Contract, this Article shall apply.

(a) The Contractor shall, at its expense, defend any suit instituted against the Department and indemnify the Department against any award of damages and costs made against the Department by a final judgment of a court of last resort based on the claim that any of the products, services or consumable supplies furnished by the Contractor under this Contract infringes any patent, copyright or other proprietary right; provided the Department gives the Contractor:

- (1) prompt written notice of any action, claim or threat of infringement suit, or other suit, and
- (2) the opportunity to take over, settle or defend such action at the Contractor's sole expense, and

- (3) all available information, assistance and authority necessary to the action, at the Contractor's sole expense.

The Contractor shall control the defense of any such suit, including appeals, and all negotiations to effect settlement, but shall keep the Department fully informed concerning the progress of the litigation.

(b) If the use of any item(s) or parts thereof is held to infringe a patent or copyright and its use is enjoined, or Contractor believes it will be enjoined, the Contractor shall have the right, at its election and expense to take action in the following order of precedence:

- (1) procure for the Department the right to continue using the same item or parts thereof;

- (2) modify the same so that it becomes non-infringing and of at least the same quality and performance;

- (3) replace the item(s) or parts thereof with noninfringing items of at least the same quality and performance;

- (4) if none of the above remedies are available, discontinue its use and eliminate any future charges or royalties pertaining thereto. The Contractor will buy back the infringing product(s) at the State's book value, or in the event of a lease, the parties shall terminate the lease. If discontinuation or elimination results in the Contractor not being able to perform the Contract, the Contract shall be terminated.

(c) In the event that an action at law or in equity is commenced against the Department arising out of a claim that the Department's use of any item or material pursuant to or resulting from this Contract infringes any patent, copyright or proprietary right, and such action is forwarded by the Department to the Contractor for defense and indemnification pursuant to this Article, the Department shall copy all pleadings and documents forwarded to the Contractor together with the forwarding correspondence and a copy of this Contract to the Office of the Attorney General of the State of New York. If upon receipt of such request for defense, or at any time thereafter, the Contractor is of the opinion that the allegations in such action, in whole or in part, are not covered by the indemnification set forth in this Article, the Contractor shall immediately notify the Department and the Office of the Attorney General of the State of New York in writing and shall specify to what extent the Contractor believes it is and is not obligated to defend and indemnify under the terms and conditions of this Contract. The Contractor shall in such event protect the interests of the Department and State of New York and secure a continuance to permit the State of New York to appear and defend its interests in cooperation with

Contractor as is appropriate, including any jurisdictional defenses which the Department and State shall have.

(d) The Contractor shall, however, have no liability to the Department under this Article if any infringement is based upon or arises out of: (1) compliance with designs, plans, or specifications furnished by or on behalf of the Department as to the items; (2) alterations of the items by the Department; (3) failure of the Department to use updated items provided by the Contractor for avoiding infringement; (4) use of items in combination with apparatus or devices not delivered by the Contractor; (5) use of items in a manner for which the same were neither designed nor contemplated; or (6) a patent or copyright in which the Department or any affiliate or subsidiary of the Department has any direct or indirect interest by license or otherwise.

(e) The foregoing states the Contractor's entire liability for, or resulting from, patent or copyright infringement or claim thereof.

XVI. Force Majeure The term Force Majeure shall include acts of God, work stoppages due to labor disputes or strikes, fires, explosions, epidemics, riots, war rebellion, sabotage or the like. If a failure of or delay in performance by either party results from the occurrence of a Force Majeure event, the delay shall be excused and the time for performance extended by a period equivalent to the time lost because of the Force majeure event, if and to the extent that:

(a) The delay or failure was beyond the control of the party affected and not due to its fault or negligence; and

(b) The delay or failure was not extended because of the affected party's failure to use all reasonable diligence to overcome the obstacle or to resume performance immediately after such obstacle was overcome; and

(c) The affected party provides notice within (5) days of the onset of the event, that it is invoking the protection of this provision.

XVII.. Freedom of Information Requests The Contractor agrees to provide the Department with any records which must be released in order to comply with a request pursuant to the Freedom of Information Law. The Department will provide the contractor with an opportunity to identify material which may be protected from release and to support its position.

XVIII. Precedence In the event of a conflict between the terms of this Appendix B and the terms of the Contract (including any and all attachments thereto and amendments thereof, but not including Appendix A), the terms of this

Appendix B shall control. In the event of a conflict between the terms of this Appendix B, and the terms of Appendix A, the terms of Appendix A shall control.

XIX. Article 15-Requirements

PARTICIPATION BY MINORITY GROUP MEMBERS AND WOMEN WITH RESPECT TO STATE CONTRACTS: REQUIREMENTS AND PROCEDURES

1. General Provisions

A. The Department is required to implement the provisions of New York State Executive Law Article 15-A and 5 NYCRR Parts 142-144 ("MWBE Regulations") for all State contracts as defined therein, with a value (1) in excess of \$25,000 for labor, services, equipment, materials, or any combination of the foregoing or (2) in excess of \$100,000 for real property renovations and construction.

B. The Contractor to the subject contract (the "Contractor" and the "Contract," respectively) agrees, in addition to any other nondiscrimination provision of the Contract and at no additional cost to the New York State Department (the "Department", to fully comply and cooperate with the Department in the implementation of New York State Executive Law Article 15-A. These requirements include equal employment opportunities for minority group members and women ("EEO") and contracting opportunities for certified minority and women-owned business enterprises ("MWBEs"). Contractor's demonstration of "good faith efforts" pursuant to 5 NYCRR §142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of, the nondiscrimination provisions required by New York State Executive Law Article 15 (the "Human Rights Law") or other applicable federal, state or local laws.

C. Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the withholding of funds or such other actions, liquidated damages pursuant to Section VII of this Article or enforcement proceedings as allowed by the Contract.

2. Contract Goals

- A. For purposes of this procurement, the Department hereby establishes an overall goal of 20% for Minority and Women-Owned Business Enterprises ("MWBE") participation, 10% for Minority-Owned Business Enterprises ("MBE") participation and 10% for Women-Owned Business Enterprises ("WBE") participation (based on the current availability of qualified MBEs and WBEs).
- B. For purposes of providing meaningful participation by MWBEs on the Contract and achieving the Contract Goals established in Section II-A hereof, Contractor should reference the directory of New York State Certified MWBEs found at the following internet address;

<http://www.esd.ny.gov/mwbe.html>

Additionally, the Contractor is encouraged to contact the Division of Minority and Woman Business Development ((518) 292-5250; (212) 803-2414; or (716) 846-8200) to discuss additional methods of maximizing participation by MWBEs on the Contract.

- C. Where MWBE goals have been established herein, pursuant to 5 NYCRR §142.8, Contractor must document "good faith efforts" to provide meaningful participation by MWBEs as subcontractors or suppliers in the performance of the Contract. In accordance with Section 316-a of Article 15-A and 5 NYCRR §142.13, the Contractor acknowledges that if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals set forth in the Contract, such a finding constitutes a breach of contract and the Contractor shall be liable to the Department for liquidated or other appropriate damages, as set forth herein.

3. Equal Employment Opportunity (EEO)

- A. Contractor agrees to be bound by the provisions of Article 15-A and the MWBE Regulations promulgated by the Division of Minority and Women's Business Development of the Department of Economic Development (the "Division"). If any of these terms or provisions conflict with applicable law or regulations, such laws and regulations shall supersede these requirements. Contractor shall comply with the following provisions of Article 15-A:

1. Contractor and Subcontractors shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.
2. The Contractor shall submit an EEO policy statement to the Department within seventy two (72) hours after the date of the notice by Department to award the Contract to the Contractor.
3. If Contractor or Subcontractor does not have an existing EEO policy statement, the Department may provide the Contractor or Subcontractor a model statement. This statement can be found at the link provided in Section 8.
4. The Contractor's EEO policy statement shall include the following language:
 - a. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.
 - b. The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.
 - c. The Contractor shall request each employer Department, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employer Department, labor union, or

representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

- d. The Contractor will include the provisions of Subdivisions (a) through (c) of this Subsection 4 and Paragraph "E" of this Section III, which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the Contract.
- e. **EEO Contract Goals** for the purposes of this procurement, the Department hereby establishes a goal of **10%** Minority Labor Force Participation, **10%** Female Labor Force Participation.

B. Staffing Plan Form

To ensure compliance with this Section, the Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Contract by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Contractors shall complete the Staffing plan form and submit it as part of their bid or proposal or within a reasonable time, but no later than the time of award of the contract.

C. Workforce Employment Utilization Report Form ("Workforce Report")

- 1. Once a contract has been awarded and during the term of Contract, Contractor is responsible for updating and providing notice to the Department of any changes to the previously submitted Staffing Plan. This information is to be submitted on a quarterly basis during the term of the Contract to report the actual workforce utilized in the performance of the Contract by the specified categories listed including ethnic background, gender, and Federal occupational categories. The Workforce Report must be submitted to report this information.
- 2. Separate forms shall be completed by

Contractor and any subcontractor performing work on the Contract.

- 3. In limited instances, Contractor may not be able to separate out the workforce utilized in the performance of the Contract from Contractor's and/or subcontractor's total workforce. When a separation can be made, Contractor shall submit the Workforce Report and indicate that the information provided related to the actual workforce utilized on the Contract. When the workforce to be utilized on the contract cannot be separated out from Contractor's and/or subcontractor's total workforce, Contractor shall submit the Workforce Report and indicate that the information provided is Contractor's total workforce during the subject time frame, not limited to work specifically under the Contract.

- D. Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

4. MWBE Utilization Plan

- A. The Contractor represents and warrants that Contractor has submitted an MWBE Utilization Plan either prior to, or at the time of, the execution of the contract.
- B. Contractor agrees to use such MWBE Utilization Plan for the performance of MWBEs on the Contract pursuant to the prescribed MWBE goals set forth in Section III-A of this Appendix.
- C. Contractor further agrees that a failure to submit and/or use such MWBE Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, Department shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsiveness.

5. Waivers

- A. For Waiver Requests Contractor should use Waiver Request Form.

- B. If the Contractor, after making good faith efforts, is unable to comply with MWBE goals, the Contractor may submit a Request for Waiver form documenting good faith efforts by the Contractor to meet such goals. If the documentation included with the waiver request is complete, the Department shall evaluate the request and issue a written notice of acceptance or denial within twenty (20) days of receipt.
- C. If the Department, upon review of the MWBE Utilization Plan and updated Quarterly MWBE Contractor Compliance Reports determines that Contractor is failing or refusing to comply with the Contract goals and no waiver has been issued in regards to such non-compliance, the Department may issue a notice of deficiency to the Contractor. The Contractor must respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

6. Quarterly MWBE Contractor Compliance Report

Contractor is required to submit a Quarterly MWBE Contractor Compliance Report Form to the Department by the 10th day following each end of quarter over the term of the Contract documenting the progress made towards achievement of the MWBE goals of the Contract.

7. Liquidated Damages - MWBE Participation

- A. Where Department determines that Contractor is not in compliance with the requirements of the Contract and Contractor refuses to comply with such requirements, or if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals, Contractor shall be obligated to pay to the Department liquidated damages.
- B. Such liquidated damages shall be calculated as an amount equaling the difference between:
 - 1. All sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and
 - 2. All sums actually paid to MWBEs for work performed or materials supplied under the Contract.
- C. In the event a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by the Department, Contractor shall pay such liquidated damages to the Department within sixty (60) days after they are assessed by the Department unless

prior to the expiration of such sixtieth day, the Contractor has filed a complaint with the Director of the Division of Minority and Woman Business Development pursuant to Subdivision 8 of Section 313 of the Executive Law in which event the liquidated damages shall be payable if Director renders a decision in favor of the Department.

8. Forms

The following forms referenced in Article XVIII 3-A-3, 3B, 3C and 5A can be found at <http://www.dec.ny.gov/about/48854.html>

SECTION VIII

General Conditions

ARTICLE 1 - Preliminary Matters

Copies of Documents:

- 1.1 Department shall furnish to Contractor without charge up to five copies of the Contract Documents. Additional copies of the Contract Documents will be furnished, upon request, at the cost of reproduction.

Preconstruction Conference:

- 1.2 No later than twenty calendar days after the Effective Date of the Agreement, but before Contractor starts the Work, a conference will be held on a date and at a location set by Department to:
 - 1.2.1 Review, item by item, the requirements of this Article;
 - 1.2.2 Review the qualifications of Contractor's resident superintendent and the qualifications of any Subcontractors and Suppliers of Contractor;
 - 1.2.3 Discuss Contractor's plans for complying with the requirements of Article 5 of the General Conditions;
 - 1.2.4 Formalize procedures for processing of Administrative Agreements, Payment Applications, Shop Drawings and other submittals, Change Orders and Proposed Change Orders, and Contractor requests for clarifications and interpretation of Contract Documents;
 - 1.2.5 Establish a working understanding among the parties as to the Work; and
 - 1.2.6 Discuss any conflicts, errors or discrepancies that Contractor has discovered by review of the Contract Documents.

Commencement of Contract Time and Start of Work at Site:

- 1.3 Before starting, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall immediately report in writing to Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
- 1.4 Before a Contractor may commence Work on the site but no later than 10 calendar days after Notice of Award, Contractor shall submit to Engineer for review and acceptance:
 - 1.4.1 An interim progress schedule indicating Contractor's anticipated schedule for the Work for the first three months in detail and for the remainder of the Work in summary form. If Contractor doesn't intend to perform Work on the date when Contract Time commences, Contractor must notify Department as soon as possible in writing when work will commence so inspection

services can be scheduled to minimize cost to the Department. The interim progress schedule shall include the information specified in paragraphs 1.4.2 and 1.4.3.

1.4.2 An interim schedule of Shop Drawing, material, soil characteristic, sample collection and analytical test result submissions covering the various stages of Work detailed in the first three months of the interim Progress Schedule; and

1.4.3 An interim schedule of values on the form provided by Engineer covering the various stages of Work detailed in the first three months of the interim Progress Schedule. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by Contractor at the time of submission.

1.5 Contractor shall start to perform the Work on the date specified in the Notice to Proceed in a manner consistent with the Contract Documents. No Work shall be done prior to the date specified in the Notice to Proceed unless written permission to do so is given by the Department to the Contractor.

Finalizing Interim Schedules:

1.6 Contractor shall submit a proposed progress schedule to finalize the interim schedules submitted in accordance with paragraph 1.4 and the requirements of the Progress Schedule Section of the Standard Specification no later than twenty days after starting work at the site. The progress schedule shall be acceptable to Engineer and Department as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will not relieve Contractor from full responsibility for the progress or scheduling of the Work. The schedule of Shop Drawing, material, soil characteristic, sample collection, and analytical test results submissions shall be acceptable to Engineer and Department as providing a workable arrangement for processing the submissions. The schedule of values shall be acceptable to Engineer and Department as to form and substance. The first Application for Payment shall not be processed unless Contractor has submitted acceptable schedules.

ARTICLE 2 - Contract Documents: Intent, Amending, Reuse

Intent:

2.1 The Contract Documents comprise the entire agreement between Department and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

2.2 The Contract Documents describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may be necessary to satisfactorily complete the contract must be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), even though reference may be specifically made to an earlier standard. If there is any conflict or discrepancy between standard specifications, manuals, or codes of any technical society, organization or association, or between Laws, the Engineer shall determine which shall apply and shall be binding on Contractor. Contractor has a duty to comply with the latest standard specification, manual, code, or Laws in effect at the time of opening of bids, without any

increase in Contract Price or extension in Contract Time. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 8.4. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Department, Contractor or Engineer or any of their consultants, agents or employees from those set forth in the Contract Documents. If there is any conflict or discrepancy between the provisions of the Contract Documents and any such referenced standard specification, manual, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence.

- 2.3 If during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to Engineer in writing at once and before proceeding with the Work affected thereby, and shall obtain a written interpretation or clarification.

Engineer will promptly investigate the matter and respond to Contractor. Until such interpretation or clarification is obtained from Engineer, any Work done by Contractor after the discovery of such a conflict, error or discrepancy, which is directly or indirectly affected by same, will be at Contractor's own risk and Contractor shall bear all cost arising therefrom. In resolving such conflicts, errors or discrepancies, the Contract Documents shall be given preference in the following order:

- 2.3.1 First, in accordance with the order of preference stated in the conflicting parts of the Contract Documents as provided by Article 4 of the Agreement;
- 2.3.2 In all cases, figured dimensions shall govern over scaled dimensions, but Work not dimensioned shall be as directed, and Work not particularly shown, identified, sized, or located shall be the same as similar parts that are shown or specified. Detail Drawings shall govern over general Drawings, larger scale Drawings take precedence over smaller scale Drawings, Change Order or Proposed Change Order Drawings govern over Contract Drawings, and approved Shop Drawings govern over Contract Drawings. Specifications shall govern as to products, execution and workmanship, and Drawings shall govern as to locations, dimensions, or quantities to be furnished. Further, in all cases where specifications, notes or details in two or more Specifications, or in two or more Drawings, conflict, the requirement calling for the larger quantities, or higher quality product or workmanship shall prevail and be binding on Contractor, unless otherwise directed by Engineer.

Amending and Supplementing Contract Documents:

- 2.4 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways as defined in Section 2, "Terms and Definitions."

- 2.4.1 An Administrative Agreement,
- 2.4.2 A Change Order (pursuant to Article 9), or
- 2.4.3 A Proposed Change Order signed by Department (pursuant to Article 9).

Contract Price and Contract Time may only be changed by a Change Order.

- 2.5 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, not involving an adjustment in Contract Price or Contract Time, in one or more of the following ways:

- 2.5.1 A Field Order (pursuant to Article 8.4),
- 2.5.2 Engineer's approval of a Shop Drawing or sample (pursuant to Article 5.23 thru 5.29), or
- 2.5.3 Engineer's written interpretation or clarification (pursuant to Article 8.3).

Reuse of Documents:

- 2.6 Neither Contractor nor any Subcontractor or Supplier or other person or organization shall have or acquire any title to or ownership rights in any of the Drawings, specifications or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Design Engineer; and they shall not reuse any of them on extensions of the Project or any other project without the written consent of Engineer or, and Department.

ARTICLE 3 - Availability of Lands; Physical Conditions; Reference Points

Availability of Lands:

- 3.1 As indicated in the Contract Documents, Department shall make available the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands as are designated for the use of Contractor. Easements or other authority for permanent structures or permanent changes in existing facilities will be obtained and paid for by Department, unless otherwise provided in the Contract Documents. If Contractor believes that any delay in Department's furnishing of these lands or easements entitles Contractor to an extension of the Contract Time, Contractor may make a request therefore as provided in Article 10 of the General Conditions. If Department and Contractor are unable to agree concerning such an extension, a claim may be made as provided in Articles 9, 10 and 11 of the General Conditions.
- 3.2 Any lands and easements for access not furnished by Department which Contractor deems necessary for the Work, including but not limited to requirements for temporary construction facilities, access and egress, or for storage of materials, shall be provided by Contractor at no increase in Contract Price nor extension in Contract Time. Contractor shall obtain all necessary permits and written approvals from the appropriate jurisdictional agencies and property owner(s) for use of premises not furnished by Department as described above, and for the use of all off-site areas needed for the Work including but not limited to off-site borrow pits, and waste and disposal areas. If permits and approvals do not specify the required treatment, if any, of said areas during and at the completion of the Work, the Progress Schedule must describe such treatment. Copies of all permits and approvals applicable to said areas shall be filed with the Engineer before utilization of any said areas. Contractor shall have sole responsibility for any property damage or personal injuries occasioned by an act or omission of Contractor in respect to all lands, and easements obtained pursuant to this paragraph.
- 3.3 Engineering survey horizontal and vertical control reference points for construction which are specified in the Contract Documents or which in Engineer's judgment are necessary to enable Contractor to proceed with the Work, will be provided by Department. Contractor shall be responsible for laying out the Work using such reference points, shall protect and preserve the established reference points; and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall notify Engineer in writing whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations; and shall be responsible for the accurate replacement or relocation of such reference points by a professionally qualified surveyor at Contractor's expense.

Physical Conditions and Existing Structures:

- 3.4 **Explorations and Reports:** Reference is made to the Supplementary Bidding Information and Requirements for identification of those reports of explorations and tests of conditions at the site that have been utilized by Design Engineer in preparation of the Contract Documents; and for identification of those drawings of physical conditions in or relating to existing surface structures (except Underground Facilities referred to in paragraphs 3.6 and 3.7) which are at or contiguous to the site that have been utilized by Design Engineer in preparation of the Contract Documents. Contractor may rely upon the accuracy of the technical data contained in such reports, as to the location where and at the point in time when data was obtained, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for Contractor's purposes. Except as indicated in the Bidding Information and Requirements Section and in paragraphs 3.11 and 3.12, Contractor shall have full responsibility with respect to subsurface conditions which Contractor could reasonably expect or foresee by reason of the technical data and Contractor's inspection of the site, and with respect to physical conditions in or relating to such surface structures.
- 3.5 Intentionally left blank.

Physical Conditions - Underground Facilities Shown or Indicated:

- 3.6 The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the Design Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
- 3.6.1 Department shall not be responsible for the accuracy or completeness of any such information or data; and,
- 3.6.2 Contractor shall have responsibility: a) for reviewing and checking all such information and data; b) for locating all Underground Facilities shown or indicated in the Contract Documents as to depth and alignment in advance of installations, backfilling or other work required by the Contract Documents; c) for coordination of the Work with the owners of such Underground Facilities during construction, d) for the safety and protection thereof, and e) for repairing any damage thereto resulting from the Work. The cost of and the time required to perform the responsibilities outlined in this paragraph will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the prescribed Contract Time(s) and Contractor shall not be entitled to additional payment therefor.
- 3.6.3 Contractor shall excavate and uncover all Underground Facilities to be crossed or paralleled by the proposed Work a sufficient time in advance to permit change in line and grade of the existing Underground Facility or the proposed Work if the location of the existing Underground Facility should interfere with the Work. Further, a reasonable interval of time, up to thirty days, will be allowed to Engineer and Department in order to resolve issues relating to Underground Facilities shown or indicated which are determined to interfere with the Work. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time unless otherwise agreed to in writing by Department. If more than thirty days is consumed in resolving such issues, no claim will be allowed unless: 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen days thereafter,

Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirement of Article 9, 10 and 11 of the General Conditions and the Standard Specifications.

- 3.6.4 Where it is necessary for the Work to be close to or between other underground facilities or structures for short distances, Contractor shall shore, block, and protect the other underground facilities or structures to the satisfaction of the utility agency, state agency, municipality or private owner having ownership or jurisdiction over said underground facilities or structures.
- 3.6.5 Access to various municipal structures shall not be obstructed by Contractor to prevent use of hydrants, valves, manholes, fire alarms, etc. Contractor is to make no connections to existing water mains, or operate valves on existing mains, or otherwise interfere with the operation of the existing water distribution system, without first giving written notice to the owners of such municipal structures and securing their written approval of the proposed action.

Underground Facilities Not Shown or Indicated:

- 3.7 If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall promptly after learning thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 5.22), identify the owner of such Underground Facility and give written notice of such uncovering to that owner and to Engineer and Department. Engineer and Department will promptly review the situation to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and take prompt action to amend the Contract Documents to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 5.20.
 - 3.7.1 Contractor shall schedule excavation and uncovering Work to begin a sufficient time in advance to allow Engineer's review and the possible amendment to the Contract Documents if unanticipated Underground Facilities are discovered as described in paragraph 3.7. Further, up to thirty days, will be allowed to Engineer and Department to resolve issues and problems related to a report of newly discovered Underground Facilities, not shown or indicated. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time and Contractor shall not be entitled to any additional payment therefor.
 - 3.7.2 No claim by Contractor under paragraph 3.7 of the General Conditions will be allowed unless more than thirty days has elapsed and 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

Report of Differing Site Conditions:

- 3.8 If Contractor believes that any subsurface or physical condition uncovered or revealed at the site renders materially inaccurate any information in the Contract Documents or technical data on which Contractor was entitled to rely as provided in paragraph 3.4 or 3.6, Contractor shall, immediately after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 5.22), notify Department and Engineer in writing about the inaccuracy or

difference to allow Department and Engineer to make any necessary changes to minimize the cost of the Work.

- 3.9 Engineer's and Department's Review: Engineer and Department will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto, and notify Contractor in writing of findings and conclusions. Immediately thereafter, Department shall perform or cause to be performed any necessary or appropriate additional investigations and tests with respect to the newly discovered conditions and furnish copies to Contractor.
- 3.10 Possible Document Change: If Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Proposed Change Order or a Change Order will be issued as provided in Article 9 to reflect and document the consequences of the inaccuracy or difference, provided Department has not exercised its right to suspend or terminate under Article 14 of Section 8, "General Conditions", Appendix B, or Article 12 of Section 6 "Agreement."
- 3.11 Possible Contract Adjustment: An increase or decrease in the cost of, or the time required to perform any part of the Work, whether or not affected by such differing conditions, and a corresponding adjustment in Contract Price or Contract Time in accordance with Articles 9, 10 and 11 of the General Conditions, or any combination thereof, may be allowable to the extent that they are attributable to any such inaccuracy or difference which Contractor could not reasonably have been expected to anticipate or be aware of. If Department and Contractor are unable to agree as to the adjustment in Contract Price or Contract Time, or if Engineer concludes that there is not a material error in the Contract Documents, or that the uncovered or revealed condition could reasonably have been anticipated by Contractor, and Contractor disagrees, a claim may be made therefor as provided in Articles 9, 10 and 11 of the General Conditions.
- 3.12 No claim by Contractor under paragraph 3.11 of the General Conditions will be allowed unless: 1) Contractor has given the written notice required in paragraph 3.8 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order substantiating in detail Contractor's proposed adjustments in accordance with the requirements of Articles 9, 10 and 11 of the General Conditions, and the Standard Specifications.
- 3.13 Responsibilities and Allowances: Contractor shall schedule excavation and uncovering of Work to begin a sufficient time in advance to allow Engineer's review as described in paragraph 3.9, and Department's issuance of a Change Order or a Proposed Change Order as described in paragraph 3.10 in connection with a report of differing conditions. Further, a reasonable interval of time, not less than thirty days will be allowed to Engineer and Department for those functions required to resolve any report of differing conditions. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time. If more than thirty days is used, no claim will be allowed unless (1) Contractor has given the written notice required in paragraph 3.8 of the General Conditions, and (2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

ARTICLE 4 - Bonds and Insurance

Performance and Other Bonds:

- 4.1 Contractor shall furnish performance, labor and material payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations

under the Contract Documents. These Bonds shall remain in effect until at least one year after the date when final payment is made, unless otherwise provided by Law or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall: a) be in the form prescribed by the Contract Documents; and b) be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and As Acceptable Reinsuring Companies" as published by the U.S. Treasury Department. Also the surety shall be licensed to do business in New York State. All Bonds signed by an agent must be accompanied by an original or a certified true copy of the agent's power of attorney. Contractor's failure to submit and keep in effect a Bond or form of financial security acceptable to Department in the manner required by this paragraph shall be cause for termination. Contractor shall give written notice to Department and reference the site number and project name, if the surety on any Bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to do business is involuntarily terminated by any state or federal agency, it ceases to meet the requirements of paragraph 4.1, Contractor, if required by Department, shall within fourteen days substitute another Bond or Surety, in an acceptable form of financial security. The top of all bonds shall have "NYSDEC-DER Site No."

If the provision of any bond requires that the surety be notified of any change in the Work, it shall be Contractor's responsibility to so notify the surety. Contractor shall furnish Department any modified bond.

Insurance - All Types:

4.2 Contractor shall purchase and maintain at its own expense the specific coverages and types of insurance set forth in this Article 4.2 through 4.3.3.

4.2.1 Contractor shall not commence or continue to perform any work unless and until Contractor has in full force and effect all required insurance, and until Contractor has submitted true copies of all endorsements (i.e., amendments) and a copy of the Certificate of Insurance attached herein to Department evidencing the specific insurance coverage required. No payment for work performed shall become due and payable unless current certificates and endorsements have been received.

4.2.2 Contractor shall not permit any Subcontractor, Supplier or other person or organization to perform Work unless the following insurance requirements at a minimum have been complied with by such Subcontractor, Supplier or other person or organization and proof of the issuance of all policies of insurance has been delivered to Contractor.

4.2.2.1 Comprehensive general liability insurance providing coverage as herein required of Contractor including Contractors' Protective Liability Insurance, Completed Operations Insurance, Products Liability Insurance and Contractual Liability Insurance. Insurance must be project specific or contain an endorsement (i.e., amendment) in writing (including print or stamp) added to and made part of the insurance contract for the purpose of changing the original terms such that the general aggregate limit applies separately to each of Contractor's projects away from premises owned by or rented to Contractor.

Commercial General liability insurance with a limit of not less than \$1,000,000 each occurrence. Such liability shall be written on the Insurance Service Office=s (ISO) liability arising from premises operations, independent contractors= operations, products-completed operations, broad form property damage, personal

and advertising injury, cross liability coverage, liability assumed in a contract (including tort liability of another assumed in a contract) and explosion, collapse and underground coverage.

X Products and Completed Operations Coverage shall include a provision that coverage will extend for a period of at least twelve (12) months after the date of final completion and acceptance by the Department of all of Contractor=s work.

4.2.2.2 Comprehensive Business automobile liability insurance with a limit of not less than \$1,000,000 with Department and Engineer listed as an additional insured.

4.2.2.3 Policy covering the obligations of the Contractor in accordance with the provisions of the Worker's Compensation Law, Employers Liability, and Disability Benefits This contract shall be void and of no effect unless the Contractor procures the Workers Compensation policy and maintains it until final acceptance of the work.

The only forms which are accepted as proof of Workers' Compensation and Disability Insurance are as follows:

<u>Form #</u>	<u>Form Title</u>
C-105.2	Certificate of Worker's Compensation Insurance
CE-200	Certificate of Attestation of Exemption – (no employees)
U-26.3	State Insurance Fund Version of the C-105.2 form
SI-12	Certificate of Worker's Compensation Self-Insurance
DB-120.1	Certificate of Disability Benefit Insurance
DB-155	Certificate of Disability Benefit Self-Insurance
GSI-105.2	Certificate of Participation in Worker's Group Comp Self-Insurance

An ACORD form is not acceptable proof of Worker's Compensation coverage All of the above referenced forms, except CE-200,SI-I2 & DB-155 must name: The New York State Department of Environmental Conservation, 625 Broadway, Albany, NY 12233, as the Entity Requesting Proof of Coverage (Entity being listed as the Certificate holder). Additional information can be obtained at the Worker's Compensation website:

<http://www.wcb.state.ny.us/content/main/Employers/Employers.jsp>

4.2.2.4 Owner's (Department's) and Contractor=s Protective Liability Insurance issued to and in the name of The People of the State of New York, the Department, and the Engineer with limits not less than \$1,000,000 per occurrence.

4.2.2.5 Pollution Liability Insurance: If the work involves abatement, removal, repair, replacement, enclosure, encapsulation and/or disposal of any hazardous material or substance, the Contractor shall maintain in full force and effect throughout the Term, pollution legal liability insurance with limits of not less than \$1,000,000, providing coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such policy shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants or in the investigation, settlement

or defense of any claim, suit, or proceedings against the State of New York and/or the Department and/or the Engineer, arising from Contractor=s work and list Department as an additional insured. Claims made policies shall have a one (1) year tail beyond the date Department determines physical completion.

X If coverage is written on claims-made policy, the Contractor warrants that any applicable retroactive date precedes the effective date of this Contract; and that continuous coverage will be maintained, or an extended discovery period exercised, for a period of not less than two years from the time work under this Contract is completed.

4.2.2.6 Errors and Omissions: If providing professional services, Contractor shall maintain, or if subcontracting professional services, shall certify that its subcontractor maintain errors and omissions liability insurance with a limit not less than \$1,000,000 per loss.

X Such insurance shall apply to professional errors, acts or omissions arising out of the scope of services covered by this contract and may not exclude bodily injury, property damage, pollution or asbestos related claims, testing, monitoring, measuring or laboratory analyses.

X If coverage is written on a claims-made policy, the Contractor warrants that any applicable retroactive date precedes the effective date of this contract; and that continuous coverage will be maintained, or an extended discovery period exercised for a period not less than two years from the time the work under this contract is completed.

4.2.3 Insurance shall be issued by carriers licensed to do business in New York State. Each insurance carrier must be rated at least AA-@ Class AVII@ in the most recently published Best=s Insurance Report. If during the term of the policy, a carrier=s rating falls below AA-@ Class VII, the insurance must be replaced no later than the renewal date of the policy, with an insurer acceptable to the Department and rated at least AA-@ Class VII in the referenced report.

4.2.4 Acceptance by Department of the insurance provided by Contractor shall not relieve Contractor from liabilities, obligations, responsibilities or decrease the liabilities of Contractor hereunder. It is understood that Department does not in any way represent that the insurance or the limits of insurance specified in the Article is sufficient or adequate to protect Contractor=s interests or liabilities, but are merely minima.

4.2.5 All insurance shall be maintained in full force and effect until the Contract has been fully and completely performed, as set forth in the Contract Documents. Completed operations insurance shall remain in effect until one year after the date of final acceptance of work under the contract, or one year after Contractor or any Subcontractor performs any work under the Contract, whichever is later. Should any coverage approach expiration during the period in which it must remain in full force and effect, it shall be renewed prior to its expiration , and a certificate again filed with Department. Also, any endorsements (i.e., amendments) which change insurance during the length of the contract shall also be submitted to Department for acceptance. All insurance policies shall require notice to Department 30 days prior to expiration, termination, or suspension of such policy, directed to the attention of Department. If any insurance provided hereunder contains an aggregate limit, the aggregate shall apply

separately to this contract and shall not be less than \$2,000,000. Expiration of any coverage shall be grounds for termination of contract for cause, at the option of Department. Department may suspend or terminate this contract unless Contractor maintains in full force and effect, the types and amounts of insurance required by this contract. No later than thirty (30) days prior to the expiration or renewal date of policy the Contractor should supply replacement certificates of insurance.

4.2.6 Contractor shall deliver, if requested by Department, duplicate originals of each policy required by Contract Documents, as well as insurance policies of Subcontractors, in such number as Department may require, and such alternate or additional proof of coverage as Department demands. Contractor shall provide prompt, written notice to the Department and its insurer, of any claims made related to work done hereunder, in accordance with the insurance policy provisions.

4.2.7 Nothing contained in these insurance requirements shall be construed to limit the liability of Contractor or Contractor's insurance carriers.

4.3 If required by the Supplementary Conditions or Law, Contractor shall purchase and maintain at its own expense insurance otherwise deemed necessary by Department with Department listed as an additional insured.

4.3.1 Where special or unusual hazards peculiar to this contract are foreseeable, Contractor shall take such steps as are necessary to insure itself against such hazards and be responsible for any damage, including water, which results from the occurrence of the hazards in connection with the performance of Work under the Contract.

4.3.2 Contractor shall purchase and maintain insurance which complies with the requirements of the Flood Disaster Protection Act.

4.3.3 Contractor shall maintain until the physical completion date builder's risk insurance on the Builder's Risk Completed Values Form with extended coverage, on the value of the work which shall be the contract amount. Whenever applicable, the Contractor's Interest Completed Value Form may be used. The extended coverage endorsement may include a loss deductible clause of \$100.00. Department shall be listed as an additional insured. The Builder's Risk policy shall include the following endorsement. "It is made a condition of this insurance that occupancy of the premises shall not require consent of the insurance company nor rate of adjustment."

ARTICLE 5 - Contractor's Responsibilities

Supervision and Superintendence:

5.1 Contractor shall supervise and direct the Work required by the contract competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be responsible for the means, methods, techniques, sequences and procedures of construction; except that Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work conforms with the Contract Documents.

- 5.2 Contractor shall keep on the Site of the Work at all times during its progress, a competent and reliable resident superintendent, who shall not be replaced without written approval of Department. The superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.
- 5.2.1 Department may require immediate replacement of the superintendent upon written notice for cause.
- 5.2.2 The superintendent and similar authorized representatives of any Subcontractors as requested by Department or Engineer shall attend all meetings pertaining to the Work.
- 5.2.3 Whenever the superintendent is not present for performance of a particular part of the Work and Engineer is not able to give to Contractor, through the superintendent, information relative to an interpretation of the Contract Documents, or relative to disapproval or rejection of materials or the performance of such work, Engineer may so inform the worker in charge of such Work. Information so given shall be binding as if given to superintendent.
- 5.2.4 Contractor shall issue all communications to Department through Engineer except as provided by Contract Documents. All written correspondence to Engineer shall be copied to Department.

Labor, Working Hours, Materials and Equipment:

- 5.3 Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall, at all times, employ labor and equipment which shall be sufficient to prosecute the several classes of work to full completion in the manner and time specified. All workers must have sufficient skill, experience and Health and Safety training required to perform properly the work assigned them. All workers engaged on special or skilled work shall have had sufficient experience in such work to perform properly and satisfactorily including operation of any equipment involved. Any person employed by Contractor or Subcontractor whom the Engineer or Department may determine incompetent or unfit to perform the work shall be at once discharged or reassigned and not again be employed on Work in connection with this Contract. The Contractor may request review by Department regarding the discharge of such employee(s). Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during normal working hours as defined in paragraph 5.3.1 below, and Contractor shall not permit overtime Work or the performance of Work during hours other than normal Working hours without: a) prior written notice to Engineer; b) Department's written consent; and c) written approval from the New York State Department of Labor as required by law.
- 5.3.1 Normal working hours shall be defined as a normal working schedule which a) does not exceed eight hours per working day, occurring between the hours set forth at the pre-construction conference, or if none are set forth, beginning no earlier than 7:00 a.m. and ending at no later than 5:00 p.m.; and b) does not exceed 40 hours per week, excluding overtime Work, Work on Saturdays, Sundays, and legal holidays (New Years, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas). Work during other than normal working hours may be scheduled by Contractor by first obtaining written permission from Department and as provided in Section 5.3. Department shall be entitled to recover extra costs incurred in providing

inspection related to Work done during other than normal working hours in accordance with paragraph 5.3.5 below.

5.3.2 If Contractor, for convenience, voluntarily chooses to schedule Work during hours other than normal working hours at no increase in Contract Price, Contractor shall submit details of such proposed schedule with the interim Progress Schedule described in paragraph 1.6 of the General Conditions. Any Progress Schedule calling for Work outside of normal working hours shall be reviewed for acceptance by Engineer and Department and must be in accordance with the requirements of the New York State Labor Law and Articles 1.6 and 5.3 of the General Conditions.

5.3.3 If at any time subsequent to the submission and approval of the Progress Schedule pursuant to the General Conditions and the Standard Specifications, an event or delay not meeting the requirements for extensions in Contract Time set forth in Articles 9, 10 and 11 of the General Conditions occurs, and requires Contractor to schedule Work during hours other than normal working hours for Contractor's convenience and at no increase in Contract Price, Contractor shall submit, at least ten working days in advance of the acceleration period, a proposed revised accelerated schedule for review by Engineer and Department. If Department accepts the revised accelerated Progress Schedule, Department will so notify Contractor in writing.

5.3.4 If the accelerated Progress Schedule pursuant to paragraph 5.3.2 or 5.3.3 is accepted by Department, Contractor shall reimburse Department for all extra costs incurred in providing inspection during hours other than normal working hours in accordance with paragraph 5.3.5 below. Acceptance by Department of the accelerated Progress Schedule shall not justify an increase in Contract Price; any increase in Contractor's cost to perform the Work, or any part thereof, whether or not affected by Contractor's initiated acceleration proposal, shall remain the responsibility of Contractor.

5.3.5 Contractor shall reimburse Department for the extra costs incurred in providing inspection during hours other than normal working hours when Department considers that the additional hours are due to Contractor's inefficiencies or delays. Reimbursement may include but may not be limited to costs for Engineer, Resident Project Representatives, administrative expenses and other related costs. Reimbursement for Engineer's charges shall be in amounts equal to Engineer's charges to Department for inspection during hours other than normal working hours under the terms of Engineer's agreement with Department. In the event Contractor fails to pay such costs within 30 days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amounts, and Department shall be entitled to an appropriate decrease in Contract Price.

5.3.6 Department may direct Contractor to accelerate if the progress of Work indicates Contractor may not be able to complete the contract within the contract terms. Contractor shall be responsible for all increased costs due to the acceleration.

5.4 Unless otherwise specified in the Contract Documents, Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, storage areas, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

5.4.1 All water for testing, flushing and construction shall be furnished by Contractor. If water is available from Department and Department agrees to its use, Contractor shall connect to

Department's water system at a point approved by Department. Department will charge Contractor for water used in performing the above functions in accordance with Department's established rate schedule. There shall be installed at each and every connection to any water supply: (a) a meter accepted by Department or Owner of water supply, and (b) a backflow preventer device accepted by the New York State Department of Health.

5.4.2 In the event that Contractor wishes to utilize water from Department's facilities as a substitute source of test water, Contractor shall submit sufficient information in accordance with paragraph 5.7.2 of the General Conditions to allow Engineer to evaluate the substitution. Additionally, such information shall include a description of the necessary equipment and temporary facilities needed to implement the substitute and an estimate of the costs savings anticipated. In the event that the substitution is accepted by Engineer pursuant to the requirements of paragraph 5.7.3 of the General Conditions and allowed by Department, and the supply of water is inadequate in quantity or quality, Contractor shall be responsible for obtaining other sources of test water at no increase in Contract Price or extension in Contract Time.

5.4.3 Contractor shall light the parts of the Work performed during working hours in the manner required by law and as required by Engineer or Department.

5.5 Except as otherwise provided in the Contract Documents, all materials shall be of good quality, good condition and new, and all equipment shall be new, or should be in good working order and of good quality. As required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents.

5.5.1 Contractor shall provide to Department for Department's benefit through Engineer all manufacturers' warranties for materials, and products incorporated into the Work, or required by the Contract Documents to be furnished by Contractor.

5.5.2 Contractor shall obtain from manufacturers of all materials and products complete information as to any special condition, or restriction to be applied in the use of these items. Should the manner or method of installation, specified performance or test results as set forth in the Specifications be contrary to the manufacturer's recommendations for installation and use of the product, the Contractor shall notify Engineer of same for appropriate action. Lack of such notification shall constitute a certification and guarantee by Contractor that Specification requirements will be met by such materials and products to be incorporated.

5.5.3 Contractor shall submit data on all products to be incorporated into the Work required by the Contract Documents, including but not limited to complete maintenance instructions (including preventive maintenance and operating requirement data) and parts lists in sufficient detail to facilitate ordering replacements, in accordance with the procedures set forth in the Special Supplementary Conditions, the Standard Specifications or the Supplementary Specifications.

Adjusting Progress Schedule:

5.6 Contractor shall report on the status of and any revisions to the Progress Schedule to Engineer and Department by delivering Progress Schedule status and update submittals to Engineer in accordance with the Specifications and Article 1.6 of the General Conditions. If Contractor does not adequately update the

Schedule, Department may reject Contractor's requests for payment, provided that Department gives Contractor 10 days written notice of its intention to do so.

"Or-Equal" or Substitute Items:

5.7.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, quality, performance and design criteria required. Unless the name is followed by words indicating that no "or equal" or substitution is permitted, materials or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by Engineer will include the following as supplemented in the Contract Documents. Requests for review of "or equal" or substitute items of material and equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use an "or equal" or substitute item of material or equipment, Contractor shall make written application to Engineer for acceptance thereof, certifying that the proposed "or equal" or substitute shall perform the functions and achieve the results called for by the general design, be similar and of equal substance and quality to that specified and be suited to the same use as that specified.

5.7.1.1 The application shall state that the evaluation and acceptance by Engineer of the proposed "or equal" or substitute shall not prejudice completion of the Work, or any part thereof, within the Contract Time, or contract times (including Contractor's achievement of Substantial Completion on time), whether or not acceptance of the "or equal" or substitute for use in the Work would require a change in the Work, or any part thereof, or would require the Department or others having a contract with Department for Work on the Project to adapt the Contract Documents to the proposed "or equal" or substitute; and whether or not incorporation or use of the "or equal" or substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed "or equal" or substitute from that specified shall be identified in the application and available maintenance, repair and replacement services shall be indicated. The application shall also contain an itemized estimate of all increases or decreases in the following costs: 1) the cost of, or the time required to perform any part of the Work, and the corresponding adjustments in Contract Price and Contract Time, resulting directly or indirectly from evaluation and acceptance of the proposed substitute, including, but not as a way of limitation, costs and delays associated with redesign, or claims of other contractors affected by the resulting "or equal" or substitute, and 2) increases or decreases in operating, maintenance, repair, replacement or spare part costs, all of which shall be considered by Engineer in evaluating the proposed "or equal" or substitute. In rendering a decision, Department and Engineer shall at a minimum, have access to any available Total Float in the approved Progress Schedule. Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed "or equal" or substitute.

5.7.2 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute only if first approved by Engineer. Contractor shall submit in writing sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for review by Engineer established by paragraph

5.7.1, and as may be supplemented in the Contract Documents, will apply to reviews under this paragraph.

- 5.7.3 Engineer shall be allowed a reasonable time as determined by Department within which to evaluate each proposed "or equal" or substitute. Engineer and Department shall be the sole judge of acceptability, and no "or equal" or substitute shall be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. Department may require Contractor to furnish at Contractor's expense a special performance guarantee or other financial security with respect to any substitute. Engineer will keep record of the time required by Engineer and Engineer's consultants in evaluating "or equals" or substitutions proposed by Contractor and in making changes in the Contract Documents occasioned thereby. Whether or not Engineer accepts an "or equal" or proposed substitute, Department shall be entitled to an offset against any payment due Contractor for the charges of Engineer and Engineer's consultants for evaluating each proposed "or equal" or substitute after the second submittal on such item. In the event that substitute materials or equipment are accepted and are less costly than the originally specified materials or equipment, then the net difference in cost shall benefit Department, and an appropriate Change Order or Proposed Change Order shall be executed to reflect the difference in cost. If Engineer or Department determine that the deduction proposed by Contractor does not reflect the net difference in cost, then this shall be adequate justification to reject the proposed substitute. Additional construction and/or engineering costs identified after Department's acceptance of the proposal and resulting from installation of an "or equal" or substitute shall be borne by Contractor.

Subcontractors, Suppliers and Others:

- 5.8.1 Contractor shall not employ nor award Work to Subcontractors in excess of the amount specified in Article 6 of the Supplementary Bidding Information and Requirements Section. Such percentage may be increased by an Administrative Agreement if, during performance of the Work, Contractor requests an increase and Department at its sole discretion determines that the increase would be to Department's advantage. Contractor shall submit to Department a statement stating the character and amount of the work to be subcontracted and the party to whom it is proposed to subcontract the work. Contractor shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, unless first approved by Department.
- 5.8.2 Wherever Work to be performed by Contractor or by a Subcontractor is dependent upon Work of other Subcontractor(s) or the work of separate contractor(s), then Contractor shall require such Subcontractor(s) whose Work is so dependent to:
- 5.8.2.1 Provide necessary notices of delay, data or other requirement(s) for performance of dependent Work or work of separate contractor(s),
 - 5.8.2.2 Supply and/or install items to be built into dependent Work or work of separate contractor(s),
 - 5.8.2.3 Make provisions for dependent Work or work of separate contractor(s),
 - 5.8.2.4 Examine previously placed dependent Work or work of separate contractor(s),

- 5.8.2.5 Check and verify dimensions of previously placed dependent Work or work of separate contractor(s),
- 5.8.2.6 Notify Engineer in writing immediately upon determining previously placed dependent Work or work of separate contractor(s), the dimensions of which are unsatisfactory or will prevent a satisfactory installation of Work,
- 5.8.2.7 Not proceed with Work until the unsatisfactory dependent conditions which prevent satisfactory installation of Work have been corrected.

Installation of Work by Contractor or by a Subcontractor in any given area shall constitute acceptance by Contractor or by such Subcontractor of all previously placed dependent Work or work of separate contractor(s) and after such acceptance Contractor shall not make any claims for additional costs based on alleged deficiencies in such Work.

- 5.8.3 Whenever other Contractors will perform portion(s) of the work that depend on the Contractor's portion of the Work; Contractor shall provide all of the notices and information listed in 5.8.2 to such other Contractors in a timely manner.
- 5.9 Contractor shall be responsible and liable to Department and Engineer for Contractor's acts and omissions and all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a contract with any level of Subcontractor or Supplier. Nothing in the Contract Documents shall create any contractual relationship between Department or Engineer and any such Subcontractor, Supplier or other person or organization. Department or Engineer may furnish to any Subcontractor or Supplier, to the extent practicable, evidence of the payments made to Contractor on account of specific Work done.
- 5.10 The various sections, divisions and subdivisions of the Standard and Supplementary Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. The Standard Specifications, Supplementary Specifications, and Drawings are complementary to each other and are to be read as a whole. Anything mentioned or shown in a division of such Specifications, or Drawings or in a specific trade Drawing shall be effective as if shown in all divisions of such Specifications and in all Drawings. In addition to the requirements of paragraphs 5.24 through 5.30 of the General Conditions, shop drawings of a specific trade shall be compared to and coordinated with those from other trades by Contractor before submission to Engineer.
- 5.11 All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Department.

Patent Fees and Royalties:

- 5.12 Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, device or intellectual processes which is the subject of patent rights or copyrights held by others, both when a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and otherwise. It is the intent of the parties that whenever Contractor is required or desires to use any design, device, material or process covered by letters, patent, trademark or copyright, the right for such use shall be provided for by suitable legal agreements with the patentee or owner, and a copy of this agreement shall be filed with Engineer. However, whether or not such

agreement is made or filed as noted, Contractor and Contractor's surety in all cases shall indemnify and hold harmless Department and Engineer and their employees as provided in Appendix B.

Permits:

- 5.13 Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for any permits or licenses required for performance of Work. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. Contractor shall pay all charges for connections or disconnections required by the Work to Underground Facilities or utilities owned by third parties.

Laws and Regulations:

- 5.14.1 Contractor shall comply with all Laws applicable to performance of the Work. Except where otherwise expressly required by applicable Laws or Contract Documents, neither Department nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws.
- 5.14.2 If Contractor observes that the Contract Documents are at variance with any applicable Laws, Contractor shall immediately give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods set forth in paragraph 2.4 and 2.5 of the General Conditions. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws, and without such notice to Engineer, Contractor shall bear all costs arising therefrom; however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws.

Taxes:

- 5.15 Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by Contractor in accordance with the Laws of the State of New York which are applicable during the performance of the Work. Materials, supplies and equipment incorporated into the Work or sold to New York State are exempt from New York State sales tax.

Use of Premises:

5.16 Contractor shall confine the use and storage of construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by applicable Laws, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Unless otherwise provided in the Contract Documents, use of Department's facilities at or contiguous to the site by Contractor for storage of materials or equipment shall not be permitted. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the acts or omissions of Contractor. Should any claim be made against Department or Engineer by any such owner or occupant because of the performance of the Work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the Claim. Contractor shall indemnify and hold Department harmless in accordance with the provisions of Appendix B.

- 5.16.1 Temporary buildings (e.g., storage sheds, trailers, shops, offices) and utilities may be erected by Contractor only with the approval of Engineer and shall be built without additional expense to Department. Such temporary buildings and utilities shall remain the property of Contractor and

shall be decontaminated as necessary and removed by Contractor at his expense upon completion of the Work; the buildings and utilities may be abandoned and remain at the site with the written consent of Department.

- 5.16.2 When materials are transported for performance of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by Federal, State, or local law or regulation. When it is necessary to cross curbs, sidewalks or work which is completed or underway on site, Contractor shall protect them from damage, and shall repair any damage caused.
- 5.16.3 Notwithstanding the designation of site boundaries or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain phases or portions of the Work may require that certain operations be carried out beyond the site boundaries. Trenching, utility Work, site development, landscaping, other Work, if required beyond such designated limits, shall be scheduled in such a manner as to cause or occasion a minimum of inconvenience or disturbance to or interference with the normal operation of Department, abutting owners and the public. Contractor shall obtain Department's prior approval and all necessary approvals from others, including but not limited to public authorities and utility companies for such operations, and shall conduct such operations expeditiously and restore the affected area to its original condition immediately upon completion of such operations, unless otherwise specified in the Contract Documents.
- 5.16.4 All existing walks, roadways, paved or landscaped areas on which temporary driveways or walks are rerouted shall be restored to their original condition, immediately upon completion of the phases or portions of the Work for which such features were disturbed unless otherwise specified in the Contract Documents.
- 5.16.5 Pumping, draining and control of surface and ground water will be carried out so as to avoid endangering the Work or any adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof, or exceeding the limits allowed by Contract Documents, or applicable Law.
- 5.17 During the progress of the Work, Contractor shall keep the Site free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Site clean and ready for Department. Contractor shall restore all pavement, sidewalks, driveways, fences, shrubs, lawns, trees and any other public or private property damaged as a result of the Work under this Contract. All such replacement shall be done in accordance with the applicable specifications and no separate or extra payment will be made unless specifically provided for in the Payment Items. In all cases, said replacement shall be at least equal to the original conditions.
- 5.18 Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

As-Built Documents:

- 5.19 Contractor shall maintain in a safe place at the Site one as-built document which shall consist of all Drawings, Specifications, Addenda, written amendments, Change Orders, Proposed Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications (issued

pursuant to paragraph 8.3) in good order and annotated to show all changes made during construction. Contractor will be required to review with Engineer the status of all as-built documents in connection with Engineer's evaluation of an Application for Payment. Pursuant to paragraph 13.2.1 of the General Conditions, failure to maintain a current file of such as-built documents up-to-date may be just cause to recommend withholding of payments for Work performed. These as-built documents together with all approved samples and a copy of all approved Shop Drawings shall be available to Engineer for reference at the Site. Upon completion of the Work, these as-built documents, samples and Shop Drawings shall be delivered to Engineer for Department. Failure by Contractor to produce acceptable as-built documents of the above listed items shall be cause for reduction of Contract Price in an amount equal to Department's cost of generating or producing the as-built documents.

Health, Safety and Protection:

- 5.20 Contractor shall be responsible for initiating, maintaining and supervising all health and safety precautions and programs in connection with the Work which include but are not limited by the Contract Documents and Contractor's Health and Safety Plan. Contractor shall take all necessary precautions for the health and safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees and other persons and organizations who may be affected thereby. Contractor shall comply with all applicable Laws of any public body having jurisdiction for the health and safety of persons or property in order to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such health, safety and protection. Contractor shall notify owners of Underground Facilities and utility owners when performance of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. In addition to any requirements imposed by Laws, Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site which are in any way affected by the excavations or other operations connected with performance of the Work under the Contract.
- 5.21 All damage, injury or loss to any property referred to in the above paragraph caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or caused by anyone for whose acts any of them may be liable, shall be remedied by Contractor; provided that Contractor shall not be responsible for damage or loss attributable to defects in the Drawings or Specifications or to the acts or omissions of Department or Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and to the extent not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a written notice to Department and Contractor in accordance with paragraph 13.11 that the Work is acceptable, except as otherwise expressly provided in connection with Substantial Completion. Department has the right to suspend Work or terminate this contract for cause for Contractor's failure to comply with any health and safety plan required by the Contract Documents or Law.
- 5.22 Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Department.

Emergencies:

- 5.23 In emergencies affecting or threatening to affect the safety or protection of persons or the Work or property at the site or adjacent thereto when prompt action is required and there is no reasonable opportunity for prior consultation with Engineer or Department, then Contractor, without special instruction or authorization from Engineer or Department, is obligated to act to prevent or mitigate threatened damage, injury or loss. Contractor shall give Engineer prompt telephonic notice followed by written notice thereof, including any significant changes in the Work or variations from the Contract Documents which Contractor believes have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, an Administrative Agreement, Field Order, Proposed Change Order or Change Order shall be issued to document the consequences of the changes or variations. Contractor shall give Engineer and Department name and number of contact for emergencies during non-Work hours.

Shop Drawings and Samples:

- 5.24 After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 1.4, hereof) six copies of all Shop Drawings plus additional copies as required by Contractor, unless otherwise specified in the Contract Documents. All such Shop Drawings shall bear a stamp or other specific written indication that Contractor has satisfied the requirements of the Contract Documents with respect to the review of the submissions including but not limited to subparagraph 5.25 below. All submissions shall be identified as Engineer may require. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable Engineer to review the information as required.
- 5.25 Contractor shall also submit to Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. Contractor shall check all samples, shall identify them clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended, and shall submit with them a written certification that Contractor has satisfied the requirements of the Contract Documents with respect to the review of such submissions including but not limited to subparagraph 5.25 below.
- 5.26 Before submission of each Shop Drawing or sample, Contractor shall certify that all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto have been reviewed or that each Shop Drawing or sample has been coordinated with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.
- 5.27 At the time of each such submission, Contractor shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation of each such variation to be made on each Shop Drawing submitted to Engineer for review and approval.
- 5.28 Engineer will review and approve or disapprove Shop Drawings and samples in 14 days. However, Engineer's review and approval of Shop Drawings will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to the accuracy of other matters that may be contained in the submittals, including but not limited to such matters as dimensions, quantities, performance of equipment and systems proposed by Contractor, Contractor's means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequences, and procedures of construction is indicated in or required by the Contract Documents) or to safety precautions or program incident thereto, the correctness

of which shall remain the sole responsibility of Contractor. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

- 5.28.1 When reviewed by Engineer, each submittal of Shop Drawings and samples will be returned to Contractor as either "Approved", "Approved as Noted", "Resubmit with Revisions", or "Disapproved." Submittals stamped as "Approved" or "Approved as Noted" will indicate Engineer's approval thereof, subject to the provisions of paragraph 5.28.
 - 5.28.2 Contractor shall revise and correct Shop Drawings and samples and resubmit them to Engineer for Engineer's second review and return pursuant to paragraph 5.29. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 - 5.28.3 Costs associated with Engineer's review and return of a Shop Drawing or sample submission other than ones submitted pursuant to paragraph 5.7 of this Section shall be borne by Contractor after the Engineer's second review. Department's charges to Contractor for additional reviews will be equal to Engineer's charges to Department under the terms of Engineer's agreement with Department. In the event Contractor fails to pay such costs within 30 days after receipt of an invoice from Department, funds will be withheld from payment requests and at the completion of the Work, a Change Order or proposed Change Order will be issued incorporating the unpaid amount, and Department will be entitled to an appropriate decrease in Contract Price.
 - 5.28.4 After the Engineer's second review, delays associated with Contractor's resubmittal and Engineer's review and return of a particular Shop Drawing or sample submission shall be the responsibility of Contractor. Such delays shall not justify an increase in Contract Price nor an extension in Contract Time.
- 5.29 Engineer's review and approval of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called Engineer's attention to each such variation at the time of submission as required by paragraph 5.27 and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by Engineer relieve Contractor from responsibility for errors or omissions in the Shop Drawings or from responsibility for complying with paragraph 5.26.
- 5.30 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

Continuing the Work:

- 5.31 Contractor shall carry on the Work and adhere to the Progress Schedule during all Claims or Disputes with Department. No work shall be delayed or postponed pending resolution of any Claims or Disputes, except as permitted by Article 14 of the General Conditions or as Contractor and Department may otherwise agree in writing.

Weather Protection:

- 5.32 Contractor shall be responsible for initiating, maintaining and supervising all weather protection precautions and programs in connection with the Work. Additional weather protection provisions, if applicable, are set forth in the Supplementary Conditions, Standard Specifications or Supplementary Specifications.

Cutting and Patching of Work:

- 5.33 Contractor shall be responsible for all cutting of masonry and other materials, and all fitting, drilling or patching which may be necessary to complete the Work or to make its several parts fit together properly, whether or not such Work is expressly specified in the Contract Documents.
- 5.34 Contractor shall not damage or endanger any portion of the Work or the work performed by Department or by any separate contractors by cutting, patching or otherwise altering any work, or by excavation. Contractor shall not cut or otherwise alter work performed by Department or any separate contractors except with the written consent of Department and of such separate contractor. Contractor shall not unreasonably withhold from Department or any separate contractor consent to cutting or otherwise altering the Work.

Quality Control:

- 5.35 Reference is made to the Supplementary Conditions, Standard Specifications and Supplementary Specifications for the identification of Contractor's quality control system requirements under the Contract.

Project Meetings:

- 5.36 Contractor, along with appropriate Subcontractors, suppliers and manufacturers, shall attend weekly project meetings at the site or as requested by Department or Engineer, for the purpose of discussing and resolving matters concerning the various elements of the Work.

Notification of Emergency Services:

- 5.37 Contractor shall notify all local Police, Fire Department and Ambulance Services at least twenty-four (24) hours in advance of construction across or adjacent to existing roadways in order that such services might be aware of any disrupted access.

Conflicts Between Contract Documents and Site:

- 5.38 Contractor shall notify Engineer and Department immediately upon discovering any conflicts, ambiguities, error or inconsistencies in the Contract Documents, between the Contract Documents and the actual Site Conditions, or between the Contract Documents and work being done by others. Failure to promptly notify the Engineer and Department may invalidate Contractor's request for an increase in Contract Price and/or Time.

ARTICLE 6 - Other Work

Related Work at Site:

- 6.1 Department may perform other work related to the Project at the site by Department's own forces, have other work performed by utility owners, or enter into other contracts for such other work.
- 6.2 Contractor shall afford each utility owner and other contractor who is a party to a direct contract with Department (or Department, if Department is performing the additional work with Department's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect the Work with theirs. Contractor shall do all the Work that may be required to make its several parts come together properly and integrate with other work. Contractor shall only alter the work of others with the written consent of Engineer and notice to the other contractors whose work will be affected, and shall not endanger any work of others by altering their work. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors.
- 6.3 If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor, utility owner or Department, Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure so to report shall constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

ARTICLE 7 - Department's Responsibilities

- 7.1 Department may issue communications to Contractor through Engineer.
- 7.2 In case of termination of the employment of Engineer, Department shall appoint an engineer whose status under the Contract Documents shall be the same as the former Engineer.
- 7.3 Department shall promptly furnish the data as required under the Contract Documents and shall make payments to Contractor promptly after they are due as provided in Article 13.
- 7.4 Department is represented by the Project Field Representative, the Project Manager and the Designated Representative whose duties and authority are set forth in the Contract Documents. Department is also represented by Engineer.
- 7.5 Department will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, unless the Contract Documents specifically impose such a duty on Department. Department will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 7.6 Department will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 8 - Engineer's Duties and Responsibilities

Project Representation:

- 8.1 The duties and responsibilities and the limitations of authority of Engineer during construction are set forth in the Contract Documents. Engineer's Resident Engineer will assist Engineer in inspecting the performance of the Work. The duties, and authorities of any Resident Engineer and Resident Project

Representatives are set forth in the Contract Documents. Secondly Department is represented as set forth in article 7.4 of the General Conditions.

Visits to Site:

- 8.2 Engineer shall make any on-site inspections necessary to check the quality or quantity of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. Engineer's duty to visit the site shall in no way be construed to relieve Contractor of its duty to perform the Work in conformance with the Contract Documents.

Clarifications and Interpretations:

- 8.3 Engineer or Department shall issue with reasonable promptness written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as Engineer or Department may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

Authorized Variations in Work:

- 8.4 Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on Contractor who shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an increase in Contract Price or an extension in Contract Time, Contractor shall be required to deliver a written notice thereof to Engineer in accordance with the provisions of Article 9 of the General Conditions. If Department and Contractor are unable to agree as to amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.

Rejecting Defective Work:

- 8.5 Engineer, based on its inspections, reports of its Resident Engineer, other information available to it and its professional experience and training, or the direction of Department, may disapprove or reject Work at any time during the construction of the Work, which Engineer believes to be Defective Work. Engineer shall also have authority to require special inspection or testing of the Work as provided in paragraphs 12.4 through 12.10 of the General Conditions, whether or not the Work is fabricated, installed, or completed. When Contractor has been notified by Engineer of disapproval or rejection of Defective Work, Contractor shall take immediate action to correct same at no additional cost.

Shop Drawings, Change Orders and Payments:

- 8.6 Engineer's responsibilities regarding Shop Drawings and samples, are set forth in paragraphs 5.24 through 5.30 of the General Conditions. If Contractor believes that Engineer's approval of a Shop Drawing or sample justifies an increase in Contract Price or an extension in Contract Time, Contractor shall be required to deliver a written notice thereof to Engineer in accordance with the provisions of Article 9 of the General Conditions. If Department and Contractor are unable to agree as to amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.
- 8.7 Engineer's duties regarding Change Orders are set forth in Articles 9, 10 and 11 of the General Conditions.

- 8.8 Engineer's duties regarding Applications for Payment, etc., are set forth in Article 13 of the General Conditions.

Determinations for Unit Prices:

- 8.9 Engineer will review and make preliminary determinations on the actual quantities and classifications of acceptable Unit Price Work performed by Contractor. Engineer will review such preliminary determinations with Contractor, before rendering a written decision thereon by recommendation of an Application for Payment or otherwise. Department shall review and approve Engineer's determinations. Department's decisions thereon shall be final unless within 10 days after the date of any such decision, Contractor delivers to Department and to Engineer written notice of disagreement with Engineer's Determination including written documentation supporting such position.

Engineer's Determinations and Claims:

- 8.10 Engineer shall interpret the Contract Documents and determine the acceptability of the Work thereunder subject to Department's right to modify or overrule Engineer's determination after consultation with Engineer and Contractor. Claims or other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work, or in respect to changes in the Contract Price or Contract Time will be referred to Engineer in writing with a request for a formal determination in accordance with this paragraph. Engineer shall render such determination in writing within a reasonable time. Written notice of Contractor's disagreement with Engineer's Determination constituting a Claim shall be delivered by Contractor to Engineer and Department within ten days after receipt. Written documentation supporting such position shall be submitted to Department within thirty days of Engineer's Determination, unless the Department allows an extension of time to submit additional information.
- 8.10.1 A written demand or written assertion by Contractor seeking the payment of money is not a Claim under this Article until certified as required below. Contractor shall submit with the claim a certification executed by Contractor's Authorized Representative specified in the Contract Documents that:
- 8.10.1.1 The Claim is made in good faith,
- 8.10.1.2 Supporting Cost and Pricing Data are current, accurate, and complete to the best of the Contractor's knowledge and belief, and
- 8.10.1.3 The amount of the Claim accurately reflects the adjustments in Contract Price or Contract Time for which Contractor believes Department is liable.
- 8.10.2 Contractor agrees that all unresolved claims shall be subject to the Dispute Resolution procedures as provided in Article 9 in Appendix B to the Agreement.
- 8.10.3 Contractor shall proceed diligently with performance of Work under this Contract, and comply with any decision of Engineer or Department pending final resolution of any request for relief, Claim, appeal, or action arising under the Contract.

Limitations on Engineer's Responsibilities:

- 8.11 Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "unreasonable," "unsuitable,"

"acceptable," "proper," or "satisfactory," or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12 or 8.13.

- 8.12 Engineer will not be responsible and Contractor remains responsible for Contractor's means, methods, techniques, sequences and procedures of construction, and the safety precautions and programs incident thereto, unless Contract Documents specifically impose such a duty on Engineer. Engineer will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 8.13 Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 9 - Changes in the Work

- 9.1 Department may, at any time or from time to time and without notice to any surety, order additions, deletions or revisions in the Work or other requirements, which the performance of, or compliance with, is established in the provisions of the Contract Documents. These changes will be initiated by Proposed Change Orders, in Administrative Orders and authorized by Change Orders. Upon receipt of an Administrative Order, or Proposed Change Order, the Contractor shall proceed with the Work involved. All such Work involved shall be performed in accordance with the applicable conditions of the Contract Documents. If an Administrative Order or Proposed Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made in a duly executed Change Order. The value of any work covered by a Proposed Change Order or a Change Order for an increase or decrease in the Contract Price or the Contract Time, hereafter called the "Work involved", shall be determined by one of the following methods:
- 9.2 Department may order minor changes in the Work which do not involve an adjustment in the Contract Price or in the Contract Time and are consistent with the overall intent and purpose of the Contract Documents. Such minor changes will be authorized by a Field Order which shall be binding on Department and Contractor who shall perform such changes promptly. If Contractor believes that a Field Order justifies an increase in the Contract Price or the Contract Time, Contractor shall make written notification in accordance with Section VIII, Article 8.10 within 3 days and provide documentation within 15 days in a Proposed Change Order to Engineer.
- 9.3 Additional work performed without authorization of a Proposed Change Order will not entitle Contractor to an increase in the Contract Price or an extension in the Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General Conditions and except in the case of uncovering Work as provided in paragraph 12.9 and 12.10 of the General Conditions.
- 9.4 When changes in the Work, involving adjustments to the Contract Price or Contract Time are contemplated by Department, pursuant to paragraph 9.1, Contractor may be requested to submit a cost proposal prior to being authorized to proceed with the change. If Department and Contractor are unable to agree and Department orders the change, or if Department pursuant to Engineer's review and decision concludes that the written direction, instruction, interpretation or clarification, approval, decision or determination does not require an increase in Contract Price or extension in Contract Time, Contractor will be required to carry on with the Work involved and adhere to the Progress Schedule. Contractor

proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three days of receipt (or issuance) of a Proposed Change Order initiated by Department (or Contractor), and shall be submitted in accordance with Articles 8, 9, 10 and 11 of the General Conditions. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price or Contract Time will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time. Unless Contractor gives written notice of intent to appeal Department's determination or to file a claim in accordance with Article 8 of the General Conditions, within said thirty days of the issuance of a Proposed Change Order or the rejection of a Proposed Change Order, Department's determination shall be final and binding upon Contractor.

9.5 Upon receipt of a cost proposal from Contractor, pursuant to paragraph 9.4 above, and if Department agrees with the increase or decrease in the Contract Price or Contract Time, Department shall authorize the change in the Work by issuing a Proposed Change Order and shall begin preparation of a Change Order covering the Work involved.

9.5.1 A Change Order shall also be any other written order, including direction, instruction, interpretation, determination, or decision embodied in a Field Order, or in a response to a request for clarification or interpretation of the requirements of the Contract Documents, or in an approval of a Shop Drawing or sample, or in a decision relating to a report or differing or unforeseen conditions or the acceptability of Work or Administrative Order which causes any change, provided that Contractor gives Engineer and Department a dated written notice identifying the written order and stating circumstances and other information required in this Article and in Articles 8, 9, 10 and 11 of the General Conditions indicating that Contractor considers the written order a Proposed Change Order.

9.5.2 Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents to which Contractor is entitled as a result of the proposed change. Pursuant to this requirement of the Contract Documents, Contractor acknowledges and agrees to the following waivers when executing Change Orders or Proposed Change Orders authorized in accordance with paragraph 9.4 of the General Conditions:

9.5.2.1 Contractor acknowledges and agrees that the adjustments in Contract Price and Contract Time stipulated in this Change Order represent full compensation for all increases or decreases in the cost of, or the time required to perform the entire Work under the Contract, arising directly or indirectly from this Change Order, including this and all previous Change Orders. Acceptance of this waiver constitutes an agreement between Department and Contractor that the Change Order represents an all inclusive, mutually agreed upon adjustment to the Contract for all direct, indirect and consequential costs and delays, and that Contractor shall waive all rights to file a claim on this Proposed Change Order after it is properly executed.

9.5.2.2 Acceptance by Contractor is evidence of mutual accord and satisfaction for those adjustments in Contract Price and Contract Time stipulated in this Proposed Change Order, that Contractor shall submit detailed supporting data within fifteen days in accordance with Articles 10 and 11 of the General Conditions to allow negotiation of outstanding issues, and that the changes ordered and documented by this Proposed Change Order will be incorporated into a future Change Order subsequent to agreement on all outstanding issues.

- 9.6 If the provision of any bond requires that the surety be notified of any change in the Work, it shall be Contractor's responsibility to so notify the surety and the amount of each applicable bond shall be adjusted accordingly. Contractor shall furnish proof to Department of such adjustment.
- 9.7 No claim by Contractor for an adjustment under this Article of the General Conditions shall be allowed if asserted after the date of final payment under this Contract.

ARTICLE 10 - Change of Contract Price or Time

- 10.1 The Contract Price constitutes the total compensation, subject to authorized adjustments, payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at its own expense without any change in the Contract Price or the Contract Time.
- 10.2 The Contract Price and the Contract Time may only be changed by a duly executed Change Order.
- 10.3 The value of the Work involved shall be determined by one of the following methods:
- 10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, those unit prices shall be used to determine the cost of the Work involved.
 - 10.3.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by application of mutually agreed upon unit prices to the quantities of the items of Work involved.
 - 10.3.3 By mutual acceptance of a lump sum.
 - 10.3.4 On the basis of the cost of the Work involved as provided in paragraph 10.4 of this Article plus a Contractor's fee for overhead and profit as provided in paragraph 10.7 of this Article.
 - 10.3.5 Where the Department and Contractor cannot agree on any of the methods described above, and Department directs Contractor to proceed with the Work involved as provided in Article 10 of the General Conditions.
- 10.4 The Cost of the Work involved shall include the following items and shall not include any of the costs disallowed under this Article 10 of the General Conditions:
- 10.4.1 Payroll costs of employees in the direct employ of the Contractor in the performance of the Work involved in job classifications agreed upon by Department and Contractor. Payroll costs shall include, but shall not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers or workmen's compensation, health and retirement benefits, and sick leave applicable thereto. Such employees may include foremen at the site but shall not include employees in the job classifications itemized in paragraphs 10.6.1. The costs of performing the Work involved during other than normal working hours, as defined in paragraph 5.3.1, shall be included in the above to the extent authorized by Department and as required by Law.
 - 10.4.2 Cost of all materials and equipment furnished and incorporated into the Work involved, including costs of transportation and storage thereof, and suppliers' field services connected therewith. All cash discounts shall accrue to Contractor unless Department deposits funds with Contractor with which to make payments, in which case, the cash discounts shall accrue to

Department. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to Department, and Contractor shall make provisions so that they may be obtained.

- 10.4.3 Payments made by Contractor to subcontractors who perform a part of the Work involved. If required by Department, Contractor shall obtain competitive bids from prospective subcontractors acceptable to Contractor and shall deliver such bids to Department who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost plus a fee, the subcontractor's cost shall be determined in the same manner as Contractor's cost of the Work involved. All subcontracts shall be subject to the provisions of the Contract Documents, insofar as applicable.
- 10.4.4 Costs of special consultants, including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants, employed for services specifically related to the Work involved to the extent authorized in writing by Department.
- 10.4.5 Costs of Contractor owned equipment - Contractor shall be reimbursed for his ownership and operating costs for self owned equipment employed on the Work involved. The rates of reimbursement shall be as listed in most recent published edition of the Rental Rate Blue Book published by Dataquest, Inc. in effect on the date of issuance of the applicable Change Order or Proposed Change Order, or prior to performing the Work in a claim for an increase or decrease in the Contract Price and applied in the following manner.
 - 10.4.5.1 Ownership costs - The equipment rates for ownership costs include depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, repairs, mobilization to and demobilization from the site of the Work involved, and profit reimbursement will be made for the hours on the Work involved. In no event shall the equipment rate billed to Department be at rates exceeding those described below.
 - 10.4.5.2 Less than 8 hours of actual use or necessary for availability as approved by Engineer: The daily rate or the product of the hours of actual use multiplied by the hourly rate, whichever is less.
 - 10.4.5.3 Between 8 hours and 40 hours of actual use: The weekly rate or the product of the hours of actual use used divided by 8 and multiplied by the daily rate, whichever is less.
 - 10.4.5.4 Between 40 hours and 176 hours of actual use: The monthly rate or the product of the hours of actual use divided by 40 multiplied by the weekly rate, whichever is less.
 - 10.4.5.5 Over 176 hours of actual use: The product of the hours of actual use divided by 176 multiplied by the monthly rate.
 - 10.4.5.6 Operating costs including fuel, lubricants, other operating expendables, and preventive and field maintenance. Operating costs do not include the operator's wages. Contractor shall be reimbursed the product of the hours of actual use multiplied by the estimated operating cost per hour.

- 10.4.5.7 The geographic area adjustment factor and the Rate adjustment tables for federal aid projects shall be applied to the equipment ownership rates.
 - 10.4.5.8 The rates used shall be those in effect at the time the Work involved is to be done as listed in the then current Rental Rate Blue Book.
 - 10.4.5.9 In the event that a rate is not established in the Rental Rate Blue Book for a particular piece of equipment, Department will establish rates for ownership and operating costs.
 - 10.4.5.10 Equipment to be used by Contractor shall be specifically described by manufacturer and model number and be of suitable size and capacity to accomplish the Work involved. In the event Contractor elects to use equipment of a higher rental rate than equipment suitable for the Work involved, payment will be made at the rate applicable to the suitable equipment. Department and Engineer shall determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversized or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment.
 - 10.4.5.11 Transportation, loading and unloading, installation, dismantling and removal costs shall be included only if such construction equipment and machinery is imported to the site solely to perform the Work involved in the Change Order Proposed Change Order, or Claim. All equipment costs shall cease when the use thereof is no longer necessary to perform the Work involved or the equipment cannot be used to perform the Work involved due to contractor actions or inactions. Payroll costs for employees operating the equipment shall be in accordance with paragraph 10.4.1 of the General Conditions.
 - 10.4.5.12 Actual equipment use time documented by Engineer shall be on the basis that the equipment was on and used at the site. In addition to the leasing rate, equipment operational costs shall not exceed the estimated hourly operation rate as set forth in the Blue Book. Daily records listing the equipment units and their respective operators, identification code, and actual usage and certified at the end of each day by Engineer shall be the record upon which actual equipment use shall be based. For multiple shift work sequences the allowable equipment rate for second or third shifts shall not exceed 50 percent of the base rate. Idle equipment at the site and necessary to perform the Work involved but not in actual use shall be paid at the rate determined above. Idle time shall include a reasonable time allowance to and from the site, and be as documented by Engineer.
- 10.4.6 Costs of Contractor rented equipment.
- 10.4.6.1 In the event Contractor must rent a specific piece of equipment, payment will be the actual rental rate for the piece of equipment for the time that is is used on the Work involved or required by Department to be present, not to exceed the rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the site of the Work involved.
 - 10.4.6.2 Contractor shall also be reimbursed for the operating cost of the rented equipment if that cost is not included in the rental cost. The operating cost shall be determined in the same manner as specified for Contractor owned equipment above. If

contractor owned equipment is available on site to complete the work, Contractor shall be reimbursed only at the rate for owned equipment and there shall not be any reimbursement for transportation of equipment to or from site.

10.4.6.3 In the event area practice dictates the rental of fully manned or fueled and maintained equipment, payment will be made on the basis of an invoice for the rental of the fully manned, fueled and/or maintained equipment, including all costs incidental to its use, plus costs of moving to and from the site of the Work involved, provided the rate is substantiated by area practice.

10.4.6.4 Transportation, loading and unloading, installation, dismantling and removal costs shall be included only if such construction equipment and machinery is imported to the site solely to perform the Work involved in the Change Order, Proposed Change Order, or Claim. All equipment costs shall cease when the use thereof is no longer necessary to perform the Work involved or the equipment cannot be used to perform the Work involved due to Contractor actions or inactions. Payroll costs for employees operating the equipment shall be in accordance with paragraph 10.4.1 of the General Conditions.

10.4.7 The maximum amount of reimbursement for the ownership costs of Contractor owned equipment or for the rental costs of rented equipment shall be limited to the original purchase price of the equipment as listed in the Green Guide for Construction Equipment published by the Equipment Guide Book Company. In the specific event where the reimbursement is limited by the original purchase price, Contractor shall be reimbursed for the operating cost per hour for each hour of actual use.

10.4.8 Supplemental costs due solely in connection with the Work involved to include the following:

10.4.8.1 The necessary transportation, travel and subsistence expenses of Contractor's employees who are solely employed in the Work involved.

10.4.8.2 Costs, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site required, but excluding hand tools, protective clothing and other consumables which are used or consumed in connection with the Work involved and are individually valued at less than \$100.00.

10.4.8.3 Sales, consumer use, or similar taxes for which Contractor is liable, exclusive of New York State and local sales taxes for materials, supplies and equipment incorporated into the Work.

10.4.8.4 Royalty payments and fees for licenses and permits.

10.4.8.5 Costs of utilities at the site including but not limited to electricity, telephone, fuel, heat, water, property rental and sanitary facilities.

10.5 The amount of credit to be allowed by Contractor to Department for any individual change in the Work which results in a net decrease in cost shall be the amount of the actual net decrease plus a deduction in Contractor's fee equal to one half of the fee derived from the application of paragraphs 10.7.2.1, 10.7.2.2 and 10.7.2.3 of this Article.

- 10.5.1 When more than one individual change is covered by one Proposed Change Order or Change Order, the adjustment in Contractor's fee shall be the sum of the individual fees computed on each individual change in accordance with paragraphs 10.7.2.1 through 10.7.2.4.
- 10.6 The cost of the Work involved shall not include any of the following, all of which are to be considered general and overhead costs covered by the Contractor's fee:
- 10.6.1 Payroll costs and other compensation of Contractor's executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, superintendents, administrators, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor, at the site or not, for general administration of the Work including any Change Orders, and who are not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 of this Article.
- 10.6.2 Expenses of Contractor's principal and branch offices other than Contractor's office at the site. Costs derived from the computation of an extended or unabsorbed home office overhead rate by application of the Eichleay, Allegheny, Burden Fluctuation, or other similar methods.
- 10.6.3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work involved and charges against Contractor for delinquent payments.
- 10.6.4 Cost of premiums for all bonds and insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same.
- 10.6.5 Costs incurred in the preparation of Proposed Change Orders or Change Orders or in preparation or filing of claims.
- 10.6.6 Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings or unpaid retainage.
- 10.6.7 Small tools used or consumed in the performance of the Work involved having an individual value of less than \$100.
- 10.6.8 Costs due to negligence of Contractor or any subcontractor anyone directly or indirectly employed by them for whose acts any of them may be liable, including, but not limited to correction of defective work, disposal of equipment or material wrongly supplied and repairing any damage to property.
- 10.6.9 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4 of this Article, all of which are to be considered general and overhead costs covered by the Contractor's fee.

Contractor's Fee:

- 10.7 The Contractor's fee for general and administrative overhead costs (whether at the site or in Contractor's principal or branch offices), small tools and profit on the Work involved shall be determined by negotiations in accordance with this paragraph.

- 10.7.1 Contractor shall negotiate with Department for reasonable overhead rates and fair and reasonable profit based on assumptions of risk, exposure to weather, size of the change, labor to material ratio, equipment requirements, and time of performance.
- 10.7.2 In no case shall the Contractor's fee exceed the following percentages of the various percentages of the Cost of the Work involved.
 - 10.7.2.1 For costs incurred under paragraph 10.4.1 (Payroll Costs) of this Article, the Contractor's fee shall not exceed fifteen percent (15%).
 - 10.7.2.2 For costs incurred under paragraph 10.4.2 (Costs of Materials and Equipment) of this Article, the Contractor's fee shall not exceed ten percent (10%).
 - 10.7.2.3 For costs incurred under paragraph 10.4.3 (Cost of Subcontracts) of this Article, the Contractor's fee shall not exceed five percent (5%) and the subcontractor's fee shall not exceed ten percent (10%).
 - 10.7.2.4 For costs incurred under paragraph 10.4.3 of this Article, for work performed by a subcontractor's subcontractor, the Contractor's and the first subcontractor's fees shall not exceed five percent (5%) each and the second subcontractor's fee shall not exceed ten percent (10%).
 - 10.7.2.5 No fee shall be paid on the costs itemized under paragraphs 10.4.4 and 10.4.5 nor on subcontractors' fees derived in accordance with paragraphs 10.7.2.3 and 10.7.2.4.
- 10.7.3 No fee shall be paid on premium portion of wages nor on increased wages due to delays.

10.8 Changes in the Contract Price due to changes in the Contract Time.

- 10.8.1 An increase in the Contract Price due solely to delays causing extensions in the Contract Time will be allowed only if the delays to the Work, or parts thereof, arise from acts or omissions of Department or Engineer which are longer than the time period(s) provided for review(s) or decision(s) as provided for in the Contract Documents, and provided further that the delays arise from changes in the Work covered by Proposed Change Orders or Change Orders prepared pursuant to Article 9 of the General Conditions or from suspensions of Work pursuant to paragraph 14.1 of the General Conditions. However no adjustment in the Contract Price shall be made under this paragraph for the following reasons:
 - 10.8.1.1 For any extensions granted in the Contract Time to the extent that performance would have been so extended by any other cause including fault or negligence of Contractor or subcontractors, suppliers or other persons or organizations.
 - 10.8.1.2 For any acceleration alternative in lieu of an extension proposed by Contractor, to the extent that the acceleration costs exceed those in connection with the alternative extension in Contract Time.
 - 10.8.1.3 For which a Contract Price is provided or excluded under any other provision of the Contract Documents.

- 10.8.1.4 For delays which are covered by or which could be covered by relocating the Total Float or a portion of it.
- 10.8.2 Recovery of damages for delay on account of extensions in Contractor's Progress Schedule or in connection with acceleration alternatives thereof will be allowed only when said delays extend the Work, or a part thereof, beyond the applicable Contract Time(s).
- 10.8.3 It is further expressly agreed and understood that Contractor will not be entitled to any compensation or damages on account of delays which meet the requirements of paragraph 10.12.3 of the General Conditions for time extensions but which can or could have been avoided by reallocating portions of the Total Float. Under this requirement, it is further understood and agreed that the only remedies for delays which are figured to cause an extension in the Contract Time or form the basis for a proposal for an acceleration alternative thereof solely due to the use of Total Float will consist of an increase in Contract Time only and shall exclude Contractor's right to recover any delay damages or compensation from Department.
- 10.9 In submitting proposals or asserting claims for changes under this Article, Contractor acknowledges and agrees that no adjustment shall be made: 1) for any escalation costs for any part of the Work which is not delayed beyond the applicable latest possible dates specified in the approved Progress Schedule, or 2) for any acceleration costs incurred without prior authorization from Department, or 3) for which an adjustment has been provided for, limited as to extent, or excluded under any other provision of the Contract Documents.
- 10.10 Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents (direct, indirect and overhead) to which Contractor is entitled as a result of the proposed change. Pursuant to this requirement, Contractor acknowledges and agrees to the following waivers when executing Proposed Change Orders and Change Orders authorized in accordance with Article 9:
 - 10.10.1 Contractor acknowledges and agrees that the adjustments in Contract Price and Contract Time stipulated in the Change Order represent full compensation for all increases or decreases in the cost of, or the time required to perform, the entire Work under the Contract arising directly or indirectly from the Change Order. Acceptance of this waiver constitutes an agreement between Contractor and Department that the Change Order represents an all inclusive, mutually agreed upon, adjustment to the Contract for all direct, indirect and consequential costs and delays, and that Contractor will waive all rights to file a claim on the Change Order after it is duly executed.
 - 10.10.2 Acceptance by Contractor is evidence of mutual accord and satisfaction for those adjustments in the Contract Price and Contract Time stipulated in the Proposed Change Order, that Contractor will submit detailed supporting data within fifteen days in accordance with Articles 10 and 11 of the General Conditions to allow negotiation of outstanding issues, and that the changes ordered and documented by the Proposed Change Order will be incorporated into a future Change Order subsequent to agreement on all outstanding issues.
- 10.11 Additional costs incurred due to acceleration or additional work performed by Contractor without an agreed upon Proposed Change Order will not entitle Contractor to an increase in Contract Price or Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General Conditions or in the case of uncovering Work as provided in paragraph 12.9 of the General Conditions.

- 10.12 The Contract Time may be changed only by a duly executed Change order. Any proposal for an extension or shortening of the Contract Time shall be based on a Proposed Change Order in accordance with the provisions of this Article.
- 10.12.1 Contractor requests substantiating the extent of increase in the Contract Time shall be delivered to Engineer within fifteen days of the event causing the proposed need for the extension in the Contract Time unless Department, in writing, allows an additional period of time. Contractor shall prove that the delays have materialized or will materialize despite reasonable, prudent, and diligent efforts to prevent such delays and meet the criteria set forth in this Article. Any delays by Contractor in submittal of proposals will not justify a delay or be basis for an extension of the Contract Time.
- 10.12.2 Extensions in Contract Time due to delays to parts of the Work will not be granted until all Total Float available for those parts of the Work has been used.
- 10.12.3 An extension in the Contract Time will not be granted unless Contractor can demonstrate, through an analysis of the Progress Schedule approved in accordance with the applicable provisions of the Standard Specifications, that the delay in completing the applicable parts of the Work within the applicable Contract Time(s) arises from unforeseeable causes beyond the control and without the fault or negligence of Contractor or its Subcontractors, Suppliers or other persons or organizations, and which Contractor could not have guarded against, and that such causes do or will cause extension of the schedule for that part of the Work beyond the applicable Contract Time. Examples of such causes include 1) acts of God or of the public enemy, 2) fires, floods, epidemics, quarantine restrictions, 3) strikes, freight embargoes, 4) unusually severe weather, 5) delays of Subcontractors or Suppliers at any tier arising from unforeseeable causes beyond the control and without fault or negligence of both Contractor and the Subcontractors, Suppliers or other persons organizations.
- 10.12.4 All time limits stated in the Contract Documents are of the essence. They have been developed by taking into account:
- 10.12.4.1 The scope of the Work under the Contract Documents;
- 10.12.4.2 Reasonable time for performance of the Work, or parts thereof, as a whole; and
- 10.12.4.3 The perceived sensitivity of the Work, or parts thereof, as a whole, to the potential delaying effect of causes meeting the requirements of paragraph 10.12.3.
- 10.12.4.4 Therefore, and as long as delays meeting the requirements of paragraph 10.12.3 are not to be considered by Contractor in the initial development of the Progress Schedule pursuant to paragraph 1.6 of the General Conditions and the Progress Schedule Section of the Standard Specifications, the initial Progress Schedule developed by Contractor could show Total Float with respect to the Contract Time, or contract Times. Pursuant to the Float sharing requirements of the Contract Documents (as set forth in the provisions of Progress Schedule Section of the Standard Specifications) any such Total Float materializing between Contractor's completion of the Work, or part thereof, as anticipated by Contractor's approved progress Schedule, and the corresponding Contract Time(s) will be available to Department, Engineer, Contractor and others to absorb delays that cannot be mitigated by any other means.

- 10.12.5 The provisions of Section 10.11 of this Article shall govern and be applicable to the following:
- 10.12.5.1 Changes in Contract Time initiated by Department or Contractor due to delays which meet the requirements of paragraph 10.12.4.
 - 10.12.5.2 Contractor proposals to accelerate the Progress Schedule, in lieu of the alternate extension of Contract Time, due to delays meeting the requirements of paragraph 10.12.3.
- 10.12.6 The provisions of paragraphs 10.11, 10.12.2, and 10.12.3 shall exclude recovery for damages arising out of an acceleration alternative to an extension in Contract Time on account of delays not meeting the requirements for extensions in Contract Time set forth in this Article.
- 10.12.7 The provisions of this Article 10 shall not exclude recovery for damages (including compensation for additional professional services and court costs) for delay by either party, except as otherwise specifically disallowed in this Article and in other provisions of the Contract Documents.
- 10.13 Failure, refusal or neglect by Contractor to comply with the time requirements for delivery of written Proposed Change Orders or notice of a claim shall be considered to be a waiver by Contractor of any request or claiming for extension in Contract Time.
- 10.13.1 Contractor proposals (or claims) substantiating Contractor's proposed adjustment in Contract Price shall be delivered within the time period stipulated in paragraph 9.3 and 9.4, unless Department in writing, allows an additional period of time to ascertain accurate cost data. Contractor shall prove that additional costs were necessarily incurred, despite Contractor's reasonable, prudent, and diligent efforts to prevent such costs and which meet the criteria set forth in this Article. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time.
 - 10.13.2 Contractor proposals (or claims) shall be submitted on forms required by Contract Documents, and shall remain firm for a period of at least 60 days from delivery of the proposal (or claim). Proposals (or claims) shall include itemized estimates of all costs and schedule adjustments that will result directly or indirectly from the changes described. Unless otherwise specified, itemized estimates shall be in accordance with the requirements of this Article of the General Conditions and in sufficient detail to reasonably permit an analysis by Engineer and Department of all quantities involved, labor and payroll costs, productivity rates, material costs, Subcontractor and Supplier costs, supplemental costs as described in paragraph 10.4.8, special consultant costs as described in paragraph 10.4.4, equipment costs, general and administrative overhead costs, field office overhead costs, and profit and shall cover all aspects of the Work involved in the change, whether such was deleted, added, changed, or impacted. Any amount claimed for Subcontractors, Suppliers or other persons or organizations shall be similarly supported. Itemized schedule adjustments shall be sufficiently detailed to permit an analysis of effects on the Progress Schedule as required in the Standard Specifications.

ARTICLE 11 - Unit Price Work and Cash Allowances

Cash Allowances:

- 11.1 Contractor shall include in the Contract Price all cash allowances named in the Contract Documents and all Work covered by those cash allowances shall be performed for an amount not to exceed those allowances without prior approval in writing by Engineer.
 - 11.1.1 The allowances include the cost to Contractor (less any applicable trade discounts) of materials labor and equipment required by the allowances to be delivered at the site, and all applicable taxes; and the cost documentation requirements of Articles 9, 10, 11 apply to cash allowances.
 - 11.1.2 Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

- 11.2 Where the Contract Documents provide that all or part of the Work to be performed on the basis of Unit Prices, the following shall apply:
 - 11.2.1 The original Contract Price shall include the sum of the bid unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated on the Contract Bid Form.
 - 11.2.2 Unless otherwise provided by the Contract Documents, the estimated quantities of Unit Price Work are not guaranteed and are solely for the purpose of comparing Bids and determining the initial Contract Price.
 - 11.2.3 Engineer shall determine the actual quantities and classifications of Unit Price Work performed by Contractor and will review with Contractor preliminary determinations before recommending an Application for Payment for those items.
 - 11.2.4 Contractor shall have included overhead and profit in the price of each separately stated unit price item bid.
 - 11.2.5 The Unit price of an item of Unit Price Work shall be subject to re-evaluation, negotiation, and possible adjustment under the following conditions:
 - 11.2.5.1 If the total cost of a particular item of Unit Price Work change by \$30,000 or 5% or more of the total Contract Price, whichever is less, and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 15% from the estimated quantity of such item indicated in the Agreement; and
 - 11.2.5.2 If Contractor justifies and adequately documents to the Department's satisfaction additional expenses have been incurred as a result thereof, or
 - 11.2.5.3 If Department believes that the quantity variation entitles Department to an adjustment in the Unit Price,

Either Department or Contractor may make a request for an adjustment in the Contract Price in accordance with the Contract Documents. If the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed, a claim may be made.

- 11.2.6 The negotiated Unit Price shall be applicable only to the variation in quantities above 115% or below 85% of the quantities estimated or indicated.
- 11.2.7 If Department or Contractor believes that the quantity variation requires an extension or shortening in Contract Time, either party shall within seven working days of knowledge of the variation in quantities, submit a written Proposed Change Order to the other party and to Engineer, and substantiate the request within fifteen days thereafter in accordance with the analysis and documentation provisions of the Standard and Supplementary Specifications.

ARTICLE 12 - Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work

Warranty and Guarantee:

- 12.1 Contractor warrants and guarantees to Department that all Work shall be in accordance with the Contract Documents and shall not be defective. Immediate notice of all defects shall be given to Contractor by Engineer. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.
 - 12.1.1 The obligations of Contractor under this paragraph 12.1 shall be in addition to and not in limitation of any obligation imposed upon it by special guarantees required by the Contract Documents or by Law.
 - 12.1.2 Notwithstanding anything in these Contract Documents to the contrary, when a particular item of equipment or part of the Work reaches Substantial Completion upon successful performance of Pre-operational Testing, and a) is not placed in continuous service until the commencement of the Correction Period, or b) is placed in continuous service upon reaching Substantial Completion (as a segment of a completed Project) but use will be limited until all segments of the Project reach substantial completion thereby commencing the Correction Period, and notwithstanding anything in the Contract Documents to the contrary, Contractor shall maintain the particular item of equipment or part of the Work in good order and in proper working condition during the period between the particular Substantial Completion date and the commencement of the Correction Period, and for such maintenance Contractor shall receive no adjustment in Contract Price. Also Contractor shall maintain the warranties and guarantees required under paragraph 12.1 of the General Conditions in full force and effect during the period between the particular item's Substantial Completion date and the commencement of the Correction Period, and for such warranties and guarantees Contractor shall receive no adjustment in Contract Price.
 - 12.1.3 The warranties and guarantees provided by Contractor under paragraph 12.1 of the General Conditions shall remain in full force and effect from the date of Substantial Completion of the Work, or part thereof, until one year after the date of commencement of the Correction Period or such a longer period as may be prescribed by Law or the terms of any applicable specific warranty or guarantee required by the Contract Documents or by any specific provision of the Contract Documents.

One Year Correction Period:

- 12.2 If within the period from the date of Substantial Completion of a particular item of equipment or a designated part of the Work to one year after the commencement of the Correction Period, or such longer period as may be prescribed by Federal or New York State Law or by the terms of any applicable special

guarantee required by the Contract Documents or by any specific provision of the Contract Documents, the particular item of equipment or designated part of the Work is found to be defective, Contractor shall promptly, without an adjustment in Contract Price and in accordance with Department's or Engineer's written instructions, either correct such Defective Work, or if it has been rejected by Department or Engineer, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. Department or Engineer may direct the correction or removal and replacement of Defective or rejected Work. In addition to any other remedies which Department may have, Contractor shall pay the indirect and consequential costs of such correction or removal and replacement, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, if the Defective Work is not corrected or the rejected Work is not removed and replaced within 30 days of the Department's or Engineer's written rejection or request for rejection of Work unless otherwise provided for in writing. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount, and Department shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, a claim may be made therefore as provided in Articles 8, 9 and 10 of the General Conditions.

- 12.2.1 At the date of Substantial Completion of the Work, the parties have agreed on the date for commencement of the Correction Period. However, Department may at its sole option advance or delay the date for commencement of the Correction Period, and Contractor's obligations to extend warranties and guarantees in accordance with paragraphs 12.1.2 and 12.1.3 or to maintain the Work in accordance with paragraph 12.1.2 and 12.1.3 until then shall remain absolute. Applicable Change Orders or Proposed Change Orders shall be executed by the parties to adjust the Contract Price, as appropriate, on the basis of the unit prices declared in Contractor's Bid for extended warranty and extended maintenance requirements.
- 12.2.2 No later than 30 days before the date for commencement of the Correction Period, Engineer shall notify Contractor in writing of the date upon which the Correction Period is expected to commence, and Contractor shall ensure that the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service, are ready in their entirety by such date for use by Department as contemplated in the Contract Documents. In addition to any other damages payable by Contractor under these Contract Documents, Contractor shall also be liable for any damages suffered by Department on account of the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service at the beginning of the Correction Period because they were not ready for continuous utilization for the purposes for which they are intended.
- 12.2.3 Each month during the period between the date of Substantial Completion of parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing and the date of commencement of the Correction Period, Contractor shall certify to Engineer in writing that the said parts of the Work are being properly maintained and will be ready for use by Department upon commencement of the Correction Period.
- 12.2.4 During the period described in Section 12.2.3 until commencement of the Correction Period, Contractor shall bear all risks of injury, loss, or damage to any part of the Work arising from the elements or from any other cause. Contractor shall rebuild, repair, restore, and make good at no cost to Department all injuries, losses, or damage to any portion of the Work occasioned by any cause and shall at no expense to Department provide suitable drainage and erect such

temporary structures and take all other actions as are necessary for the protection of the Work. Suspension of the Work or the granting of an extension in Contract Time for any cause shall not relieve Contractor of its responsibility for the Work as herein specified.

- 12.2.5 Contractor's responsibilities under this Paragraph 12.2 are in addition to, not in lieu of, all other obligations imposed by these Contract Documents.

Access to Work:

- 12.3 Representatives of Department, Engineer, and representatives of testing agencies and governmental agencies with jurisdictional interests will have access to the Work at all times for observation, inspection and testing. Contractor shall provide proper and safe conditions for such access. Inspections, tests or observations by Engineer, Department or third parties may be performed to provide information to Department on the progress of the Work, however, this provision is not intended to create any duty or obligation to Contractor by Department or Engineer, nor is the information provided intended to fulfill Contractor's obligations under the Contract.

Tests and Inspections:

- 12.4 Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals.
- 12.5 If a Law specifically requires any Work (or part thereof) to be inspected, tested or approved, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish to Engineer the required certificates of inspection, testing or approval. Except as provided in Article 5, Contractor shall be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Department's or Engineer's acceptance of materials or equipment proposed or submitted to Department and Engineer for approval prior or subsequent to Contractor's purchase thereof for incorporation in the work. The cost of all inspections, tests and approvals in addition to the above which are required by the contract documents shall be paid by Contractor.
- 12.6 All inspections, tests or approvals other than those required by Law to be performed or given by public body having jurisdiction over the Work or any part thereof, shall be performed by organizations acceptable to Department and Engineer. Contractor shall perform sufficient inspection and testing of the Work to support the warranty and guarantee requirements of paragraph 12.1 and 12.2 of the General Conditions. Reference is made to the Supplementary Conditions, Standard Specifications and Supplementary Specifications for provisions applicable to the procurement of an independent testing laboratory.
- 12.7 If any Work, including the work of others, that is to be inspected, tested or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for inspection. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.
- 12.8 Neither inspections by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work:

- 12.9 If any work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's inspection and replaced at Contractor's expense.
- 12.10 If Engineer considers it necessary or advisable that covered Work be inspected by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment.
- 12.10.1 If it is found that such Work is Defective, Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension of Contract Time or recovery of any delay damages due to the uncovering.
- 12.10.2 If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction pursuant to Articles 9, 10 and 11.
- 12.10.3 When covered Work is uncovered and found to be Defective, all direct, indirect and consequential costs as established in paragraph 12.10.1 shall be paid by Contractor. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price, and if the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 9 and 10 of the General Conditions.

Department May Stop the Work:

- 12.11 If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Department may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Department to stop the Work shall not give rise to any duty on the part of Department to exercise this right for the benefit of Contractor or any other party.
- 12.11.1 Contractor shall bear all direct, indirect and consequential costs of such order to Contractor to stop Work including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, and Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to any extension of contract time or recovery of any delay damages due to the order to stop Work.
- 12.11.2 In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price. If the parties are unable to

agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions.

Correction or Removal of Defective Work:

- 12.12 If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Engineer, remove it from the site and replace it with non-defective Work that conforms with the Contract Documents. Contractor shall bear all direct, indirect and consequential costs of such correction or removal including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations. Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension in Contract Time or recovery of any delay damages due to the correction or removal. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount, as an appropriate reduction in the Contract Price. If the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions.

Acceptance of Defective Work:

- 12.13 If, instead of requiring correction or removal and replacement of defective Work, Department prefers to accept it, Department may do so. Contractor shall bear all direct, indirect and consequential costs attributable to Department's evaluation and determination to accept such Defective Work, such costs to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations. Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension in Contract Time or recovery of any delay or acceleration damages due to Department's evaluation and determination to accept such Defective Work. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order may be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Department shall be entitled to an appropriate reduction in the Contract Price. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, or if the parties are unable to agree as to the amount thereof, Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions. If the acceptance occurs after final payment, an appropriate amount will be refunded by Contractor to Department.

Department May Correct Defective Work:

- 12.14 If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and to correct Defective Work or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Department may, after seven days' written notice to Contractor, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, Department may exclude Contractor from all or part of the site, take possession of all or part of the work and suspend or terminate Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which Department has paid Contractor but which are stored elsewhere. Contractor shall allow Department, and Department's representatives, agents

and employees such access to the site as may be necessary to enable Department to exercise the rights and remedies provided by this paragraph and the Contract Documents. All direct, indirect and consequential costs of Department in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Department shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Contractor may make a claim therefore as provided in Article 8, 9, 10, and 11. Such direct, indirect and consequential costs shall include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all costs of delay and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's Defective Work. Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Department of Department's rights and remedies hereunder.

ARTICLE 13 - Payments to Contractor and Completion

Schedule of Values:

- 13.1 The schedule of values established as provided in paragraph 1.4 and 1.6 of the General Conditions shall serve as the basis for progress payments. Progress payments for Unit Price Work shall be based on the number of units completed. Department will furnish Application for Payment forms.

Application for Progress Payment:

- 13.2 At least fourteen days before each progress payment is scheduled to be submitted to the Department, Contractor shall submit to Engineer for review an Application for Payment on forms furnished by Department filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by bills of sale, invoices or other documentation supporting the cost, together with documents warranting that Department has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (each and all of these terms are hereinafter referred to as "Liens"). Each Application for Payment shall contain a certification by Contractor that progress payments received from Department on account of the Work have been applied by Contractor and its Subcontractors to discharge in full all of Contractor's and its Subcontractors' obligations stated in the prior Application for Payment, and that Contractor has verified the accuracy of the progress reported to have been completed by Contractor or its Subcontractors in the Application for Payment. Notwithstanding any other provisions of the Contract Documents to the contrary, neither Department nor Engineer are under any duty or obligation whatsoever to any Subcontractor or Supplier to insure that payments due and owing by Contractor to any of them are or will be made. Such parties shall rely only on Contractor's surety bonds for remedy of nonpayment by Contractor. The amount of retainage with respect to progress payments will be as provided for by the laws of New York State.
- 13.2.1 An Application for Payment a) will not be approved if the as-built documents, including but not limited to Drawings legibly marked in accordance with Contract Documents to record actual construction, are not kept current, and b) will not be approved until the completed as-built documents, showing all variations between the Work as actually constructed and as originally shown on the Drawings and other Contract Documents, have been inspected by Engineer. For the purpose of this paragraph, the as-built documents will be considered current if they include

all of the documents itemized in paragraph 5.19 together with any other information that supplements or changes the original Contract Documents which has been delivered or otherwise made known to Contractor prior to the time when Application for Payment is to be reviewed by Engineer.

- 13.2.2 An Application for Payment will not be approved until Contractor has submitted and Engineer has reviewed the Progress Schedule and submittals required in Contract Documents which are due prior to that Application for Payment.

Contractor's Warranty of Title:

- 13.3 Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether or not incorporated in the Project, shall pass to Department no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment:

- 13.4 Engineer shall, within five days after receipt of each Application for Payment, either recommend payment in writing and present the Application to Department or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the application. After presentation of the application for payment with Engineer's recommendation, the amount recommended shall be paid in accordance with New York State Law upon approval of the Department.
- 13.5 Department may refuse to make payment of the full amount recommended by Engineer for one or more of the following reasons: claims have been made against Department on account of Contractor's performance, or furnishing of the Work, Liens have been filed in connection with the Work, there are other facts or circumstances entitling Department to a set-off against the amount recommended, or Department has determined that Work performed by Contractor does not conform to Contract Documents including, but not limited to, moneys payable by Contractor to Department pursuant to the requirements of Articles 5 and 12 of the General Conditions. In the event of such refusal to pay the full recommended amount, Department must give Contractor prompt written notice (with a copy to Engineer) stating the reasons for such action.

Substantial Completion:

- 13.6 When Contractor considers all or part of the Work ready for its intended use, Contractor shall notify Department and Engineer in writing that the Work or specified part thereof, is substantially complete except for items specifically listed by Contractor as incomplete, and request that Engineer issue a certificate of Substantial Completion for the Work, or such specified part thereof. Within a reasonable time thereafter, not to exceed 30 days, Department, Contractor and Engineer shall make an inspection of the Work, or specified part thereof, to determine the status of completion. If Engineer or Department does not consider the Work, or specified part thereof, substantially complete, Engineer shall notify Contractor in writing giving the reasons therefor, after consultation with the Department. If Engineer considers the Work, or part thereof, substantially complete, Engineer shall prepare and deliver to Department a tentative certificate of Substantial Completion for the Work, or part thereof which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be completed or corrected before final payment, and Engineer's written recommendation as to a division of responsibilities between Department and Contractor pending final payment including but not limited to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Department shall have

seven days after receipt of the tentative certificate with attachments during which to make written objection to Engineer as to any provisions of the referenced submittals and to direct a revision of the tentative certificate. Unless Department and Contractor agree otherwise in writing and so inform Engineer or Department directs the revision of the certificate of Substantial Completion for the Work, or specified part thereof, Engineer's recommendation will be binding on Contractor until final payment.

- 13.7 Department shall have the right to exclude Contractor from the Work, or part thereof, after the date of Substantial Completion for the Work, but Department shall allow Contractor reasonable access to complete or correct items on the tentative list.

Partial Utilization:

- 13.8 Department may use any finished part of the Work which has specifically been identified in the Contract Documents, or which Department, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Department without significant interference with Contractor's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

13.8.1 Department at any time may direct Contractor in writing to permit Department to use any such part of the Work which Department believes to be ready for its intended use and substantially complete. Contractor may certify to Department and Engineer that said part of the Work is substantially complete and request Engineer to issue certificate of Substantial Completion for that part of the Work. Within a reasonable time after such direction, Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not determine that part of the Work to be substantially complete, Engineer will notify Department and Contractor in writing giving the reasons therefor. The provisions of paragraphs 13.6 and 13.7 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

13.8.2 Department may at any time direct Contractor in writing to permit Department to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer and within a reasonable time thereafter Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Department and Engineer that such part of the Work is not ready for separate operation by Department, Engineer shall submit to Department a list of items to be completed or corrected together with a written recommendation as to a division of responsibilities between Department and Contractor, including but not limited to security, operation, safety, maintenance, utilities, insurance and warranties pending final payment for such Work. Department shall have seven days to make written objection to Engineer's list and recommended division of responsibilities to direct a revision thereof. Such directed revision or otherwise objected list and recommended division of responsibilities, shall become binding upon Department and Contractor at the time when Department takes over such operation unless they shall have agreed otherwise in writing. During such operation and prior to Substantial Completion of such part of the Work, Department shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

- 13.9 Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will make a final inspection with Department and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment:

- 13.10 After Contractor has completed all corrections to the satisfaction of Engineer and Department and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.19) and other documents - all as required by the Contract Documents, and after Engineer has indicated that the Work is acceptable (subject to the provisions of paragraph 13.12), Contractor may make application for final payment following the procedures for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers satisfactory to Department of all Liens arising out of or filed in connection with the Work. In lieu thereof and as provided for by the laws of New York State and approved by Department, Contractor may furnish receipts or releases in full and an affidavit of Contractor that such receipts and releases include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Department or Department's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Department to indemnify Department against any Lien.

Final Payment and Acceptance:

- 13.11 If, on the basis of Engineer's inspection of the work during construction and final inspection, and Engineer's review of the final application for payment and accompanying documentation, Engineer has determined that the work has been completed in substantial conformance with the contract documents and Contractor's other obligations under the contract documents have been fulfilled, Engineer will, within ten days after receipt of the final application for payment, indicate in writing Engineer's recommendation of payment and present the application to Department for payment along with a certificate that the work was completed in substantial conformance with the contract documents. Thereupon Engineer will give written notice to Department and Contractor that the work is acceptable subject to the provisions of paragraph 13.13. Otherwise, Engineer will return the application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. After presentation to Department of the application and accompanying documentation, in appropriate form and substance, and with Engineer's recommendation and certification of substantial conformance with the Contract Documents, final payment will be paid by Department to Contractor in accordance with New York State Law. If Department believes deficiencies exist, it will so notify Engineer and Contractor in writing.
- 13.12 If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Department shall, upon receipt of Contractor's final Application for Payment and recommendation of Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted.

Waiver of Claims:

13.13 The making and acceptance of final payment will constitute:

- 13.13.1 A waiver of all claims by Department against Contractor, except claims arising from unsettled Liens, from Defective Work appearing after final inspection pursuant to paragraph 13.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Department of any claims or rights with respect to Contractor's continuing obligations under the Contract Documents; and
- 13.13.2 A waiver of all claims by Contractor against Department other than those previously made in writing and still unsettled.

ARTICLE 14 - Suspension of Work and Termination

Department May Suspend Work:

- 14.1 Department may for its convenience, order Contractor in writing at any time to suspend the Work or any portion thereof for such a period of time as Department may determine to be appropriate. A suspension of Work order will fix the date on which the Work, or portion thereof, will be resumed. Contractor shall resume the Work, or portion thereof, on the date so fixed.
 - 14.1.1 If the performance of the Work or portion thereof is suspended for a period of time which exceeds the Total Float available in the approved Progress Schedule for the portion or portions controlling the Work affected by a suspension of Work order pursuant to paragraph 14.1, or by an act of Department or Engineer in the administration of the Contract, or by Department's or Engineer's failure to act within the applicable latest dates substantiated in the approved Progress Schedule, Contractor will be allowed an increase in Contract Price or an extension in Contract Time, or both, necessarily caused by such suspension which extends the applicable latest dates in the approved Progress Schedule. However, no adjustment will be made under this paragraph of the General Conditions for any suspension to the extent: 1) that performance would have been so suspended by any other cause, including the fault and negligence of Contractor, or 2) for which an adjustment is provided, limited as to extent, or excluded under any other provision of the Contract Documents.
 - 14.1.2 Contractor shall deliver to Engineer a written Proposed Change Order including at a minimum, justification for the request within seven days or earlier if so required elsewhere in the Contract Documents, of the act or failure to act which Contractor believes gives rise to an adjustment in Contract Price or Contract Time pursuant to paragraph 14.1.1. Failure by Contractor to comply with the time requirements for delivery of written Proposed Change Orders will be considered to be a waiver by Contractor of any request for adjustment or claim for an increase in Contract Price or Contract Time for the period of time during which the Proposed Change Order has not been submitted.
 - 14.1.3 Contractor's proposal with all supporting data shall be delivered within 15 days of such notice or within twenty-two days of such occurrence, whichever is later, unless Department allows an additional period of time to obtain more accurate data. Contractor shall prove that additional costs and delays were necessarily incurred which meet the criteria set forth in Articles 9, 10 and 11 of the General Conditions, despite Contractor's reasonable, prudent, and diligent efforts to prevent such costs or delays.

- 14.2 In addition to the provisions of Appendix B, if Department stops Work in accordance with Article 12.10 of the General Conditions or suspends Contractor's services in accordance with article 12.11, or suspends the work or any portion thereof because of Contractor's failure to prosecute the work and to protect persons and property, Contractor shall not be entitled to an extension of Contract Time or an increase in Contract Price.

Department May Terminate:

- 14.3 Department may serve written notice upon Contractor and its surety that it intends to terminate the Contract for cause upon the date specified which shall not be less than seven days from the date of the notice. Such notice shall contain the reasons for the intended termination which shall be effective on the date specified unless Contractor shall cease the violations(s) or make arrangements which are satisfactory to the Department to address the violation(s). Upon termination, the Department may exclude Contractor from the site and take possession of the Work and of all Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by Contractor without liability to Contractor for trespass or conversion, incorporate in the work all materials and equipment stored at the site or for which Department has paid Contractor but which are stored elsewhere, and finish the Work as Department may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work including but not limited to fees and charges of Engineers, architects, attorneys and other professionals and court costs, such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Department. Such costs incurred by Department will be approved as to reasonableness by Engineer and incorporated in a Change Order or Proposed Change Order.

Department may terminate for cause upon the occurrence of any one or more of the following events:

- 14.3.1 If Contractor commences a voluntary case under any chapter of the Bankruptcy Code, as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
- 14.3.2 If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
- 14.3.3 If Contractor makes a general assignment for the benefit of creditors;
- 14.3.4 If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;
- 14.3.5 If Contractor admits in writing an inability to pay its debts generally as they become due;
- 14.3.6 If Contractor fails to perform the Work in accordance with the Contract Documents, including, but not limited to, failure to supply sufficient skilled workers, or suitable materials or equipment, or failure to adhere to the progress schedule established under paragraph 1.6 as revised from time to time or failure to submit an updated schedule as required by paragraph 5.6;

- 14.3.7 If Contractor disregards Laws or Regulations of any public body having jurisdiction;
- 14.3.8 If Contractor disregards the authority of Engineer;
- 14.3.9 If Contractor filed certification in accordance with New York State Finance Law ' 139-k which was intentionally false or intentionally incomplete; or
- 14.4 Where Contractor's services have been so terminated by Department, the termination shall not affect any rights or remedies of Department against Contractor then existing or which may thereafter accrue. Any retention or payment or moneys due Contractor by Department will not release Contractor from liability.
- 14.5 The Department may without cause and without prejudice to any other right or remedy terminate the Contract for convenience upon seven days written notice to Contractor, its surety and Engineer, and elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work accepted by Department.

Contractor May Stop Work or Terminate:

- 14.6 If, through no act or fault of Contractor, Engineer fails to act on any Application for Payment within thirty days after it is submitted, or Department fails for one hundred and twenty days to pay Contractor any sum finally determined to be due by Department, then Contractor may, upon seven days' written notice to Department and Engineer, terminate the Agreement and recover from Department payment for all Work accepted by Department. In lieu of terminating the Agreement, if Engineer has failed to act on an Application for Payment or Department has failed to make any payment as aforesaid, Contractor may upon seven days' written notice to Department and Engineer stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve Contractor of the obligations under paragraph 5.3130 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Department.

ARTICLE 15 - Miscellaneous

Notice and Service:

- 15.1 All notices, demands, requests, instructions, approvals and claims shall be in writing.
 - 15.1.1 Any notice to or demand upon Contractor shall be deemed sufficient if delivered to Contractor's representative at the site or if delivered to the individual proprietor if Contractor is an individual, to a partner if Contractor is a partnership or to an officer of the corporation if Contractor is a corporation, at the office of Contractor specified in the Contract Documents, or if deposited in the United States mail in a sealed, postage prepaid envelope, addressed to the principal office of Contractor listed in the Agreement, or if delivered with charges prepaid to any telegraph company for transmission, in each case addressed to the office of Contractor specified in the Contract Documents or faxed to the number provided in the Contract Documents and followed by written notice.
 - 15.1.2 All notices or other papers required to be delivered by Contractor to Department, or to any of its representatives shall, unless otherwise specified in writing to Contractor, be delivered to Department at the office specified in the Contract Documents. Any other notice or demand

upon Department shall be deemed sufficient if delivered to such office, or if deposited in the United States mail in a sealed, postage prepaid envelope, or if delivered, with the charges prepaid to any telegraph company for transmission, in each case addressed to such office or to such other representative of Department or to such other address as Department may subsequently specify in writing to Contractor for such purpose, or faxed to the number provided in the Contract Documents and followed by written notice.

15.1.3 Any written notice or other communication to Contractor's Surety or Sureties shall be delivered or mailed to the home office of the Surety or Sureties, or to the agent or agents who executed the Bonds on behalf of the Surety or Sureties.

15.1.4 Any such notice or demand shall be deemed to have been given or made as of the time of actual delivery, or, in the case of mailing or of telegrams, at the time of actual receipt thereof.

Computation of Time:

15.2 When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last calendar day of such period. If the last calendar day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the State of New York, such day will be omitted from the computation. This does not apply to contract completion time as set forth in Article 6 of the Agreement.

General:

15.3 Should Department or Contractor suffer injury or damage to person or property because of an act or omission to act of the other party, its employees or agents or others for whose acts the other party is legally liable, a Claim may be made therefore, in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

15.4 The duties and obligations imposed by these General Conditions and the rights and remedies available to the parties hereunder, including but not limited to the warranties, guarantees and obligations imposed upon Contractor by Contract Documents and all of the rights and remedies available to Department thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by New York State Laws, by special warranty or guarantee or by other provisions of the Contract Documents. The provisions of this paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy. All representations, warranties and guarantees made in the Contract Documents shall survive final payment and termination or completion of the Agreement.

15.5 The obligation of Contractor to maintain the Work, or any part thereof, until the completion of the Correction Period shall survive final payment and termination or completion of the Agreement.

No Waiver of Legal Rights:

15.6.1 Inspection by Engineer or by any of its duly authorized representatives, any measurement or report by Engineer, any order by Department for the payment of money, any payment for or acceptance or possession of any Work or any extension in Contract Time or any possession taken by Department shall not operate as a waiver of any provision of the Contract Documents,

or any power therein preserved to Department, or of any right to damages therein provided. Any Waiver of any breach of this Contract shall not be held to be a waiver of any other or subsequent breach.

- 15.6.2 Department reserves the right to correct any error that may be discovered in any estimate that may have been paid, and to adjust the same to meet the requirements of the Contract Documents. Department further reserves the right, should proof of Defective Work on the part of Contractor be discovered after the final payment has been made, to claim, and recover by process of law, such sums as may be sufficient to correct the error, or make good the defects in the Work.
- 15.6.3 Any waiver of any provision of the Contract Documents shall be specific, shall apply only to the particular item or matter concerned and shall not apply to other similar or dissimilar items or matters.

Affidavit and Release of Lien:

- 15.7.1 When the Work has been completed, Contractor shall execute a final release of Lien and an Affidavit declaring that all bills have been paid in full, and that the requirements of the New York State Labor Law have been complied with.
- 15.7.2 These documents will be furnished to Department on the forms provided by Department.
- 15.7.3 Contractor shall be responsible for obtaining and submitting these forms to Department for all subcontractors involved in the Work.

Recovery Rights Subsequent to Final Payment:

- 15.8 Department reserves the right, should an error be discovered in an Application for Payment or should proof of Defective Work or materials used by or on the part of Contractor be discovered after the final payment has been made, to claim and recover from Contractor or his Surety, or both, by process of law, such sums as may be sufficient to correct the error or make good the defects in the Work and materials.

General Guarantee:

- 15.9 Neither the final acceptance, nor final payment by Department, nor any provision of the Contract Documents, nor partial or entire use of the Work by Department, shall constitute an acceptance of Work not done in accordance with the Contract Documents or relieve Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. Contractor guarantees the remedy of all Defective Work and payment for all damage to other Work, persons or property resulting therefrom which shall occur within one year from the date of final acceptance unless a longer period is required by Contract Documents, by Law, or by standard practice. Department will give notice of observed Defective Work with reasonable promptness. Contractor shall ensure that its Surety shall be bound with and for Contractor in the faithful observance of this General Guarantee.

Audit; Access to Records:

- 15.10.1 In addition to the rights of access set forth in Appendix A, if Contractor has submitted Cost and Pricing Data in connection with the pricing of any Change Order, Proposed Change Order or Claim related to this Contract, Department and Engineer or any of their duly authorized

representatives shall have the right to examine and audit all books, ledgers, records, and documents pertinent to all Cost and Pricing data available and relied upon by Contractor including but not limited to that used by Contractor in the determination of its Bid for the Work, in order to evaluate the accuracy, completeness, and currency of the Cost or Pricing data.

15.10.2 Contractor shall make available at Contractor's office at all reasonable times the materials described in paragraph 15.10.1 above, for examination, audit, or reproduction, until 6 years after final payment under this Contract.

15.10.2.1 If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for 6 years after any resulting final termination settlement.

15.10.2.2 Records pertaining to appeals under Article 8 of Section VIII, "General Conditions," to litigation or the settlement of claims arising under or relating to the performance of this Contract shall be made available until disposition of such appeals, litigation, or claims.

15.10.3 A provision stating that all the requirements of this Article of Section VIII, "General Conditions" are applicable to Subcontracts under this Contract exceeding \$50,000 in value shall be inserted by Contractor in all such subcontracts.

Price Reduction for Defective Cost or Pricing Data:

15.11.1 This provision shall become operative only for any Change Order, or Proposed Change Order or claim settlement under this Contract involving aggregate increases and/or decreases in costs, plus applicable profits, of more than \$10,000; except that this provision shall not apply to any amendment to the Contract for which the price of the Work involved in the amendment is:

15.11.1.1 Based on adequate price competition;

15.11.1.2 Based on established catalog or market prices of commercial items sold in substantial quantities to the general public, or

15.11.1.3 Set by New York State law.

15.11.2 If any price, including profit, negotiated in connection with any Change Order, Proposed Change Order or claim settlement under this provision, was increased because: 1) Contractor or a Subcontractor, Supplier, other person or organization furnished Cost and Pricing Data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data; 2) a designated or prospective Subcontractor, Supplier, other person or organization furnished Contractor Cost and Pricing Data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost and Pricing Data; or 3) any of these parties furnished data of any description that were not accurate, the price shall be changed accordingly and the Contract shall be adjusted to reflect the change. This right to a change in Contract Price is limited to that resulting from defects in data relating to amendments to the Contract for which this provision becomes operative under paragraph 16.11.1 above.

15.11.3 Any decrease in Contract Price under paragraph 16.11.2 above due to defective data from a designated or prospective Subcontractor, Supplier, other person or organization that was not subsequently awarded the Subcontract or purchase order shall be limited to the amount, plus

applicable overhead and profit markup, by which 1) the actual Subcontract or purchase order or 2) the actual cost to Contractor, if there was no Subcontract or purchase order, was less than the prospective Subcontract or purchase order, cost estimate submitted by Contractor; provided, that the actual Subcontract or purchase order price was not itself affected by defective cost or Pricing data.

- 15.11.4 Before awarding any Subcontract or purchase order which exceeds or can be reasonably expected to exceed \$150,000 when entered into, or pricing any Change Order or Proposed Change Order or claim settlement involving a pricing adjustment expected to exceed \$10,000, Contractor shall require the Subcontractor, Supplier, other person or organization to submit Cost or Pricing data (actually or by specific identification in writing), unless the price is:

15.11.4.1 Based on adequate price competition;

15.11.4.2 Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

15.11.4.3 Set by New York State law.

- 15.11.5 Contractor shall require such Subcontractor, Supplier, other person or organization to certify in the form prescribed in the Contract Documents, that to best of its knowledge and belief, the data submitted under paragraph 15.11.4 is accurate, complete, and current as of the date of agreement on the negotiated price of the Subcontract, purchase order, Change Order, Proposed Change Order, or claim settlement affecting the Subcontract.

- 15.11.6 Contractor shall make the provisions of this Article applicable to all Subcontracts or purchase orders that exceed or can be reasonably expected to exceed \$150,000.

No Waiver:

- 15.12.1 The rights and remedies set forth in the Contract Documents are not exclusive and are in addition to any other rights and remedies provided by law or equity. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by New York State law.

- 15.12.2 No act or omission by Department or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such act or omission constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

Comparable or Equivalent Terms:

- 15.13.1 Contractor warrants, represents and guarantees that all of the prices, terms, warranties and benefits granted to Department under the Contract are comparable to or better than the equivalent terms, prices, warranties and benefits offered to any other existing customer for similar Work.

- 15.13.2 In addition to the other remedies available, Department may demand repayment for any excess payment, plus interest thereon, for failure of Contractor to comply with paragraph 15.13.1.

Unlawful Provisions Deemed Stricken:

- 15.14.1 If the Contract Documents contain any unlawful provisions, such unlawful provisions shall be of no effect. Any provision determined to be unlawful by a court of competent jurisdiction, shall be deemed stricken from the Contract Documents without affecting the validity of the remaining provisions of the Contract Documents.

All Legal Provisions Included:

- 15.15.1 All provisions of Law required to be included in the Contract Documents shall be and are inserted herein. If through mistake, neglect, oversight or otherwise, any such provision has not been included or included in improper form, upon the application of either party, the Contract Documents shall be amended in writing at no increase in Contract Price nor extension in Contract Time, so as to comply with the Law.

No Estoppel:

- 15.16 Department or any officer, employee, servant or agent thereof, shall not be estopped, bound or precluded by any determination, return, decision, approval, order, letter, payment or certificate made or given by Engineer or any other officer, employee, servant or agent of Department, at any time, either before or after final completion and acceptance of the Work and payment therefor:
- 15.16.1 From showing the true and correct amount, classification, quality, and character of the Work completed and materials furnished by Contractor or any other person under the Contract, or from showing at any time that any determination, return, decision, approval, order, letter, payment, or certificate is untrue and incorrect, or improperly made in any particular, or that the Work or the materials or any part thereof, do not in fact conform to the Contract Documents; or,
- 15.16.2 From demanding the recovery of any overpayments made to Contractor, or such damages as Department may sustain by reason of failure to perform each and every term, provision or condition of the Contract in accordance with its terms.

Prohibited Interests:

- 15.17 No official of Department who is authorized in such capacity on behalf of Department to negotiate, make, accept or approve or to take part in the negotiating, making or approving any architectural, engineering, inspection, construction or material supply contract or any Subcontractor in connection with the Work or the Project of which the Work is a part, shall be knowingly permitted by Contractor to become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, architect, attorney, engineer or project representative of or for Department who is authorized in such capacity and in behalf of Department to exercise any executive, supervisory or other similar function in connection with the Work or the Project of which the Work is a part shall be knowingly permitted by Contractor to become directly interested personally in this Contract or in any part thereof.

No Third Party Beneficiary:

- 15.18 Contractor acknowledges and agrees that it is not a third party beneficiary to any other agreement between the Department and any third party and/or any work product prepared or work performed for the Department by any third party, including but not limited to the contract between and/or work or work

product performed by the Engineer; that nothing in the bid documents or the contract document shall be construed so as to give the contractor any legal or equitable claim, right or remedy against any other party with whom the Department has contracted, including but not limited to the Engineer; that nothing in any separate agreement between Department and any third party, including but not limited to the Engineer shall be construed to give the contractor any legal or equitable claim, right or remedy against such third party; rather such agreements are acknowledged and agreed to be intended to be for the sole exclusive benefit of the parties thereto. Contractor further acknowledges and agrees that its sole rights and remedies in connection with its bidding and performance of the work to be performed by it under the bid documents and contract documents are limited to such rights and remedies as are provided under the bid documents and contract documents. Further, contractor acknowledges and agrees that no claim against any third party, including but not limited to the Engineer, which is in separate contractual privity with the Department, shall arise out of such contractor=s or the Engineer=s performance of services for the Department pursuant to such separate contract.

Nothing herein shall release or waive any direct claim which the Department may have against any such separate contractor, including the Engineer, pursuant to the terms of the Department=s contract with such third party.

Should any direct claim be brought by contractor against any third party in separate direct contractual relationship with the Department, contractor agrees to reimburse to the Department and to such separate contractor, including Engineer, their reasonable and necessary costs, including legal fees, incurred in the defense of such claim or claims.

SECTION IX

Supplementary Conditions

Section II – Terms and Definitions shall be supplemented as follows:

Owner – The New York State Department of Environmental Conservation, unless specifically used in reference to the owners of the properties on and adjacent to the Site.

SECTION X

Standard Specifications

00001	Progress Schedule
00002	Concrete
00003	Minimum Requirements for Health and Safety
00030	Green Remediation Practices

SECTION X - Standard Specifications

SPEC 00001 *Progress Schedule*

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SECTION X

Standard Specifications

SPEC 00001

Progress Schedule

1) *Terms and Definitions*

The terms listed below (or pronouns in place of them) have the following intent and meanings which are applicable to both the singular and plural thereof.

- a) **Activity** - A part of the Work identified in the Progress Schedule, assigned a description, duration, certain codes, and other related Shop Drawing data, and Cost and Pricing data, and evaluated to start and finish in accordance with Early and Late Schedules.
- b) **Activity, Critical** - An Activity is considered to be Critical when it is evaluated to have the minimum value of Total Float Time available in the Progress Schedule.
- c) **Activity, Value** - That portion of the contract Price which represents a fair value for the part of the Work identified by that Activity.
- d) **As-Built Schedule** - Term used to denote record schedule drawings and data substantiating how the Work was performed as to timing, sequencing and rate of progress.
- e) **Bar Chart Diagram** - A graphical representation of how the Work is to be performed as shown by timing each activity between a single choice of anticipated start and finish dates.
- f) **Critical Path** - The sequence of Critical Activities from the Date for Commencement of the Contract Time, or Contract Times, to Substantial Completion of the Work, or part thereof.
- g) **Critical Path Method Diagram** - A graphical representation of how the Work is to be performed as represented by the sequencing and timing of the Activities. A CPM Diagram shall either follow an "arrow" (I-J) format, wherein the start of an Activity is dependent upon the finish of preceding Activities, or a "precedence" format, wherein either the start or finish of an Activity is dependent upon either the start or finish of preceding Activities.
- h) **Dummy restraints** - Activities not identifying a part of the Work, and used to preserve proper logic sequencing, avoid duplicate Activity numbering, to enforce Work Sequences indicated in or required by the Contract Documents, or to achieve other preferential sequencing chosen by **Contractor**.
- I) **Duration (Activity)** - Estimated or required time of performance for the part of the Work

represented by that Activity.

- j) **Free Float** - Working days by which an Activity may be delayed from its Early Schedule, without delaying any other Activities from their Early Schedules.
- k) **Contract Float** - Working days between the date(s) for Substantial Completion shown for the Work, or part thereof, in **Contractor's** anticipated Early Schedule, and the corresponding Contract Time or Contract Times.
- l) **Total Float** - Working days between the Early Schedule and the Late Schedule for an Activity by which that Activity may be delayed without necessarily extending the Contract time, or Contract Times.
- m) **Early Schedule (Late Schedule)** - The proposed Early Dates (Late Dates) of performance for the parts of the Work represented by the Activities. The Early dates are predicated on proceeding with the Work, or part thereof, exactly on the date when the Contract Time, or applicable Contract Time, commences to run; and the Late dates are based on achieving Substantial Completion of the Work, or part thereof, exactly on the Contract Time, or applicable Contract Times.
- n) **Percent Complete** - That portion of an Activity which when multiplied by the Activity Value will yield a fair proportion of the Contract Price for that part of the Work completed.
- o) **Preferential Logic** - **Contractor's** approach to sequencing of the Work over and above those sequences indicated in or required by the Contract Documents. Examples include equipment restraints, crew movements, form reuse, special logic (lead/lag) restraints, etc. factored into the Progress Schedule instead of disclosing the associated Float Times.

2) **Requirements Included**

- a) Pursuant to the requirements of the Contract Documents, **Contractor** shall prepare and submit, finalize, and periodically adjust the Progress Schedule as required herein.
- b) This Section of the Specifications requires **Contractor** to plan, manage, schedule and execute the Work in accordance with a Progress Schedule meeting the requirements of the Contract Documents; that **Contractor's** Progress Schedule stay current with **Contractor's** approach to performing Work remaining; that the Progress Schedule, when approved, be jointly used by **Owner**, **Engineer** and **Contractor** to substantiate or mitigate the impact of delays and Change Orders; and that **Contractor** prepare record schedule drawings and data showing how the Work is being performed as to sequencing, timing, and rate of progress.

3) **Bar Chart Description**

- a) A Bar Chart Diagram does not show express logic ties, nor does it compute Early or Late Dates as defined above. Although a Bar Chart Diagram may show Contract Float time, it does not disclose Activity Total Float values.

- b) Total Float and Contract Float are not for the exclusive benefit of **Owner, Engineer, Contractor**, or others, but is time available to all parties as needed for the Contract as a whole. Such Float times shall be shared between **Owner, Engineer, Contractor** and others to absorb delays which could not be mitigated by any other reasonable means.
- c) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.

4) ***Critical Path Method (CPM) Description***

- a) The Progress Schedule shall be based on the Critical Path Method (CPM) of planning and scheduling, and prepared, finalized, and revised in accordance with the principles, definitions and terms described hereafter and those standards of the industry for CPM scheduling which are not in conflict with this Specification.
- b) CPM Diagrams shall show in detail the priority, sequencing and interdependence of Activities, and the sequence in which the Work is to be accomplished to: a) to comply with the Contract Time(s), named allowances, and those sequences of Work indicated in or required by the Contract Documents; b) to anticipate foreseeable events that may in any manner affect cost, progress, schedule, performance, and furnishing of the Work; and c) to reflect the means, methods, techniques, sequences, and procedures of construction anticipated by **Contractor**, subject to the limitations on Float sequestering set forth by this Specification.
- c) Total Float and contract Float are not for the exclusive benefit of **Owner, Engineer, Contractor**, OR OTHERS, but is time available to all parties as needed for the Contract as a whole. Such Float Times shall be shared between **Owner, Engineer, Contractor** and others to absorb delays which could not be mitigated by any other reasonable means. Use of Float Time shown in the approved progress Schedule for interim milestones or Contract Times will be available to **Owner**, if required to effect proper interfacing between work performed.
- d) Use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended Activity times, imposed Activity dates, scheduling items of Work required for Final Completion as though they were prerequisites to Substantial Completion, and others, and 2) use of Float time disclosed or implied by the use of alternate Float suppression techniques will be allowed, provided: a) that **Contractor** not engage in Float manipulations which have the net effect of "sequestering" Float, that is to reduce unilaterally otherwise available Float Time by more than 50 percent; and b) that **Contractor** agrees that in order to mitigate the impact of delays to the Work, or parts thereof, adjustment or removal of such Float suppression techniques will be a prerequisite to consideration of any requests for compensation for delay or acceleration or for extensions in Contract Time.
- e) The finalized Schedule of Values will be acceptable to **Engineer** as to form and substance, and will serve as the basis for progress payments.

- f) The finalized Schedule of Shop Drawing submissions will be acceptable to **Engineer** as providing a workable arrangement for processing the submissions.

5) ***Progress Schedule Submittals for CPM Schedules***

- a) All CPM Diagrams, Schedule of Values, Schedule of Shop Drawing submissions, associated computer reports, and narratives submitted by **Contractor** shall be consistent with the requirements of this Specification.
- b) The "Preliminary" submittal set shall consist of:
 - 1) A CPM Diagram and associated Schedule of Values and a supporting narrative.
 - 2) A User Manual for the scheduling software to be used by **Contractor** for the purposes of computation of the Progress Schedule.
- c) The "Interim" submittals shall consists of the interim CPM Diagram and associated Schedule of Values and Schedule of Shop Drawings submissions and a supporting narrative.
- d) The "Detailed" submittal set shall consist of:
 - 1) The Detailed CPM Diagram, and the reports associated with the Schedule of Values, and Schedule of Shop Drawing submissions, and a supporting narrative.
 - 2) The five associated Activity reports described in paragraph 18.A sorted by each of the first four sequencing criteria described in paragraph 18.D.
- e) "Status" submittal sets shall consist of "mark-up" versions of the current Detailed CPM Diagram, Schedule of Values, and Schedule of Shop Drawings, together with a supporting narrative.
- f) "Update" submittal sets shall consist of revised Detailed CPM Diagrams, Schedule of Values and Schedule of Shop Drawings, the six associated computer reports, a detailed **Contractor's** Cost report, and a supporting narrative.
- g) The "Contract Completion" submittal set shall consist of the Detailed Contract Completion Schedule, and associated computer reports.
- h) The "As-Built" submittal set shall consist of the As-Built CPM Diagram, and a "Schedule Reconciliation" report.

6) ***Quality Assurance of Progress Schedule***

- a) **Engineer** will review and if acceptable, approve the Progress Schedule.
- b) In preparing a version of the Progress Schedule, pursuant to paragraph 1.6 of the General Conditions and Supplementary Conditions, it is the responsibility of **Contractor** 1) to inspect the preaward "Preliminary Progress Schedule" submitted in compliance with Article 11 of Section III of the Contract Documents, 2) to verify site conditions that may in any manner affect cost, scheduling, progress, performance and furnishing of the Work, 3) to work with each major Subcontractor, Supplier, or other relevant person or

organization to obtain information on Activities, sequencing, and Activity Durations for incorporation into the Progress Schedule, and 4) to request and obtain written interpretations from **Engineer** as needed.

- c) The Detailed Progress Schedule shall break down the Work into Activities in sufficient detail to identify clearly all individual parts of the Work and those factors which may in any manner affect the cost, schedule, progress, performance, and furnishing of the Work. At a minimum, the break down of the Work in the detailed Progress Schedule submittal for CPM schedules only, shall delineate the following:
- 1) Those Activities designating the date for commencement of the Contract Time, or Contract Times; those Activities leading to Substantial Completion of the Work, or parts thereof; and those Activities identifying parts of the Work to be performed or furnished leading from Substantial Completion to Final Completion.
 - 2) All special Work sequences, schedule milestones, intermediate Contract Times, and named allowances set forth in the Contract Documents.
 - 3) Items pertaining to securing prerequisite permits and approvals from those agencies with jurisdiction over Work to be performed under the Contract.
 - 4) All items of Work involved in the preparation, submittal, review and approval of Shop Drawings and samples required by the Specifications.
 - 5) Appropriate times required for the fabrication, delivery, receipt and inspection, and storage of items of materials and equipment.
 - 6) Work associated with installation, erection and other field construction activities.
 - 7) Items of Work required to work around existing physical conditions and Underground Facilities which are at or contiguous to the site including the time for permanent or temporary relocation of such existing physical conditions and/or underground facilities.
 - 8) Items of interface which relate to the responsibilities of **Owner**, **Engineer** or other contractors performing work under separate contracts with **Owner**.
 - 9) Work required to implement cut-offs or closures, power shutdowns or temporary or permanent take-down or interruptions to existing facilities or affecting the operations of **Owner**, utilities or similarly involved third-parties. Specific dates when such cut-offs, etc. are to take place shall be shown as milestone dates on the appropriate Activities.
 - 10) All items of Work related to shop and field testing, associated trimout activities and specified manufacturer or supplier training required prior to placing the facilities in service, including but not limited to manufacturer or supplier installation checks; leak, disinfection and pressure tests; removal or erection of temporary components; tie-ins; flushing and chemical/mechanical cleaning operations; specified performance tests; and other necessary non-operating tasks adjustments, cold-alignment checks, corrections, housekeeping and spare parts stocking required of **Contractor** to conform to the Pre-operational testing requirements of the Contract Documents.

- 11) All items of Work associated with the performance of the Start-Up Testing requirements of the Contract Documents, including, but not limited to, trial operation tests and operator training, performance tests under simulated and design operating conditions, emission testing, final acceptance or guarantee tests.
 - 12) Work related to the tentative list of items to be completed or corrected before and subsequent to Pre-operational, Startup Testing and Final Testing.
- d) The following limitations shall also apply to the selection and scoping of Activities for CPM schedules only:
- 1) Activity Durations shall be in working days and represent **Contractor's** best estimate of the time required for completion based on the Work included and the resources planned for that Activity. The computation of the Activity dates shall be based on a calendar recognizing the applicable holidays and the limitations on Work during hours other than the normal working hours set forth in the General Conditions and the Supplementary Conditions.
 - 2) Unless otherwise provided in the Special Progress Schedule Requirements, all Activities, except those identifying Work related to Shop Drawings and deliveries, shall span twenty working days or less, and their Values shall not exceed \$45,000. Duration requirements for Activities identifying Work related to **Engineer's** review of Shop Drawing or sample submissions are prescribed in the Special progress Schedule Requirements.
 - 3) Installation Activities shall not combine Work located in separate structures, buildings or facilities, nor Work corresponding to different Divisions of the Specifications. Submittal and associated delivery Activities shall identify each submittal required by the Sections of the specifications. Activities identifying Work in connection with Pre-Operational or Start-up Testing shall not combine Work pertaining to the different Division within the specifications.
 - 4) Reference is made to Article 1.11 of this specification for the identification of allowances and their incorporation into the Progress Schedule.
 - 5) Items that qualify as (a) on-site stored materials, fixtures and equipment and (b) undelivered equipment, shall be separately identified on the Progress Schedule.
- 7) ***References for CPM Schedules***
- a) The text "Precedence and Arrow Networking Techniques for Construction," by R.B. Harris (Wiley, 1978), provides principles, definitions and terms common to CPM arrow and precedence diagrams, and schedule computations therefrom.
 - b) The provisions of this Section are binding on **Contractor** in the event of a conflict between the Standard Specifications and this Specification.
- 8) ***Review of Progress Schedule Submittals***
- a) **Engineer's** and **Owner's** review of **Contractor's** Progress Schedule submittals will be only for conformance with the Contract Time(s), those sequences of Work indicated in or

required by the Contract Documents, the Float sharing concepts established in the Contract Documents, and for compliance with the requirements of this Specification and the information given in the Contract Documents. **Engineer's** and **Owner's** review, comments and exceptions taken, if any, shall not extend to, nor constitute directions nor approval of, the means, methods, techniques, sequences, or procedures of construction or safety precautions, the correctness of which shall be the sole responsibility of **Contractor**.

- b) **Engineer's** and **Owner's** review of progress schedule submittals will be predicated on a **Contractor's** stamp of approval signed off by **Contractor**. **Contractor's** stamp of approval on Progress Schedule submittals shall constitute a representation to **Owner** that **Contractor** has either determined or verified all data on the Progress Schedule submittal, or assumes full responsibility for doing so, and that **Contractor** and his Subcontractors, Suppliers or other persons or organizations have reviewed and coordinated the sequences shown in the Progress Schedule with the requirements of the Work under the Contract Documents.
- c) **Engineer's** and **Owner's** review will not be intended to be for the purpose of determining the accuracy of other matters that may be contained in the submittals. When the review of a Progress Schedule results in a number of comments or exceptions taken, **Engineer** and **Owner** does not warrant that these comments are inclusive of all variations, as it shall remain the responsibility of **Contractor** to meet the requirements of the contract documents and to identify expressly any proposed variations.
- d) **Engineer's** and **Owner's** review of progress schedule submittals shall not relieve **contractor** from responsibility for any variations from the requirements of the Contract Documents unless **Contractor** has in writing, by means of a specific notice, called **Engineer's** attention to each variation, and **Engineer** has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Progress Schedule submittal.
- e) **Engineer's** approval of Progress Schedule submittals will not relieve **Contractor** from responsibility for errors and omissions in the submittals or from responsibility for having complied with the provisions of General Conditions and Supplementary Conditions. Approval of a Progress Schedule with undisclosed variations or errors such as omitted Work or erroneous sequences will not relieve **Contractor** from completing the omitted or impacted Work within the applicable Contract Time(s).
- f) Progress Schedules that include Activities with negative Float Times, or Activities scheduled beyond the applicable Contract Time(s), will not be approved until a specific Change Order or Proposed Change Order authorizing appropriate changes to the impacted Contract Time(s) is agreed upon between **Owner** and **Contractor**.
- g) When reviewed by **Engineer** and **Owner**, each progress schedule submittal will be returned stamped as either "approved," "approved as noted," "resubmit with revisions," or "disapproved." Submittals stamped as "approved" or "approved as noted" will indicate approval thereof, subject to the limitations set forth, and will be considered to represent the approved progress schedule as of the date in the approval stamp until an updated progress schedule is submitted by **Contractor** and approved by **Owner** and **Engineer**.
- h) If **Contractor** believes that **Engineer's** approval of a progress schedule justifies an increase or decrease in contract price or an extension or shortening in contract time, **Contractor** shall be required to deliver a proposed change order thereof to **Engineer** in

accordance with the provisions of article 9 of the general conditions. If **Owner** and **Contractor** are unable to agree as to amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.

- I) Costs associated with **Engineer's** and **Owner's** review and return of a progress schedule submission after the **Engineer's** second time review shall be borne by **Contractor**. **Owner's** charges to **Contractor** for additional reviews will be equal to **Engineer's** charges to **Owner** under the terms of **Engineer's** agreement with **Owner**. In the event **Contractor** fails to pay such costs within 30 days after receipt of an invoice from **Owner**, a change order or proposed change order will be issued incorporating the unpaid amount, and **Owner** will be entitled to an appropriate decrease in Contract Price.
- j) No partial submittals will be reviewed. Submittals not complete will be returned to **Contractor** for resubmittal.

9) ***Delays and Recovery***

- a) Reference is made to the General Conditions and the Supplementary Conditions for Contract requirements related to delays, conditions warranting extensions in Contract Time(s), and conditions applicable to reimbursement for delay costs.
- b) Whenever **Contractor** fails to complete an activity within its late date on the approved progress schedule, **Contractor** shall, within five days or with the next application for payment, whichever comes earlier, submit a written statement to **Engineer** describing the cause for the slippage in the Activity and the actions being considered by **Contractor** to recover the time lost and to prevent or mitigate any derived slippage beyond the applicable Contract Time(s).
- c) A written schedule recovery statement shall include, but not be limited to, such actions as overlapping of dependent Activities, sequencing changes to accommodate increased Activity concurrency, assignment of additional labor or equipment, shift or overtime Work, expediting of submittals or deliveries, or any combination of the foregoing.
- d) If **Contractor** refuses, fails or neglects to submit a required written schedule recovery statement, **Owner** may, at its option, withhold additional retainage pursuant to the Contract Documents and/or initiate default termination proceedings in accordance with Contract Documents or request **Engineer** to identify and to order alternate recovery actions on the basis of the information in the current Progress Schedule. If **Contractor** believes that a written order to recover schedule from **Engineer** justifies an increase in Contract Price or an extension in Contract Time, **Contractor** shall be required to deliver a written request thereof in accordance with the provisions of Article 9 of the General Conditions. If **Owner** and **Contractor** are unable to agree as to responsibility for the slippage in the schedule or the amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.

10) ***Early-Completion Progress Schedules***

- a) Progress Schedules anticipating achievement of Substantial Completion ahead of the corresponding Contract Time(s), and disclosing appropriate Contract Float Time(s) for the Work, or parts thereof, shall be considered equivalent or equal to Progress Schedules anticipating Substantial Completion exactly on the Contract Time(s). In accordance with requirements of the Contract Documents, the contract Float Time in these equivalent or equal Progress Schedules will be available to **Owner**, **Engineer**, **Contractor** and others

to absorb delays to the Work as a whole which cannot be mitigated by any other means.

- b) Progress Schedules anticipating achievement of Substantial Completion ahead of the corresponding Contract Time(s), but with zero Contract Float as opposed to positive Contract Float, will be returned as either "Approved as Noted," "Resubmit with Revisions," or "Disapproved." Submittals stamped as "Approved as Noted" will indicate **Engineer's** approval thereof, subject to the limitations set forth, including **Engineer's** computation of the appropriate Contract Float implied by the anticipated early completion.
- c) If upon approval (or approval as noted) by **Engineer** of a Progress Schedule with disclosed or implied Contract Float Time, **Contractor** disputes the availability of Contract Float and proposes that compensation for delay shall be measured from the anticipated early completion date(s) as opposed to the corresponding Contract Time(s), **Contractor** agrees and understands that said proposal will represent a request to **Owner** that the approved Progress Schedule be evaluated as a substitute Progress Schedule for the purposes of changing the Contract Time(s) to those supported by the **Contractor's** early-completion Progress Schedule. Evaluation of that substitution will be in accordance with the requirements of paragraphs 5.7.1, 5.7.2 and 5.7.3 of the General conditions, and will require additional supporting data that explains and substantiates the basis of the anticipated Early Schedules. Such supporting data shall consist of: 1) notice of any scheduled Work during hours other than normal work hours, 2) information related to rates of production including pertinent quantities, crew sizes, man-day requirements, major items of equipment, etc., for Critical and other significant Activities, 3) express or implied contingency allowances figured in for Activities for such factors as weather, delays, activities of **Owner** AND **Engineer** to respond to reports of differing site conditions, and other relevant factors. Acceptance of that substitution will be evidenced by a Change Order shortening the Contract Time, or Contract Times accordingly, but maintaining the Contract Price and the provisions for liquidated and actual damages set forth in the Agreement.

11) ***Cash Allowance - Scheduling Subcontractor***

- a) It is understood that **Contractor** has included in the Contract Price the allowance stipulated in the Bid Form so named in the Contract Documents and shall cause the Work so covered to be done by the Scheduling Subcontractor and for such sums within the allowance as maybe acceptable to **Owner** and **Engineer**.
- b) It is also understood that **Contractor** has included in the Contract Price sufficient funds to cover all costs in excess of the allowance in connection with Work to be done by the Scheduling Subcontractor.

- c) **Contractor's** costs for administering the performance of Work by the Scheduling Subcontractor, for participating in the preparation of the required progress Schedule submittals, for overhead, profit and other expenses contemplated for the allowance have been included in the Contract Price for the Work and not in the allowance for the Scheduling Subcontractor. No demand for additional payment on account of any costs thereof will be valid.

12) ***Time Allowance Requirements for Document Review and Other Activities***

- a) **Contractor** shall make allowances for time required for a) document review and approval of submittals of Shop Drawings and samples specified in this Specification, b) the requirements for anticipated repeat submissions for particular items of materials or equipment, and c) the requirements for anticipated or required time intervals for the performance of specific parts of the Work by **Contractor**.
- b) **Contractor** shall make allowances for time required by a) those other activities indicated in or required by the contract Documents which are the responsibility of **Owner** or **Engineer**, b) the potential time requirements of **Owner** and **Engineer** to investigate instances of potential differing site conditions, and c) those other named time allowances required by the Contract Documents.
- c) It is understood that **Contractor** has included in the Contract Price the effect of accommodating all of these time allowances and requirements in the planning, scheduling and execution of the Work; that **Contractor's** Progress Schedule will incorporate Activities and sequences contemplated by the time allowances based on the information indicated in or required by the Contract Documents; and that **Contractor** shall cause the Work or requirements covered by such time allowances to be done within the limits of the Contract Time(s).

13) ***Measurement and Payments***

- a) All costs in connection with these requirements, including the Work to be performed by the Scheduling Subcontractor, shall be borne by **Contractor**. Payments made to **Contractor** under the allowance for the Scheduling Subcontractor provided for in paragraph 11.A shall be disbursed in their entirety to the Scheduling Subcontractor.
- b) Payments for Work performed under this Section of the Specifications will be made pursuant to Article 9 of the Agreement. Payment for Work performed shall be in accordance with the schedule of payments in the Special Progress Schedule Requirements.

14) ***Compliance***

- a) If **Contractor** refuses, fails or neglects to provide the required Progress Schedules or related schedule, Pricing and cost data, Shop Drawing data, or schedule recovery data, he will be deemed not to have provided sufficient information to **Engineer** upon which progress can be evaluated, and **Engineer** may refuse to recommend the whole or part of any outstanding payment if, in the **Engineer's** opinion, it would be incorrect to make such representations to **Owner**. Further, and pursuant to the Article 14 of the General Conditions, **Owner** may refuse to make payment of those amounts recommended by **Engineer** because of **Contractor's** failure or refusal to provide the required Progress Schedule and related submittal data.

15) ***Acceptable CPM Diagrams***

- a) Interim and Detailed CPM Diagrams shall be based on an arrow or precedence diagram format, and sequenced by the separate structures, facilities, buildings or site areas.
- b) CPM Diagrams shall be allotted on a time-scaled calendar and expressly identify: 1) the Contract Times, 2) the approach taken to comply with the Work Sequence conditions, 3) the Critical Path(s), and 4) all Activities. Activities shall be shown on their Early Schedule, and their total Float Times noted beside them.
- c) CPM Diagrams shall include title blocks identifying the name and location of the Project, Contract designation, names of **Owner, Engineer, Contractor** and Scheduling Subcontractor, Progress Schedule issue number and date, and sheet title. Diagram sheets shall be dimensioned as the full-size Contract Drawings, be neat and legible and submitted on a medium suitable for reproduction. Connections between Activities on different sheets shall be shown on the different sheets of the CPM Diagrams to allow a complete schedule document.

16) ***Acceptable Activity Schedule Data for CPM Diagrams***

- a) Activity schedule information shall, at a minimum, include the following data:
 - 1) Activity identified, i.e., I-J numbers in arrow format, or alphanumeric numbers in precedence format, such that not more than one Activity, dummy, or restraint may have the same identifier.
 - 2) Activity Description for each Activity, dummy or preferential restraint shall fully convey the scope of the Work included.
 - 3) Special Activity codes designating: a) location of the Work, e.g., site areas, elevations, etc., b) Work breakdown, e.g., process, trade, performing organization, c) responsibility, e.g., **Contractor, Owner**, Subcontractors, etc., d) as-awarded from amended (added or deleted by a Change Order or Proposed Change Order) items of Work.
 - 4) Activity labor requirements, based on a proportionate share of the (direct) labor manhours and quantities in the associated items from the Contract Price Breakdown developed pursuant to the requirements of the Supplementary Conditions.
 - 5) The use of start or finish restraint dates must be annotated as to the basis for the chosen restraints.

17) ***Acceptable Activity Value and Shop Drawing Data***

- a) Activity data pertaining to the Schedule of Values shall at a minimum include the following for each Activity:
 - 1) Activity code and description as on the CPM Diagram.

- 2) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.
 - 3) Activity Values shall breakdown Value for anticipated stored materials from Value for Work installed, as applicable.
 - 4) Cost of equipment or materials to be incorporated in the Work shall be assigned to the appropriate fabrication and delivery Activities.
- b) Activity data pertaining to the Schedule of Shop Drawing submissions shall at a minimum include the following for each Activity:
- 1) Activity code and description as on the CPM Diagram.
 - 2) A list of specific submissions, Specification Section, Contract Drawing sheet numbers, and applicable submission dates.
- c) The Schedule of Values and the Schedule of Shop Drawing submissions shall be provided on forms acceptable to **Engineer**.

18) ***Acceptable Scheduling Software***

- a) **Contractor's** evaluation of the CPM Diagrams shall be based on scheduling software meeting the data management, computational, and reporting requirements of this Specification. Activity reports provided by the scheduling software selected shall, at a minimum, display the following data for each Activity, dummy, or restraint:
- 1) Activity identifier, activity description, activity duration, activity man-days, computed or restrained Early Start date, computed Early Finish date, computed Late Start date, computed or restrained Late Finish date, Total Float and Free Float, Activity Value, Percent Complete, Activity Value for Work performed, and associated Activity list items (e.g., Shop Drawing submissions).
 - 2) Dates shall be in calendar form. Contract Times representing Substantial Completion requirements shall be set as restrained Late Finish Dates where applicable; Contract Times representing Commencement of Work conditions shall be shown as restrained Early Start Dates as applicable. Contract Float times shall be computed and shown pursuant to the definition in Attachment A.
- b) If the CPM Diagram is based on the precedence format, an additional computer report tabulating the sequences on the Diagram shall be provided showing: a) each Activity together with a listing of all of its preceding and succeeding Activities, and b) the relationship type, lead/lag types, and lead/lag times between each Activity and each of its preceding and succeeding Activities.
- c) The scheduling software shall have the capability of sorting out computer reports by the special Activity codes designated in 17(a) above.
- d) The scheduling software shall have the capability of sequencing computer reports by:
- 1) Activity identifier, in order of ascending I-J number.

- 2) Activity identifier, in order of descending J-I number.
 - 3) Total Float, in order of ascending Total Float values, and by ascending Early Start Dates, or by ascending I-J numbers, or by descending J-I numbers, within the same Total Float values.
 - 4) Early Start dates in chronological order of Early Start dates, and by ascending I-J numbers within the same Early Start Dates.
 - 5) Late Finish dates, in chronological order of Late Finish Dates and by descending J-I numbers within the same Late Finish Dates.
 - 6) Change Order or Proposed Change Order No.
- e) In addition to the ability to process the required Activity data, the scheduling software shall offer the following features: a) the capability of accepting and processing schedules with actual start and actual finish dates for the Activities; b) processing of CPM schedules with negative Total Float values; c) printing or plotting of rate of progress data, such as labor utilization and payment curves; d) the ability of drawing CPM Diagrams using plottergraphics.

19) ***Acceptable Progress Schedule Narratives***

- a) A narrative shall include sufficient information to substantiate the basis of the data used to develop that Progress Schedule submittal, and detail:
- 1) The status of the Progress Schedule in terms of number of days ahead or behind the Contract Time, or Contract Times.
 - 2) The progress status (i.e., progress achieved vs. that forecasted) for a) Activities designating accomplishment of Substantial Completion, b) Critical and other significant Activities, c) Work related to achieving milestones set forth by the Work Sequences indicated in or required by the Contract Documents, d) long-lead delivery items of material or equipment.
 - 3) The assumptions made in incorporating Work related to pending or authorized Change Orders and Proposed change Orders.
 - 4) Actual or potential delays, including causes, the steps taken or anticipated to mitigate their impact, and the anticipated effect on the Progress Schedule as a whole.
 - 5) Schedule recovery statement describing actions under consideration by **Contractor** to recover from a negative float or overrun in Late Finish Date condition.

- 6) Any significant changes in Progress Schedule sequences, and their basis thereof. Significant sequencing changes shall be those affecting Critical Activities, or causing a substantial reduction or increase in the Total Float Times available.
- 7) **Owner** and **Engineer** Activities which become due over the next two months on account of **Contractor's** requirements for performing Work which follows such **Owner** and **Engineer** Activities.
- 8) Rate of progress or "momentum" curves showing: a) the anticipated levels of labor utilization, e.g., man-days per week, and b) the anticipated level of payments for Work to be performed, all in accordance with the Activity time frames supported by the Early and Late Dates in the Progress Schedule.
- 9) Other information relevant to or of concern in the planning, scheduling and execution of Work over the next two months.
- 10) **Contractor's** responses to **Engineer's** comments raised in the review of the previous Progress Schedule submittal.
- 11) Actions taken to address schedule noncompliance issues which have negated **Engineer's** approval of a previous Progress Schedule submittal.

20) ***Acceptable Contractor's Cost Data***

- a) Cost data for inclusion in the **Contractor's** Cost reports required with each Progress Schedule Update submittal shall detail Contract financial and budget data available to and customarily relied upon by **Contractor** to monitor financial and cost performance.
- b) Acceptable financial and cost data for each cost account used by **Contractor** to apportion the contract Price to separable parts of the Work shall include:
 - 1) Account number and description.
 - 2) Account estimate data, identifying labor, material and equipment, and Subcontract costs for that account is included in the **Contractor's** Bid estimate, together with the sum increase or decrease in associated authorized Change Orders or Proposed Change Orders, and those sums anticipated by proposed Change Orders in negotiation or claims pending resolution.
 - 3) Current labor, material and equipment, and Subcontract cost data for the account; percent complete for the Work designated by that account; and **Contractor's** current forecast of the cost to complete Work designated by the account.

*** END OF SECTION ***

SECTION X - Standard Specifications

SPEC 00002

Concrete

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SECTION X - Standard Specifications

SPEC 00002

Concrete

1) *General*

1.1 *Scope of Work*

- a) The Contractor shall furnish all labor, materials, equipment, and incidentals needed for the cast-in-place and/or precast concrete required by the Contract Documents and as herein specified.

1.2 *Submittals*

- a) Cast-in-place concrete.
 - 1) Name and location of batch plant.
 - 2) Design mix.
 - 3) Shop drawings indicating placement of all reinforcing inserts, location of joints, sealing of joints, etc.
 - 4) Submittal on grating and frame.
- b) Precast concrete
 - 1) Name and location of precaster.
 - 2) Submittals of precast units.
 - 3) Certifications of design for loading.
 - 4) Submittal on manhole frame and cover.

1.3 *Quality Assurance*

- a) Codes and Standards
 - 1) Comply with the provisions of the following codes and standards, except as otherwise shown or specified:
 - a) ACI 301 - "Specifications for Structural Concrete for Buildings."
 - b) ACI 318 - "Building Code Requirements for Reinforced Concrete."
 - c) CRSI - "Manual of Standard Practice."
 - d) ACI 305 - "Recommended Practice for Hot Weather Concreting."

- 2) Where provisions of the above codes and standards are in conflict with the building code in force for the project, the more stringent code shall apply.

2) ***Products***

2.1 **Cast-In-Place Concrete**

- a) Portland Cement - ASTM C 150, Type III.
- b) Aggregates - ASTM C 33
 - 1) Fine aggregates - clean, sharp, natural sand free of dune sand, bank run sand, manufactured sand, loam, clay, etc.
 - 2) Coarse aggregate - clean processed natural limestone free of all foreign matter.
- c) Water - clean, fresh, free of all oils, acids organics, etc.
- d) Admixtures.
 - 1) Air-Entraining - ASTM C 260.
 - 2) Water-Reducing - ASTM C 494.
 - 3) Floor sealer - Sonoglaze is manufactured by Sonneborn Building Products or similar product by Master Builders.
- e) Concrete Qualifiers.
 - 1) Concrete mix shall be DOT Class E.
 - 2) Strength - 4,000 psi at twenty-eight (28) days with maximum water-cement ratio of 0.45.
 - 3) Air content - 6 percent.
 - 4) Slump limits - 3-4 inch.
- f) Reinforcing
 - 1) Bars - ASTM A615, Grade 40.
 - 2) Welded Wire Fabric - ASTM A185.
- g) Frame and Grating - (Reteculine)
 - 1) The frames, gratings, and appurtenances shall be fabricated from steel conforming to ASTM A36.
 - 2) All parts shall be galvanized according to the requirements of the NYSDOT 719-01 type 1.

- 3) Grating shall be provided with lock down bolt anchors.
- h) Waterstops
 - 1) Waterstops to be 6" PVC dumbbell style, made of virgin raw materials.
 - 2) Waterstops shall be #747 as manufactured by Greenstreak, #8046 as manufactured by Vulcan Metal Products, Inc., or equal.

2.2 **Precast Concrete Units**

- a) Precast concrete units shall be of sizes shown and built in accordance with ASTM standards C913-89. Units to be designated to withstand H-20 loading.
- b) Manhole cover and frame shall conform to NYSDOT Standard 715-05, Class No. 30. Units shall be supplied with lock down device.

3) ***Execution***

3.1 **Concrete Placement**

- a) General - Place concrete in compliance with the practices and recommendations of ACI-304, and herein specified.
- b) Deposit and consolidate concrete slabs in a continuous operation, within the limits of construction joints, until the placing of a panel or section is complete. In the event that the slab is placed in two sections, the sections shall have continuous waterstops.
- c) Consolidate concrete during placing operations using mechanical vibrating equipment, so that concrete is thoroughly worked around reinforcing and other embedded items and into corners.
- d) Bring slab surfaces to the correct level with a straight edge strike off. Use bull floats or darbies to smooth the surface, leaving it free of humps or hollows.

3.2 **Cold Weather Placing**

- a) Protect all concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures.
- b) When air temperature has fallen to or is expected to fall below 40E F, uniformly heat all water and aggregate before mixing, to obtain a mixture temperature of not less than 50E F and not more than 80E F at point of placement.
- c) Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators.

3.3 **Monolithic Slab Finish**

- a) Begin float finishing when surface water has disappeared or when concrete has stiffened sufficiently to permit the operation of a power-driven float. Check surface plane to a

tolerance not to exceed 1/4 inch in 10 feet, with uniform slopes to drains.

- b) Begin the final troweling when the surface produces a ringing sound as the trowel is moved over the surface.

3.4 Concrete Curing and Protection

- a) Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- b) Weather permitting, keep placed concrete continuously moist for not less than 72 hours.

3.5 Concrete Floor Sealer

- a) Concrete slab shall be fully cured, cleaned, and etched.
- b) Apply sealer as recommended by manufacturer or as specified in the contract documents.

*** END OF SECTION ***

SECTION X - Standard Specifications

SPEC 00003

Minimum Requirements for Health and Safety

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MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY

1. GENERAL

1.01 Description

- A.** The **CONTRACTOR** is solely responsible and liable for the health and safety of all on-site personnel and any off-site community potentially impacted by the remediation.
- B.** This section describes the minimum health and safety requirements for this project including the requirements for the development of a written Health and Safety Plan (HASP). All on-site workers must comply with the requirements of the HASP. The **CONTRACTOR's** HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this site remediation. The HASP is a required deliverable for this project. The HASP will be reviewed by the **ENGINEER**. The **CONTRACTOR** will resubmit the HASP, addressing all review comments from the **ENGINEER**. The **CONTRACTOR** shall not initiate on-site work in contaminated areas until an acceptable HASP addressing all comments has been developed.
- C.** Consistent disregard for the provision of these health and safety specifications shall be deemed just and sufficient cause for immediate stoppage of work and/or termination of the Contract or any Subcontract without compromise or prejudice to the rights of the **DEPARTMENT** or the **ENGINEER**.
- D.** Any discrepancies between this HASP and the specifications (or OSHA requirements) shall be resolved in favor of the more stringent requirements as determined by the **ENGINEER**.

1.02 Basis

- A.** The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (20 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (EPA), Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and EPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the EPA and the National Institute for Occupation Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.
- B.** The safety and health of the public and project personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Any additional costs will be considered only after the cause for suspension of operations is addressed and work is resumed. The **ENGINEER's** on-site representative and the **CONTRACTOR's** Superintendent will be kept

appraised, by the Safety Officer, of conditions which may adversely affect the safety and health of project personnel and the community. The **ENGINEER** may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the **ENGINEER**. The cost of work stoppage due to health and safety is the responsibility of the **CONTRACTOR** under this Contract.

1.03 Health and Safety Definitions

A. The following definitions shall apply to the work of this Contract:

1. Project Personnel: Project personnel include the **ENGINEER**, the **ENGINEER's** On-site Representatives, **CONTRACTOR**, Subcontractors, and Federal and State Representatives, working or having official business at the Project Site.
2. Authorized Visitor: Authorized visitors who work for the State of New York shall receive approval to enter the site from the **DEPARTMENT**. The Safety Officer has primary responsibility on determining who is qualified and may enter the site. The Site Safety Officer will only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.
3. Health and Safety Coordinator (HSC): The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the **CONTRACTOR**. The HSC will be responsible for the development and implementation of the HASP.
4. Safety Officer (SO): The SO will be the **CONTRACTOR's** on-site person who will be responsible for the day-to-day implementation and enforcement of the HASP.
5. Health and Safety Technicians (HST): The HST(s) will be the **CONTRACTOR's** on-site personnel who will assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.
6. Medical Consultant (MC): The MC is a physician retained by the **CONTRACTOR** who will be responsible for conducting physical exams as specified under the Medical Monitoring Programs in this section.
7. Project Site: The area designated on the Site Sketch, which includes the Contractor Work Area.
8. Contractor Work Area: An area of the project site including the Support Zone, access road, staging area, and Exclusion Zone.
9. Contractor Support Zone: An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.

10. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.
11. Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination. Protective clothing and breathing apparatus as specified in the health and safety requirements and in the **CONTRACTOR's** approved HASP must be worn.
12. Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.
13. **ENGINEER's** on-site representative: The **ENGINEER's** representative assigned responsibility and authority by the **ENGINEER** for day-to-day field surveillance duties.
14. Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by the **ENGINEER**.
15. Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases and/or vapor, which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials and hazardous conditions.

1.04 Responsibilities

A. The **ENGINEER** will be responsible for the following:

1. Reviewing the HASP for the acceptability for its personnel and the impact on the site and human health.
2. Reviewing modifications to the HASP.

B. The **CONTRACTOR** will be responsible for the following:

C. The **CONTRACTOR** will perform all work required by the Contract Documents in a safe and environmentally acceptable manner. The **CONTRACTOR** will provide for the safety of all project personnel and the community for the duration of the Contract.

D. The **CONTRACTOR** shall:

1. Employ an SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the **CONTRACTOR** shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications contained herein. No work will proceed on this project in the absence of an approved SO.

2. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract.
3. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations.
4. Be responsible for the implementation of this HASP, and the Emergency Contingency and Response Plan.
5. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary.
6. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the respective emergency services.
7. Have sole and complete responsibility of safety conditions for the project, including safety of all persons (including employees).
8. Be responsible for protecting the project personnel and the general public from hazards due to the exposure, handling, and transport of contaminated materials. Barricades, lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.
9. Ensure all OSHA health and safety requirements are met.
10. Maintain a chronological log of all persons entering the project site. It will include organization, date, and time of entry and exit. Each person must sign in and out.

1.05 Health and Safety Plan

A. The HASP is a deliverable product of this project. The **ENGINEER** will review and comment on the **CONTRACTOR's** HASP. Agreed upon responses to all comments will be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this contract. The HASP shall address, at a minimum, the following items in accordance with 29 CFR 1910.120(l)(2):

1. Health and Safety Organization.
2. Site Description and Hazard Assessment.
3. Training.
4. Medical Surveillance.

5. Work Areas.
6. Standard Operating Safety Procedures and Engineering Controls.
7. Personal Protective Equipment (PPE).
8. Personnel Hygiene and Decontamination.
9. Equipment Decontamination.
10. Air Monitoring.
11. Emergency Equipment/First Aid Requirements.
12. Emergency Response and Contingency Plan.
13. Confined-Space Entry Procedures.
14. Spill Containment Plan.
15. Heat & Cold Stress.
16. Record Keeping.
17. Community Protection Plan.

B. The following sections will describe the requirements of each of the above-listed elements of the HASP.

1.06 Health and Safety Organization

- A.** The **CONTRACTOR** shall list in the HASP a safety organization with specific names and responsibilities. At a minimum, the **CONTRACTOR** shall provide the services of a Health and Safety Coordinator, SO, Health and Safety Technician, and a Medical Consultant.
- B.** Health and Safety Coordinator: The **CONTRACTOR** must retain the services of a Health and Safety Coordinator (HSC). The HSC must be an American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP). The HSC must have a minimum of two years experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations. The HSC must be familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.

In addition to meeting the above requirements the HSC will have the following responsibilities:

1. Responsibility for the overall development and implementation of the HASP.
2. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.

3. Availability during normal business hours for consultation by the Safety Officer.
4. Availability to assist the Safety Officer in follow-up training and if changes in site conditions occur.

C. Safety Officer: The designated SO must have, at a minimum, two years of experience in the remediation of hazardous waste sites or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.

In addition to meeting the above qualifications, the SO will be responsible for the following minimum requirements:

1. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.
2. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction, including:
 - a. Potential hazards.
 - b. Personal hygiene principles.
 - c. PPE.
 - d. Respiratory protection equipment usage and fit testing.
 - e. Emergency procedures dealing with fire and medical situations.
 - f. Conduct daily update meetings in regard to health and safety.
3. Responsibility for alerting the **ENGINEER's** on-site representative prior to the **CONTRACTOR** starting any particular hazardous work.
4. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).
5. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.

D. Health and Safety Technicians: The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid. The HST will be under direct supervision of the SO during on-site work. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this

remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.

- E. Medical Consultant: The **CONTRACTOR** is required to retain a Medical Consultant (MC) who is a physician, certified in occupational medicine. The physician shall have experience in the occupational health area and shall be familiar with potential site hazards of remedial action projects. The MC will also be available to provide annual physicals and to provide additional medical evaluations of personnel when necessary.

1.07 Site Description and Hazard Assessment

- A. The **CONTRACTOR** shall perform a hazard assessment to provide information to assist in selection of PPE and establish air monitoring guidelines to protect on-site personnel, the environment, and the public. The **CONTRACTOR** shall provide a general description of the site, its location, past history, previous environmental sampling results, and general background on the conditions present at the site.
1. Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:
 - Nature of potential contaminants;
 - Location of potential contaminants at the project site;
 - Potential for exposure during site activities; and
 - Effects of potential contaminants on human health.
 2. Biological Hazards: A qualitative evaluation of biological hazards consisting of the elements listed for chemical hazards.
 3. Physical Hazards: The **CONTRACTOR** shall assess the potential for physical hazards affecting personnel during the performance of on-site work.
- B. The **CONTRACTOR** shall develop a hazard assessment for each site task and operation established in the HASP.

1.08 Training

A. OSHA Training

1. The **CONTRACTOR** is responsible to ensure that all project personnel have been trained in accordance with OSHA 1910.120 regulations.
2. The **CONTRACTOR** shall ensure that all employees are informed of the potential hazards of toxic chemicals to the unborn child and of the risks associated with working at the project site.
3. The **CONTRACTOR** shall be responsible for, and guarantee that, personnel not successfully completing the required training are not permitted to enter the project site to perform work.

B. Safety Meetings

1. The SO will conduct daily safety meetings for each working shift that will be mandatory for all project personnel. The meetings will provide refresher courses for existing equipment and protocols, and will examine new site conditions as they are encountered.
2. Additional safety meetings will be held on an as-required basis.

- C.** Should any unforeseen or site-specific safety-related factor, hazard, or condition become evident during the performance of work at this site, the **CONTRACTOR** will bring such to the attention of the SO in writing as quickly as possible for resolution. In the interim, the **CONTRACTOR** will take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.

1.09 Medical Surveillance

- A.** The **CONTRACTOR** shall utilize the services of a Physician to provide the minimum medical examinations and surveillance specified herein. The name of the Physician and evidence of examination of all **CONTRACTOR** and Subcontractor on-site personnel shall be kept by the SO.
- B.** **CONTRACTOR** and Subcontractor project personnel involved in this project shall be provided with medical surveillance prior to onset of work. Immediately at the conclusion of this project, and at any time there is suspected excessive exposure to substances that would be medically detectable, all project personnel will be medically monitored. The costs for these medical exams, including state field representatives, (four maximum) are to be borne by the **CONTRACTOR**.
- C.** Physical examinations are required for:
1. Any and all personnel entering hazardous or transition zones or performing work that required respiratory protection.
 2. All **CONTRACTOR** personnel on site who are dedicated or may be used for emergency response purposes in the Exclusion Zone.
 3. **CONTRACTOR** supervisors entering hazardous or transition zones, or on site for more than 16 hours during the length of the contract.
- D.** Physical examinations are not required for people making periodic deliveries provided they do not enter hazardous or transition zones.
- E.** In accordance with good medical practice, the examining Physician or other appropriate representative of the Physician shall discuss the results of such medical examination with the individual examined. Such discussion shall include an explanation of any medical condition that the Physician believes required further evaluation or treatment and any medical condition which the Physician believes would be adversely affected by such individual's employment at the project site. A written report of such examination shall be transmitted to the individual's private physician upon written request by the individual.

- F.** The examining Physician or Physician group shall notify the SO in writing that the individual has received a medical examination and shall advise the SO as to any specific limitations upon such individual's ability to work at the project site that were identified as a result of the examination. Appropriate action shall be taken in light of the advice given pursuant to this subparagraph.
- G.** The physical examination shall also include but not be limited to the following minimum requirements:
1. Complete blood profile;
 2. Blood chemistry to include: chloride, CO₂, potassium, sodium, BUN, glucose, globulin, total protein, albumin, calcium, cholesterol, alkaline phosphatase, triglycerides, uric acid, creatinine, total bilirubin, phosphorous, lactic dehydrogenase, SGPT, SGOT;
 3. Urine analysis;
 4. "Hands on" physical examination to include a complete evaluation of all organ systems including any follow-up appointments deemed necessary in the clinical judgement of the examining physician to monitor any chronic conditions or abnormalities;
 5. Electrocardiogram;
 6. Chest X-ray (if recommended by examining physician in accordance with good medical practice);
 7. Pulmonary function;
 8. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.
 9. Vision screening - Use a battery (TITMUS) instrument to screen the individual's ability to see test targets well at 13 to 16 inches and at 20 feet. Tests should include an assessment of muscle balance, eye coordination, depth perception, peripheral vision, color discrimination, and tonometry.
 10. Tetanus booster shot (if no inoculation has been received within the last five years); and
 11. Complete medical history.

1.10 Site Control

A. Security

1. Security shall be provided and maintained by the **CONTRACTOR**.
2. The **CONTRACTOR** shall contact law enforcement officials, emergency medical care units, local fire departments and utility emergency teams to ascertain the type of response required in any emergency situation and to coordinate the responses of the various units. A standard operating procedure describing security force response to foreseeable contingencies

shall be developed. The **CONTRACTOR** shall also prepare and update a list of emergency points of contact, telephone numbers, radio frequencies, and call signs to ensure dependable responses.

3. Security personnel shall record their presence while patrolling the site using a watchman's clock. The Tapes or punch cards shall be delivered to the **ENGINEER** once a week.
4. Security identification, specific to the project site, shall be provided by the **CONTRACTOR** for all project personnel entering the project site. The **CONTRACTOR** shall be responsible for and ensure that such identification shall be worn by each individual, visible at all times, while the individual is on the site. Vehicular access to the site, other than to designated parking areas, shall be restricted to authorized vehicles only.
5. Use of on-site designated parking areas shall be restricted to vehicles of the **ENGINEER**, **ENGINEER's** on-site representative, **CONTRACTOR**, subcontractor, and service personnel assigned to the site and actually on duty but may also be used on short-term basis for authorized visitors.
6. The **CONTRACTOR** shall be responsible for maintaining a log of security incidents and visitor access granted.
7. The **CONTRACTOR** shall require all personnel having access to the project site to sign-in and sign-out, and shall keep a record of all site access.
8. All approved visitors to the site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit.
9. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the **DEPARTMENT** with appropriate site access agreement.
10. Project sites shall be posted, "Warning Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence or equal at a minimum. Warning signs shall be posted at a minimum of every 500 feet.

B. Site Control

1. The **CONTRACTOR** shall provide the following site control procedures as a minimum:
 - A site map;
 - A map showing site work zones;
 - The use of a "buddy system"; and
 - Standard operating procedures or safe work practices.

C. Work Areas

1. The **CONTRACTOR** will clearly lay out and identify work areas in the field and will limit equipment, operations and personnel in the areas as defined below:
 - a. Exclusion Zone (EZ) - This will include all areas where potential environmental monitoring has shown or it is suspected that a potential hazard may exist to workers. The level of PPE required in these areas will be determined by the SO after air monitoring and on-site inspection has been conducted. The area will be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The Exclusion Zone will be delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing).
 - b. Contamination Reduction Zone - This zone will occur at the interface of "Hazardous" and "Clean" areas and will provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and clothing prior to entering the "Clean" area, and for the physical segregation of the "Clean" and "Hazardous" areas. This area will contain all required emergency equipment, etc. This area will be clearly delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing). It shall also delineate an area that although not contaminated at a particular time may become so at a later date.
 - c. Support Zone - This area is the remainder of the work site and project site. The Support Zone will be clearly delineated and procedures implemented to prevent active or passive contamination from the work site. The function of the Support Zone includes:
 1. An entry area for personnel, material and equipment to the Exclusion Zone of site operations through the Contamination Reduction Zone;
 2. An exit for decontamination personnel, materials and equipment from the "Decontamination" area of site operations;
 3. The housing of site special services; and
 4. A storage area for clean, safety, and work equipment.

1.11 Standard Operating Safety Procedures (SOSP), Engineering Controls

A. General SOSP

1. The **CONTRACTOR** will ensure that all safety equipment and protective clothing is kept clean and well maintained.
2. All prescription eyeglasses in use on this project will be safety glasses and will be compatible with respirators. No contact lenses shall be allowed on site.

3. All disposable or reusable gloves worn on the site will be approved by the SO.
4. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.
5. Footwear used on site will be covered by rubber overboots or booties when entering or working in the Exclusion Zone area or Contamination Reduction Zone. Boots or booties will be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or Contamination Reduction Zone.
6. All PPE used on site will be decontaminated or disposed of at the end of the work day. The SO will be responsible for ensuring decontamination of PPE before reuse.
7. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.
8. **CONTRACTOR**, subcontractor and service personnel unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that requires respiratory protection.
9. The **CONTRACTOR** will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.
10. On-site personnel found to be disregarding any provision of this plan will, at the request of the SO, be barred from the project.
11. Used disposable outerwear such as coveralls, gloves, and boots shall not be reused. Used disposable outerwear will be removed upon leaving the hazardous work zone and will be placed inside disposable containers provided for that purpose. These containers will be stored at the site at the designated staging area and the **CONTRACTOR** will be responsible for proper disposal of these materials at the completion of the project. This cost shall be borne by the **CONTRACTOR**.
12. Protective coveralls that become torn or badly soiled will be replaced immediately.
13. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.
14. All personnel will thoroughly cleanse their hands, face, and forearms and other exposed areas prior to eating, smoking or drinking.
15. Workers who have worked in a hazardous work zone will shower at the completion of the work day.
16. All personnel will wash their hands, face, and forearms before using toilet facilities.

17. No alcohol, firearms or drugs (without prescriptions) will be allowed on site at any time.
18. All personnel who are on medication should report it to the SO who will make a determination whether or not the individual will be allowed to work and in what capacity. The SO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.

B. Engineering Controls - Air Emissions

1. The **CONTRACTOR** shall provide all equipment and personnel necessary to monitor and control air emissions.

1.12 Personal Protective Equipment

A. General

1. The **CONTRACTOR** shall provide all project personnel with the necessary safety equipment and protective clothing, taking into consideration the chemical wastes at the site. The **CONTRACTOR** shall supply the **ENGINEER's** on-site personnel (average two people for the project duration) with PPE as specified. The **ENGINEER** will require specific manufacturers and styles of PPE, which are detailed in the Safety Equipment Specifications portion of this section. At a minimum, the **CONTRACTOR** shall supply all project personnel with the following:
 - a. Two (2) sets of cotton work clothing to include underwear, socks, work shirts, and work pants. Leather steel-toed work boots, and such other clothing and outer garments as required by weather conditions (e.g., insulated coveralls and winter jacket);
 - b. Sufficient disposable coveralls;
 - c. One pair splash goggles;
 - d. Chemical-resistant outer and inner gloves;
 - e. Rubber overshoes (to be washed daily);
 - f. Hard hat;
 - g. One full-face mask with appropriate canisters. The **ENGINEER** and the **DEPARTMENT** will supply their own full-face mask. The **CONTRACTOR** will supply the appropriate canisters to all on-site project personnel including the **ENGINEER** and the **DEPARTMENT**. The **CONTRACTOR** shall supply MSA canisters; and
 - h. For all project personnel involved with Level B protection, a positive-pressure SCBA or in-line air. A 5-minute escape bottle must be included with the in-line air apparatus.

B. Levels of Protection

1. It is planned that Levels C and D PPE will be required in this remediation. Although Levels A and B are not planned, site conditions may be encountered that require their use. The following sections described the requirements of each level of protection.

a. Level A Protection

1. PPE:
 - a. Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and NIOSH. Respirators may be:
 - Positive-pressure SCBA; or
 - Positive-pressure airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere).
 - b. Fully encapsulating chemical-resistant suit.
 - c. Coveralls.
 - d. Cotton long underwear.*
 - e. Gloves (inner), chemical-resistant.
 - f. Boots, chemical-resistant, steel toe and shank. (Depending on suit construction, worn over or under suit boot.)
 - g. Hard hat (under suit).*
 - h. Disposal gloves and boot covers (worn over fully encapsulating suit).
 - i. Cooling unit.*
 - j. Two-way radio communications (inherently safe).*

* Optional

2. Criteria for Selection:

Meeting any of these criteria warrants use of Level A protection:

- a. The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on:
 - Measures (or potential for) high concentration of atmospheric vapors, gases, or particulates, or
 - Site operations and work functions involves high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials highly toxic to the skin.
- b. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible.
- c. Operations must be conducted in confined, poorly ventilated areas until the absence of substances requiring Level A protection is determined.
- d. Direct readings on field Flame Ionization Detectors (FID) or Photoionization Detectors (PID) and similar instruments indicate high levels of unidentified vapors and gases in the air.

3. Guidance on Selection:

- a. Fully encapsulating suits are primarily designed to provide a gas- or vapor-tight barrier between the wearer and atmospheric contaminants. Therefore, Level A is generally worn when high concentrations of airborne substances could severely effect the skin. Since Level A requires the use of SCBA, the eyes and respiratory system are also more protected.

Until air surveillance data become available to assist in the selection of the appropriate level of protection, the use of Level A may have to be based on indirect evidence of the potential for atmospheric contamination or other means of skin contact with severe skin affecting substances.

Conditions that may require Level A protection include:

- Confined spaces: Enclosed, confined, or poorly ventilated areas are conducive to the buildup of toxic vapors, gases, or particulates. (Explosive or oxygen-deficient atmospheres are also more probable in confined spaces). Confined-space entry does not automatically warrant wearing Level

A protection, but should serve as a cue to carefully consider and to justify a lower level of protection.

- Suspected/known highly toxic substances: Various substances that are highly toxic, especially skin absorption, for example, fuming corrosives, cyanide compounds, concentrated pesticides, Department of Transportation Poison "A" materials, suspected carcinogens, and infectious substances may be known or suspected to be involved. Field instruments may not be available to detect or quantify air concentrations of these materials. Until these substances are identified and concentrations measured, maximum protection may be necessary.
- Visible emissions: Visible air emissions from leaking containers or railroad/vehicular tank cars, as well as smoke from chemical fires and others, indicate high potential for concentrations of substances that could be extreme respiratory or skin hazards.
- Job Functions: Initial site entries are generally walk-throughs, in which instruments and visual observations are used to make a preliminary evaluation of the hazards.

In initial site entries, Level A should be worn when:

- There is a probability for exposure to high concentrations of vapors, gases, or particulates; and
- Substances are known or suspected of being extremely toxic directly to the skin or by being absorbed.

Subsequent entries are to conduct the many activities needed to reduce the environmental impact of the incident. Levels of protection for later operations are based not only on data obtained from the initial and subsequent environmental monitoring, but also on the probability of contamination and ease of decontamination.

Examples of situations where Level A has been worn are:

- Excavating of soil to sample buried drums suspected of containing high concentrations of dioxin;
- Entering a cloud of chlorine to repair a valve broken in a railroad accident;
- Handling and moving drums known to contain oleum; and

- Responding to accidents involving cyanide, arsenic, and undiluted pesticides.
- b. The fully encapsulating suit provides the highest degree of protection to skin, eyes, and respiratory system if the suit material resists chemicals during the time the suit is worn. While Level A provides maximum protection, all suit material may be rapidly permeated and degraded by certain chemicals from extremely high air concentrations, splashes, or immersion of boots or gloves in concentrated liquids or sludges. These limitations should be recognized when specifying the type of fully encapsulating suit. Whenever possible, the suit material should be matched with the substance it is used to protect against.

b. Level B Protection

1. PPE:
 - a.. Positive-pressure SCBA (MSHA/NIOSH approved); or
 - b. Positive-pressure air line respirator (with escape bottle for IDLH or potential for IDLH atmosphere) MSHA/NIOSH approved;
 - c. Chemical-resistant clothing (overalls and long-sleeved jacket; coveralls or hooded, one- or two-piece chemical-splash suit; disposable chemical-resistant, one-piece suits);
 - d. Cotton long underwear;*
 - e. Coveralls;
 - f. Gloves (outer), chemical-resistant;
 - g. Gloves (inner), chemical-resistant;
 - h. Boots (inner), leather work shoe with steel toe and shank;
 - i. Boots (outer), chemical-resistant, (disposable);
 - j. Hard hat (face shield*);
 - k. 2-way radio communication;* and
 - l. Taping between suit and gloves, and suit and boots.

*Optional

2. Criteria for Selection:

Any one of the following conditions warrants use of Level B Protection:

- a. The type and atmospheric concentration of toxic substances have been identified and require a high level of respiratory protection, but less skin protection than Level A. These atmospheres would:
 - Have IDLH concentrations; or
 - Exceed limits of protection afforded by an air-purifying mask; or
 - Contain substances for which air-purifying canisters do not exist or have low removal efficiency; or
 - Contain substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard.
- b. The atmosphere contains less than 19.5% oxygen.
- c. Site operations make it highly unlikely that the work being done will generate high concentrations of vapors, gases or particulates, or splashes of material that will affect the skin of person wearing Level B protection.
- d. Working in confined spaces.
- e. Total atmospheric concentrations, sustained in the breathing zone, of unidentified vapors or gases range from 5 ppm above background to 500 ppm above background as measured by direct reading instruments such as the FID or PID or similar instruments, but vapors and gases are not suspected of containing high levels of chemicals toxic to skin.

3. Guidance on Selection Criteria:

Level B equipment provides a reasonable degree of protection against splashes and to lower air contaminant concentrations, but a somewhat lower level of protection to skin than Level A. The chemical-resistant clothing required in Level B is available in a wide variety of styles, materials, construction detail, permeability, etc. Taping joints between the gloves, boots and suit, and between hood and respirator reduces the possibility for splash and vapor or gas penetration. These factors all affect the degree of protection afforded. Therefore, the SO should select the most effective chemical-resistant clothing based on the known or anticipated

hazards and/or job function. (It is anticipated that Level B protection will not be required under this contract.)

Level B does provide a high level of protection to the respiratory tract. Generally, if SCBA is required, Level B clothing rather than a fully encapsulating suit (Level A) is selected based on needing less protection against known or anticipated substances affecting the skin. Level B skin protection is selected by:

- a. Comparing the concentrations of known or identified substances in air with skin toxicity data;
- b. Determining the presence of substances that are destructive to or readily absorbed through the skin by liquid splashes, unexpected high levels of gases, vapor or particulates, or other means of direct contact; and
- c. Assessing the effect of the substance (at its measured air concentrations or splash potential) on the small area of the head and neck left unprotected by chemical-resistant clothing.

For initial site entry at an open site, Level B protection should protect site personnel, providing the conditions described in selecting Level A are known or judged to be absent.

c. Level C Protection

1. PPE
 - a.. Full-face, air-purifying, cartridge- or canister-equipped respirator (MSHA/NIOSH approved) with cartridges appropriate for the respiratory hazards;
 - b. Chemical-resistant clothing (coveralls, hooded, one-piece or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls);
 - c. Coveralls;
 - d. Cotton long underwear;*
 - e. Gloves (outer), chemical-resistant;
 - f. Gloves (inner), chemical-resistant;
 - g. Boots (inner), leather work shoes with steel toe and shank;
 - h. Boots (outer), chemical-resistant (disposable);*
 - i. Hard hat (face shield);*
 - j. Escape SCBA of at least 5-minute duration;

- k. 2-way radio communications (inherently safe);* and
- l. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection

Meeting all of these criteria permits use of Level C protection:

- a. Measured air concentrations of identified substances will be reduced by the respirator to, at or below, the substance's Threshold Limit Value (TLV) or appropriate occupational exposure limit and the concentration is within the service limit of the canister.
- b. Atmospheric contaminant concentrations do not exceed IDLH levels.
- c. Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect the small area of the skin left unprotected by chemical-resistant clothing.
- d. Job functions do not require SCBA.
- e. Total readings register between background and 5 ppm above background as measured by instruments such as the FID or PID.
- f. Oxygen concentrations are not less than 19.5% by volume.
- g. Air will be monitored continuously.

3. Guidance on Selection Criteria

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing air-purifying devices. The air-purifying device must be a full-face mask (MSHA/NIOSH approved) equipped with a cartridge suspended from the chin or on a harness. Cartridges must be able to remove the substances encountered.

A full-face, air-purifying mask can be used only if:

- a. Oxygen content of the atmosphere is at least 19.5% by volume;
- b. Substance(s) is identified and its concentrations(s) measured;
- c. Substance(s) has adequate warning properties;

- d. Individual passes a qualitative fit-test for the mask; and
- e. Appropriate cartridge is used, and its service limits concentration is not exceeded.

An air monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators (Level C). Continual surveillance using direct-reading instruments and air sampling is needed to detect any changes in air quality necessitating a higher level of respiratory protection. Total unidentified vapor/gas concentrations exceeding 5 ppm above background require Level B.

d. Level D Protection

- 1. PPE:
 - a. Coveralls, chemical resistant;

- b. Gloves (outer), chemical resistant;
- c. Gloves (inner), chemical resistant;*
- d. Boots (inner), leather work shoes with steel toe and shank;
- e. Boots (outer), chemical resistant (disposable);*
- f. Hard hat;
- g. Face shield;*
- h. Safety glasses with side shields or chemical splash goggles;* and
- i. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection:

- a. No atmospheric contaminant is present.
- b. Direct reading instruments do not indicate any readings above background.
- c. Job functions have been determined not to require respirator protection.

3. Guidance on Selection Criteria:

Level D protection is distinguished from Level C protection in the requirement for respiratory protection. Level D is used for non-intrusive activities or intrusive activities with continuous air monitoring. It can be worn only in areas where there is no possibility of contact with contamination.

e. Anticipated Levels of Protection

- 1. It is anticipated that most of the work shall be performed in Level D. A respirator shall be immediately available in the event that air monitoring indicates an upgrade to Level C is required. The determination of the proper level of protection for each task shall be the responsibility of the **CONTRACTOR**. These task specific levels of protection shall be stated in the **CONTRACTOR's** HASP.

C. Safety Equipment Specifications

Note: Prior to purchasing any equipment or supplies required by this HASP, the **CONTRACTOR** shall notify the **ENGINEER** of the type, model and manufacturer/supplier of that particular safety equipment he is proposing to use or purchase for use on this project. The specifications for PPE that the **CONTRACTOR** is to supply to the **ENGINEER** and which differ from the minimum requirements shown below are provided at the end of this section.

D. Self-Contained Breathing Apparatus

1. The **CONTRACTOR** shall provide positive-pressure SCBA for possible upgrades in respiratory protection. The **CONTRACTOR** shall further supply all the SCBA for all field personnel for the duration of normal work activities. The units must be a MSHA/NIOSH-approved pressure-demand type with a 30-minute service life, manufactured/supplied by Scott, MSA, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators in accordance with OSHA regulations (29 CFR 1910.13-4) and as recommended by the manufacturer.

E. Disposable Coveralls

1. The **CONTRACTOR** shall provide, as necessary, protective coveralls for all project personnel each day with extra sets provided for authorized visitors. The coveralls shall be of the disposable type made of Tyvek or equivalent material, and shall be manufactured/supplied by Durafab, Koppler, or other appropriate manufacturers. To protect project personnel from exposure to liquids, splash-resistant suits (Saranex suits, from appropriate manufacturers) shall be provided. Ripped suits will be immediately replaced after all necessary decontamination has been completed to the satisfaction of the SO.

F. Hard Hat

1. The **CONTRACTOR** shall provide and maintain one hard hat per person on site (authorized visitors included). The hard hats shall comply with OSHA Health and Safety Standards (29 CFR 1910.135).

G. Face Shields

1. The **CONTRACTOR** shall provide and maintain one face shield per person on site. The face shields shall be of the full face type meeting OSHA Health and Safety Standards (29 CFR 1910.133) and shall have brackets for mounting on hard hats. Hard hats and face shields shall be from the same manufacturer to ensure proper fit and shall be manufactured/supplied by Bullard, Norton, or other appropriate manufacturers.

H. Work Clothing

1. The **CONTRACTOR** shall provide a minimum of two sets of work clothing per personnel to allow for changing if contaminated. The work clothing shall include a minimum of underwear, socks, work shirts, work pants, and other clothing as weather conditions dictate. All work clothes shall be put on clean, before entering the site and shall not be kept in same lockers as the workers street clothes. All project personnel shall shower and change to street clothing prior to leaving the site. All contaminated work clothing shall be laundered on site with wash water drained to the decontamination water holding tank.

I. Escape-Type Respirator

1. The **CONTRACTOR** shall provide and maintain one self-contained breathing escape-type respirator per person working on site. The small self-contained device shall be capable of providing oxygen to the worker while protecting an escaping worker from toxic gases. The respirator shall be made by Scott, MSA, or other appropriate manufacturer. The **CONTRACTOR** shall inspect and ensure all devices are in working order before issuing to personnel. Employees must be trained to use equipment prior to being allowed to work on site and carry the escape-type respirator with them. An escape-type respirator must be provided if positive-pressure SCBA are not part of the ensemble worn by each person on site.

J. Full Face Organic Vapor Respirator

1. The **CONTRACTOR** shall provide and maintain a dedicated air-purifying organic vapor respirator per person working in hazardous work and neutral work zones. The respirator shall be of the full-face canister type with cartridges appropriate for the respiratory hazards. Respirators and cartridges shall be MSHA/NIOSH approved, manufactured/supplied by MSA, Scott, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators and canisters in accordance with OSHA regulations (29 CFR 1910.134) and in accordance with manufacturer's instructions. The **CONTRACTOR** shall ensure that proper fit testing training and medical surveillance of respirator users is in accordance with OSHA regulations (29 CFR 1910.134).

K. Gloves (outer)

1. The **CONTRACTOR** shall supply a minimum of one pair of gloves per workman in areas where skin contact with hazardous material is possible. Work gloves shall consist of nitrile (NCR) or Neoprene material. Other gloves may be selected if required based on the potential chemical present. Cotton liners will be provided by the **CONTRACTOR** during cold weather.

L. Gloves (inner)

1. The **CONTRACTOR** shall supply Latex or equivalent surgical gloves to be worn inside the outer gloves.

M. Boots (inner)

1. The **CONTRACTOR** shall supply one pair of safety shoes or boots per workman and shall be of the safety-toe type meeting the requirements of 29 CFR 1910.136.

N. Boots (outer)

1. The **CONTRACTOR** shall provide and maintain one pair of overshoes for the on-site person entering a hazardous work area. The overshoes shall be constructed of rubber and shall be 12 inches high minimum.

PERSONAL PROTECTIVE EQUIPMENT SPECIFICATIONS				
Description	Manufacturer	Model Number	Size	Comments
Tyvek coveralls	Kappler/Abanda	1427/1428	xl/lg	NA
Saranex coveralls	Kappler/Abanda	77427/77428/77434	xl/lg	NA
Sijal acid suit	Chemtex Bata	91522-G	xl/lg	NA
Surgical gloves	Best	7005	xl/lg	NA
Neoprene gloves	Edmont	8-354	xl/lg	NA
Nitrile gloves	Granet	1711	10	NA
Butyl gloves	North	B-161	10	NA
Viton gloves	North	F-124	10/11	NA
Long gauntlet neoprene	Edmont	19-938	xl	NA
Cotton work gloves	North	Grip-N/K511M	men's	or equal
Latex booties	Rainfair	1250-Y	xl	NA
PAPR pesticide cartridges	Racal	AP-3	NA	NA
PAPR asbestos cartridges	Racal	SP-3	NA	NA
APR organic cartridges	MSA	GMC-H	NA	NA
APR asbestos cartridges	MSA	Type H	NA	NA
APR pesticide cartridges	MSA	GMP	NA	NA

1.13 Personnel Hygiene and Decontamination

A. On-Site Hygiene Facility

- The **CONTRACTOR** shall provide a hygiene facility on site. The hygiene facility shall include the following:
 - Adequate lighting and heat;
 - Shower facilities for project personnel;
 - Laundry facilities for washing work clothes and towels;
 - Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;

- Clean and "dirty" locker facilities; and
- Storage area for work clothing, etc.

a. Portable "Boot Wash" Decontamination Equipment

1. The **CONTRACTOR** shall provide a portable decontamination station, commonly referred to as a "Boot Wash" facility for each hazardous work zone requiring decontamination for project personnel. These facilities shall be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform, with the equipment being mobile, allowing easy transport from one hazardous work zone to the next. All such wash water shall be disposed of at the dewatering facility. An appropriate detergent such as trisodium phosphate shall be used.

b. Personnel Decontamination

1. The **CONTRACTOR** shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.

c. Disposal of Spent Clothing and Material

1. Contaminated clothing, used respirator cartridges and other disposable items will be put into drums/containers for transport and proper disposal in accordance with TSCA and RCRA requirements.
2. Containers/55-gallon capacity drums shall conform to the requirements of 40 CFR Part 178 for Transportation of Hazardous Materials. The containers/drums containing excavated and other hazardous material shall be transported by the **CONTRACTOR** to the staging area.
3. The **CONTRACTOR** is responsible for the proper container packaging, labeling, transporting, and disposal.

1.14 Equipment Decontamination

A. General

1. All equipment and material used in this project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. With the exception of the excavated materials, all other contaminated debris, clothing, etc. that cannot be decontaminated shall be disposed at the **CONTRACTOR's** expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization the unit prices bid for disposal of decontamination liquids or as otherwise directed on this project. All vehicles and equipment used in the "Dirty Area" will be

decontaminated to the satisfaction of the SO in the decontamination area on site prior to leaving the project. The **CONTRACTOR** will certify, in writing, that each piece of equipment has been decontaminated prior to removal from the site.

2. Decontamination shall take place within the designated equipment and materials decontamination area. The decontamination shall consist of degreasing (if required), followed by high-pressure, hot-water cleaning, supplemented by detergents as appropriate. Wash units shall be portable, high-pressure with a self-contained water storage tank and pressurizing system (as required). Each unit shall be capable of heating wash waters to 180 degrees Fahrenheit and providing a nozzle pressure of 150 psi.
3. Personnel engaged in vehicle decontamination will wear protective clothing and equipment as determined in the HASP. If the **CONTRACTOR** cannot or does not satisfactorily decontaminate his tools or equipment at the completion of the project, the **CONTRACTOR** will dispose of any equipment which cannot be decontaminated satisfactorily and will bear the cost of such tools and equipment and its disposal without any liability to the **ENGINEER**. At the completion of the project the **CONTRACTOR** shall completely decontaminate and clean the decontamination area.

B. Decontamination Station

1. The **CONTRACTOR** shall construct a decontamination station as described. The decontamination station shall be located in the Contamination Reduction Zone and shall be used to clean all vehicles leaving the Exclusion Zone prior to entering the Support Zone or leaving the site.
2. Each decontamination pad will be equipped with a drain system and holding tank on a properly graded area that has no deleterious material. The **CONTRACTOR** shall obtain and analyze one soil sample at the area where the decontamination pad is to be built and one soil sample after the pad has been dismantled, as directed by the Engineer. The cost associated with the samples shall be included in the cost of providing health and safety at the site.
3. Shop drawings of the decontamination pad shall be submitted to the **ENGINEER** for approval.
4. The **CONTRACTOR** shall be responsible for the provision of an adequately equipped decontamination pad which shall meet the following requirements:
 - a. Adequate dimensions to contain wash water and debris from the largest sized vehicles to be utilized in this contract. All vehicles and construction equipment leaving a contaminated zone shall be decontaminated.
 - b. Perimeter to be curbed and provided with splash guards.
 - c. 40 mil impervious HDPE membrane is required to prevent seepage into the ground.
 - d. Sumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.

- e. Temporary storage facility may be mobile tankers or suitable fixed tanks. Fixed tanks shall be located within secondary containment areas capable of containing 100% of the tank capacity, or 110% of the largest tank where the secondary containment area holds more than one tank. The secondary containment area shall have a permeability of not more than 1.0×10^{-7} cm/sec.

- f. The decontamination pad is to be located at the exit of each contaminated zone such that previously non-contaminated areas are not contaminated during remedial activities. This may require the construction and use of multiple decontamination pads.
 - g. The **CONTRACTOR** shall place a minimum of six (6) inches of sand under the decontamination pad.
 - h. There shall be side wall panels, six (6) feet high minimum on two sides to prevent over spray.
- C. The **CONTRACTOR** shall clean the decontamination pad after daily use. No contamination shall be left behind. The **CONTRACTOR** will be required to dismantle, remove and properly dispose of the pad at their own expense.

1.15 Air Monitoring Program

A. General

- 1. The **CONTRACTOR** shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-site receptors as a result of site work.
- 2. The **CONTRACTOR** shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum real-time aerosol monitors, depending on work activities and environmental conditions.
- 3. The **CONTRACTOR's** AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring will be to determine if an upgrade (or down-grade) of PPE is required while performing on-site work and to implement engineering controls, protocols, or emergency procedures if **CONTRACTOR**-established action levels are encountered.
- 4. The **CONTRACTOR** shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration of contamination to off-site receptors. Documentation monitoring shall include the collection and analysis of samples for total nuisance dust.
- 5. To protect the public in the neighboring residential neighborhood, the **CONTRACTOR** must include in the AMP provisions for suspending work and implementing engineering controls based upon detectable odors, as well as upon instrument monitoring results.
- 6. During the progress of active remedial work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work site will be conducted on a continuous basis. Any departures from general background will be reported to the SO prior to entering the area. The SO will determine when and if operations should be shut down.

7. Air monitoring (both real time and documentation monitoring) shall be conducted by a minimum of one dedicated person with communication to the foreman whenever intrusive activities (such as excavation, tank removal, and soil treatment) are performed in an exclusion zone. After completion of intrusive activities involving contaminated materials and removal of the exclusion zone, air monitoring may be discontinued.
8. Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the **ENGINEER's** on-site representative.

B. Action Levels

1. VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

a. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

b. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

c. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

d. All 15-minute readings must be recorded and be available for State (DEPARTMENT and New York State Department of Health (NYSDOH)) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

2. Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

a. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.

b. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

c. All readings must be recorded and be available for State (DEPARTMENT and NYSDOH) and County Health personnel to review.

C. Real-Time Monitoring

1. The **CONTRACTOR** shall submit a written copy of the real time air monitoring results for each Workday, by 10:00 a.m. the following Workday, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).
2. Real-time monitoring shall be conducted using the following equipment:
3. Organic vapor photoionizers shall be Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equal. The **CONTRACTOR** shall provide one Photovac TIP for each and every hazardous work zone operation.
4. Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPDM-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM₁₀) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols

Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 µg/m³)

Precision (2-sigma) at constant temperature:

+/- 10 $\mu\text{g}/\text{m}^3$ for one second averaging; +/- 1.5 $\mu\text{g}/\text{m}^3$ for sixty second averaging

Accuracy:

+/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 μm , g= 2.5, as aerosolized)

Resolution: 0.1% of reading or 1 $\mu\text{g}/\text{m}^3$, whichever is larger

Particle Size Range of Maximum Response: 0.1-10 μ

Total Number of Data Points in Memory: 10,000

Logged Data:

Each Data Point: average concentration, time/date, and data point number

Run Summary:

overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.

Alarm Averaging Time (user selectable):

real-time (1-60 seconds) or STEL (15 minutes)

Operating Time: 48 hours (fully charged NiMH battery); continuously with charger

Operating Temperature: -10 to 50°C (14 to 122°F)

Automatic alarms are suggested.

5. Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although the instrument's design does not allow it to make a sharp differentiation of particulates at the PM_{10} standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10 μ range in the immediate vicinity of construction activities.
6. Monitor the air, using the same equipment, for 10-15 minutes upwind of the work site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m^3 or 2.5 times the established background level at the work site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m^3 above background, monitor the downwind site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m^3 above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m^3 over background concentration, the CONTRACTOR shall immediately suspend work at the site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.
7. Real-time monitoring will be conducted at any excavation of contaminated soil or sediments. Real-time monitoring will also be conducted at perimeter locations including an upwind (background) and three downwind locations. A

background reading will be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading will be made. Downwind readings at the perimeter will be made when **CONTRACTOR** action levels have been exceeded at the excavation face or at a minimum of twice a day.

8. If action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.
9. Construction activities generate dust which could potentially transport contaminants off site. There may be situations when visible dust is being generated and leaving the site and the monitoring equipment does not measure PM₁₀ at or above the action level. Therefore, if dust is observed leaving the working site, additional dust suppression techniques must be employed by the **CONTRACTOR**.

D. Documentation Monitoring

1. Documentation monitoring will be conducted at the perimeter at a minimum of four locations (one upwind and three downwind) for total dust. Documentation monitoring will be conducted only during excavation, consolidation, staging, removal, or decontamination activities (i.e., intrusive activities).
 - a. Collect total nuisance dust using PVC collection filter and personnel sampling pump and analyze gravimetrically according to NIOSH 89-127 Method 0500.
 - b. Documentation samples will be collected at established perimeter locations. The four locations will be chosen according to site activities and expected wind direction.
 - c. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site. Samples will be collected at a height of 6 feet above ground surface.
 - d. Documentation samples will be collected continuously, during the normal work hours when activities are occurring on site. At the end of the week, one days worth of sampling (i.e. three downwind locations and one upwind location) will be selected by the Engineer for analysis by the Contractor.
 - e. The documentation samples will be collected over an eight (8) hour work period.
 - f.. In addition to perimeter monitoring, personnel documentation samples will be collected on site once a week. On-site samples will be collected by choosing "high risk" workers to wear appropriate collection media for pesticides, metals, and particulate. "High risk" workers are those who are most likely to encounter contamination on a particular task. At a minimum, two high risk workers will be chosen to wear

collection media for a particular day each week and the media will be analyzed with the documentation air monitoring samples.

- g. The **CONTRACTOR** shall submit a written copy of the documentation air monitoring results within 7 days of sampling, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).
- h. The documentation sampling submitted shall also identify the “high risk” workers chosen to wear appropriate collection media for contaminants; date media was worn; task involved; analytical results and applicable standards.
- i. Payment for air monitoring will not be approved until the above submittals have been received and approved by the **ENGINEER**.

E. Community Air Monitoring

- 1. Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEPARTMENT/NYSDOH staff.
 - a. **Continuous monitoring** will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.
 - b. **Periodic monitoring** for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or Final DER-10 Page 205 of 226 Technical Guidance for Site Investigation and Remediation May 2010 overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

1.16 Emergency Equipment and First Aid Requirements

A. Communications

1. The **CONTRACTOR** shall provide telephone communication at the site field office. Emergency numbers, such as police, sheriff, fire, ambulance, hospital, poison control, DEPARTMENT, EPA, NYSDOH, and utilities, applicable to this site shall be prominently posted near the telephone.
2. The **CONTRACTOR** shall establish a signaling system for emergency purposes.

B. Emergency Shower and Emergency Eye Wash

1. The **CONTRACTOR** shall supply and maintain one portable eyewash/body wash facility per active hazardous work zone. The facility shall have a minimum water capacity of 10 gallons and shall conform to OSHA regulations 29 CFR 1910.151. The portable eyewash/body wash facility shall be manufactured/ supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

C. Fire Extinguishers

1. The **CONTRACTOR** shall supply and maintain at least one fire extinguisher in the **CONTRACTOR's** office and one at each hazardous work zone. The fire extinguisher shall be a 20-pound Class ABC dry fire extinguisher with UL-approval per OSHA Safety and Health Training Standards 29 CFR 1910.157. The fire extinguisher shall be manufactured/supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

D. First Aid Kit

1. The **CONTRACTOR** shall supply and locate in his project office and at each and every hazardous work zone one 24-unit (minimum size) "industrial" or "Contractor" first aid kit, required by OSHA requirements 29 CFR 1910.151. The first aid kit shall be manufactured/supplied by Norton, Scott, or other appropriate suppliers.

E. Emergency Inventory

1. In addition to those items specified elsewhere, the SO will maintain the following inventory of equipment and protective clothing for use at the site in the event of emergencies.
 - a. Washable coveralls;
 - b. Gloves (outer);
 - c. Gloves (inner);
 - d. SCBA;
 - e. Escape SCBA (authorized visitor use);
 - f. Face shields;
 - g. Safety glasses;

- h. Respirators and appropriate cartridges;
- i. Disposable coveralls;
- j. Chemical-resistant boots and latex boot covers;
- k. Hard hats;
- l. Bottled breathing air; and
- m. Rain suits.

1.17 Emergency Responses/contingency Plan and Procedures

A. Daily Work

1. During the progress of work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation prior to personnel entering these areas. Sampling shall be conducted on a continuous basis. Based on the air monitoring data, the proper level of protection will be chosen by the SO.

B. Emergency Vehicle Access

1. In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is blocked by the working crew operations, those operations (equipment, materials, etc.) will be immediately moved to allow those vehicles access. Emergency crews will be briefed as to site conditions and hazards by the SO. All vehicles and personnel will be decontaminated prior to leaving the site.
2. The **CONTRACTOR** shall schedule a site briefing with the local Fire Department at the completion of mobilization to familiarize emergency response personnel with his operations and site layout.

C. Personal Injury Response Plan

1. In cases of personal injuries, the injured person or the crew personnel in charge will notify the SO. The SO will assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO will arrange for an ambulance if required.
2. If soiled clothing cannot be removed, the injured person will be wrapped in blankets for transportation to the hospital.
3. Personnel, including unauthorized personnel, having skin contact with chemically contaminated liquids or soils shall be flushed with water after any wet or soiled clothing has been removed.
4. These personnel should be observed by the SO to ascertain whether there are any symptoms resulting from the exposure. If there is any visible manifestation of exposure such as skin irritation, the project personnel will refer to a consulting physician to determine whether the symptoms were the result of a delayed or acute exposure, a secondary response to exposure such as skin infection, or occupational dermatitis. All episodes of obvious chemical contamination will be reviewed by the SO in order to determine whether changes are needed in work procedures.

D. Route to the Hospital

1. The **CONTRACTOR** shall post in conspicuous places in the Support Zone a map with written directions to the nearest hospital or emergency medical treatment facility.

E. Fire Service

1. The **CONTRACTOR** will make arrangements to take immediate fire fighting and fire protection measures with the local Fire Chief. If there is a fire, the crewmen or their person in charge will immediately call the SO. The SO will immediately call the fire personnel.
2. The air downwind from any fire or explosion will be monitored immediately in order to protect workers and the nearby community. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan are to be followed.

F. Master Telephone List

1. The attached master telephone list will be completed and prominently posted at the field office. The list will have telephone numbers of all project personnel, emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the **DEPARTMENT** for emergency reference purposes.

<u>Emergency Service</u>	<u>Telephone Number</u>
Fire Department	911
Police Department	911
Ambulance	911
Hospital/Emergency Care Facility	To be determined
Poison Control Center	(800) 336-6997
Chemical Emergency Advice (CHEMTREC)	(800) 424-9300
NYSDEC Albany Office	Work Hours To be determined After Hours To be determined
NYSDEC Regional Office	Work Hours To be determined
County Dept. of Health	To be determined
New York State Dept. of Health - Albany	To be determined
New York State Dept. of Health - Regional	To be determined

1.18 Heat Stress Monitoring

- A. Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion, and heat stroke can be experienced, which, if not remedied, can threaten life or health. Therefore, an American Red Cross Standard First Aid book or equivalent will be maintained on site at all times so that the SO and site personnel will be able to recognize symptoms of heat emergencies and be capable of controlling the problem.
- B. When protective clothing is worn, especially Levels A and B, the suggested guidelines for ambient temperature and maximum wearing time per excursion are:

Ambient Temperature (°F)	Maximum Wearing Time Per Excursion (Minutes)
Above 90	15
85 to 90	30

80 to 85	60
70 to 80	90
60 to 70	120
50 to 60	180

- C.** One method of measuring the effectiveness of employees' rest-recovery regime is by monitoring the heart rate. The "Brouha guideline" is one such method:
- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minute.
 - Double the count.
- D.** If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.
- E.** In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages will return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard.
- F.** This liquid refreshment will be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:
1. Personnel shall wash and rinse their outer gloves and remove them.
 2. Personnel shall remove their hard hats and respirators and place on table.
 3. Personnel shall remove their inner gloves and place them on table.
 4. Personnel shall wash and rinse their face and hands.
 5. Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.
 6. The used bottle or cups will not be returned to the cooler, but will be placed in a receptacle or container to be cleaned or disposed of.
 7. Personnel shall replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

G. When personnel are working in situations where the ambient temperatures and humidity are high--and especially in situations where protection Levels A, B, and C are required--the SO must:

- Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);
- Assure that frequent breaks are scheduled so overheating does not occur; and
- Revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

1.19 Cold Stress

A. Whole-body protection shall be provided to all site personnel that have prolonged exposure to cold air. The right kind of protective clothing shall be provided to site personnel to prevent cold stress. The following dry clothing shall be provided by the **CONTRACTOR** as deemed necessary by the SO:

- Appropriate underclothing (wool or other);
- Outer coats that repel wind and moisture;
- Face, head, and ear coverings;
- Extra pair of socks;
- Insulated safety boots; and
- Glove liners (wool) or wind- and water-repellant gloves.

B. The SO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

C. Site personnel working continuously in the cold are required to warm themselves on a regular basis in the on-site hygiene facility. Warm, sweet drinks will also be provided to site personnel to prevent dehydration. The SO shall follow the work practices and recommendations for cold stress threshold limit values as stated by the 1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.

1.20 Logs, Reports and Record Keeping

A. Security Log

1. A daily log of security incidents and visitors granted access to the site will be maintained, as well as a log of all personnel entering and exiting the site.

2. All approved visitors to the site will be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors will not be permitted to enter a hazardous work zone.
3. Project site shall be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence.

B. Safety Log

1. The **CONTRACTOR's** SO will maintain a bound safety logbook. The log will include all health and safety matters on site and include, but not be limited to, the following information:
 - Date and weather conditions on site;
 - A description of the proposed work for the day;
 - Times when site personnel arrive and depart;
 - Air monitoring data;
 - Heat and/or cold stress monitoring;
 - Decontamination procedures;
 - Type and calibration of air sampling/monitoring equipment used;
 - Safety meeting summaries; and
 - Accidents.

C. Emergency Or Accident Report

1. Any emergency or accident will be reported immediately to the SO. The **ENGINEER** will also be notified. The **CONTRACTOR** will submit a written report immediately, but no later than 24 hours of its concurrence. The report will include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the **CONTRACTOR** will institute to minimize future occurrences. All spills will be treated as emergencies.

D. Daily Work Report

1. The **CONTRACTOR** shall maintain a daily work report that summarizes the following:
 - Work performed,
 - Level of protection,
 - Air monitoring results,
 - Safety-related problems, and
 - Corrective actions implemented.

1.21 Posting Regulations

- A. The **CONTRACTOR** will post signs at the perimeter of the Exclusion Zone that state "Warning, Hazardous Work Area, Do Not Enter Unless Authorized." In addition, a notice directing visitors to sign in will be posted at the project site. Also, the **CONTRACTOR** will post a sign stating that any questions about the site should be directed to the New York State Department of Environmental Conservation.
- B. Safety regulations and safety reminders will be posted at conspicuous locations throughout the project area. The following safety regulations and safety reminders are at a minimum to be posted around the job site:

SAFETY REGULATIONS

(To be Posted for Project Personnel)

The main safety emphasis is on preventing personal **contact** with gases, soils, sludge and water. Towards that end, the following rules have been established.

Regulations

- A. Eating, drinking and smoking on the site is PROHIBITED except in specifically designated areas.
- B. All project personnel on the site must wear clean or new gloves daily.
- C. If you get wet to the skin, you must wash the affected area with soap and water immediately. If clothes in touch with the skin are wet, these must be changed.
- D. You must wash your hands and face before eating, drinking or smoking.
- E. Observe regulations on washing and removing boots before entering the dressing room or a clean area and showering before going home.

Recommendations

- A. Do not smoke on site with dirty hands; better yet, do not smoke.
- B. Check for any personal habit which could get soil or water into your body.

Examples: food off your fingers, wiping your face or nose with a dirty hand or running a dirty hand through your hair.

- C. Check that any regularly worn clothing is clean. Examples include dirty watchbands, neck chains and a dirty liner on your safety helmet. Safety practices with poisonous chemicals can be summed up with a few words:

Don't breathe in chemical odors and don't touch the water, soil, and sludge.

If you do get dirty or wet, clean up as soon as possible.

SAFETY REMINDER FOR TOXIC CHEMICALS

(Post for Project Personnel)

Chemicals can't cause problems unless you breathe them, eat them, or put them on your skin.

Chemicals in Gases, Soils, Sludge, and Water

Don't let them go into your mouth, nose, or stay on your skin.

Use common personal hygiene.

- A. Don't eat or drink on the site.
- B. No smoking in the area of work.
- C. Wear protective clothing.
- D. Glove liners must be **clean**.
- E. Wash your hands whenever practical. Wash before eating, drinking, or smoking.
- F. Don't carry chemicals home to your family. (For example, on clothing, mud in the car, dirty hands.)
- G. Follow strictly the HASP.

1.22 Community Protection Plan

A. General

- 1. Develop, as part of this HASP, a Community Protection Plan (CPP). The CPP shall outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.

B. Air Monitoring

1. As part of the Air Monitoring Program, use real-time monitoring and documentation sampling as described in the Subpart "Air Monitoring Program" of this section to determine if off-site emission, as a result of site work, poses a threat to the surrounding community.
2. Provide real-time air monitoring for volatile compounds and particulate levels as the perimeter of the work area as necessary. Include the following:
 - a. Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities shall be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.
 - b. Particulates shall be continuously monitored at the 4 documentation sampling stations for a total of 4 dust monitors. If the downwind particulate level is 150 ug/m³ greater than the upwind particulate level, dust suppression techniques shall be employed. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.

C. Vapor Emission Response Plan

1. If the ambient air concentration of organic vapors exceed 5 ppm above background at the perimeter of the work area, activities shall be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume. If the organic vapor levels are greater than 5 ppm over background but less than 225 ppm over background at the perimeter of the work area, activities may resume provided the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.
2. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities shall be shutdown. When work shutdown occurs, downwind air monitoring as directed by the SO shall be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

D. Major Vapor Emission

1. If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities shall be halted.

2. If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, the air quality shall be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).
3. If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background and persist for more than 30 minutes in the 20 Foot Zone, the Major Vapor Emission Response Plan shall automatically be placed into effect.
4. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background levels.

E. Major Vapor Emission Response Plan

1. Upon activation, the following shall be undertaken:
 - a. All Emergency Response Contracts as listed in the Subpart titled "Emergency Response and Contingency Plan" paragraph titled "Telephone List."
 - b. The local police authorities shall immediately be contacted by the SO and advised of the situation. Coordinate with local officials to arrange for notification and evacuation of the surrounding community.
 - c. Frequent air monitoring shall be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the SO.
2. The Air Monitoring Program shall include real-time air monitoring and shall be conducted at the perimeter of the site. Particulates should be continuously monitored upwind, downwind and within the Exclusion Zone at temporary particulate monitoring stations. If the downwind particulate level is more than 2.5 times greater than the upwind particulate level and greater than 150 ug/m^3 , then dust suppression techniques shall be employed. This is a general action level. A site-specific action level shall be developed based on available analytical data. All readings shall be recorded and be available for ENGINEER, DEPARTMENT, and NYSDOH personnel to review.
3. Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-site emissions pose a threat.

F. Odor

1. Foam active work areas to reduce odors if odor complaints are received from nearby residences during site activities. Odor masking agents or other odor

control methods may be used subject to **ENGINEER's** review. Continue odor suppression during each day that odor complaints are received.

G. Off-Site Spill Response

1. Produce as part of the HASP a Spill Response Plan, also coordinated with local officials, in case of an off-site spill of either liquid or solid wastes. The plan shall include transportation routes and times, as well as the minimum requirements set forth in the Subpart titled "On-Site Spill Containment Plan." The driver shall be supplied with Material Safety Data Sheets (MSDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project site.

1.23 Confined Space Work

- A. Evaluate the work areas and determine if there are any permit-required confined spaces. If the **CONTRACTOR** determines that personnel will not need to enter a permit-required confined space, appropriate measures to prevent personnel from entering such shall be taken. If the **CONTRACTOR** determines that personnel will need to enter a permit-required confined space, develop and implement a written permit-required confined space program.
- B. The written program shall comply with 29 CFR 1910.146 and shall include the following:
 1. Implement methods to prevent unauthorized entry;
 2. Identify and evaluate the hazards of permit-required confined spaces before personnel entry;
 3. Develop and implement procedures for safe permit-required confined space entry;
 4. Provide the appropriate equipment to evaluate permit-required confined spaces;
 5. Evaluate permit-required confined spaces when entry operations are conducted;
 6. Provide at least one attendant outside the permit-required confined space which will be entered;
 7. Designate the personnel who will have active roles in entry operations;
 8. Develop and implement procedures for obtaining rescue and emergency services;
 9. Develop and implement a system for the preparation, issuance, use, and collection of entry permits;
 10. Develop and implement procedures to coordinate entry operations when personnel from more than one employer are working;
 11. Develop and implement procedures for concluding the entry;
 12. Review and revise entry operations if measures may not protect personnel; and
 13. Review the permit-required confined space program to ensure personnel are protected from the hazards present.

C. Copies of the permit-required confined space program and employee training certificates shall be included with the HASP.

2. PRODUCTS

Not Used.

3. EXECUTION

Not Used.

*** END OF SECTION ***

SECTION 00030

GREEN REMEDIATION PRACTICES

PART 1 - GENERAL

1.01 SUMMARY

- A. Work includes, to the extent practicable, special environmental "Green" remediation practices related to reducing waste generation; energy usage; emissions including greenhouse gases (GHGs), nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter and hazardous air pollutants (HAPs); water usage; and land and ecosystem disturbance.
- B. The **CONTRACTOR** shall implement green remediation practices in the performance of the requirements of the Work to maximize to the extent practicable, sustainability, reduce energy and water usage, promote carbon neutrality, promote industrial materials reuse and recycling, and protect and preserve land resources.
- C. The **CONTRACTOR** shall utilize concepts and techniques presented in the New York State Department of Environmental Conservation – (NYSDEC) Program Policy DER-31/Green Remediation, August 11, 2010.
- D. The **CONTRACTOR** shall implement, to the extent practicable, practices and procedures to meet the environmental performance goals of the **DEPARTMENT** consistent with NYSDEC Program Policy DER-31/Green Remediation. In general, such practices and procedures shall include, but are not limited to:
 - 1. Reducing direct and indirect Green House Gas (GHG) and other emissions;
 - 2. Increasing energy efficiency and minimizing use of non-renewable energy;
 - 3. Conserving and efficiently managing natural resources such as soil, water and habitat;
 - 4. Reducing waste, increasing recycling and increasing reuse of materials;
 - 5. Maximizing the reuse of land and the recycling of on-site materials; and
 - 6. Applying green remediation concepts, such as foregoing energy consuming operations.

- E. Specifically, **CONTRACTOR** shall consider inclusion of the following provisions:
1. Beneficially reuse materials that would otherwise be considered a waste (e.g., crushed clean concrete as base or fill).
 2. Use of renewable energy and/or the purchase of renewable energy credits (RECs) or a combination of the two techniques to offset electricity demand at the site.
 3. Reduce vehicle idling. All vehicles, both on and off road (including construction equipment) shall be shut off when not in use for more than 5 minutes, consistent with 6 NYCRR Part 217 Motor Vehicle Emissions, Subpart 217-3 Idling Prohibition For Heavy Duty Vehicles.
 4. Cover soil, as approved by the **DEPARTMENT**, rather than spraying with water.
 5. Establish minimally invasive and well-designed traffic patterns for on-site activities to reduce impacts to land and ecosystems.
- F. **CONTRACTOR** shall be aware of the **DEPARTMENT'S** policy to utilize, as approved by the **DEPARTMENT**, recycled content materials, locally manufactured materials and low-emitting materials.
- G. **CONTRACTOR** shall ensure, to the extent practicable, that the requirements related to the goals of the **DEPARTMENT** and as defined in the Contract Documents, are implemented to the fullest extent.

1.02 DEFINITIONS:

A. Green Remediation Definitions

1. Renewable energy sources include solar, wind, geothermal, biomass and biogas.
2. Locally manufactured shall mean manufactured within 150 miles of the work.
3. Recovered materials shall be waste materials and by-products that have been recovered from solid waste, but does not include materials and by-products generated from, and commonly reused within, an original manufacturing process.

1.03 ENVIRONMENTAL GOALS

- A. The **CONTRACTOR**, to the extent practicable, shall:
1. Minimize the amount of waste generated from the site and maximize the use of recycling/reuse facilities for disposal of the waste to the extent practicable and as approved by the **DEPARTMENT**.
 2. Maximize use energy derived from a renewable source.
 3. Minimize on and off-site fuel combustion.
 4. Minimize use of water.
 5. Minimize disturbance to land and ecosystems.

1.04 SUBMITTALS

- A. Form "A" - Summary of Green Remediation Metrics:
1. Consistent with NYSDEC Program Policy DER-31/Green Remediation requirements specified in Section 1.1B and Green Remediation Metrics requirements specified in Section 1.2.C of the applicable specifications, the **CONTRACTOR** shall complete *Form A - Summary of Green Remediation Metrics*, in its entirety and sign the certification as to its accuracy.
 2. The **CONTRACTOR** shall submit properly completed Form A to the **DEPARTMENT** along with the **CONTRACTOR'S** Application for Payment.

1.05 QUALITY ASSURANCE

- A. Environmental Project Management and Coordination:
1. **CONTRACTOR** shall designate an employee who shall be responsible for implementation of green remediation elements, coordinate work of subcontractors and suppliers; instruct workers relating to environmental issues; ensure that green remediation metrics are collected, recorded on *Form A - Summary of Green Remediation Metrics* and submitted with the **CONTRACTOR'S** Application for Payment, and oversee Project environmental goals.

PART 2 – PRODUCTS

- A. **CONTRACTOR** shall use environmentally preferable products, where appropriate and as approved by the **DEPARTMENT**, including, but not limited to:
1. Compact Fluorescent Lights (CFL) or LED
 2. Environmentally friendly electronics (e.g., ENERGY STAR)
 3. Items composed of recovered materials

PART 3- EXECUTION

- A. The **CONTRACTOR** shall, to the extent practicable:
1. Set up on- site recycling program for **CONTRACTOR** generated wastes.
 2. Minimize equipment engine idling.
 3. Utilize properly sized equipment.
 4. Minimize emissions during site work (i.e., replace or retrofit older engines or use newer efficient models).
 5. Practice engine maintenance in accordance with manufacturers' standards and properly train operators to run equipment efficiently.
 6. Sequence work to minimize double-handling of materials.
 7. Provide locally made materials that are composed of recovered materials to the maximum amount practicable.
 8. Provide materials that generate least amount of pollution during mining, manufacturing, transport, installation, use and disposal.
 9. Maintain office trailer heating and cooling systems at efficient set points.
 10. Avoid materials that contain ozone-depleting chemicals (e.g., CFCs or HCFCs) and that emit potentially harmful volatile organic compounds (VOCs).
 11. Employ construction practices that minimize the generation of excessive dust and combustion by-products.
 12. Minimize use of scarce, irreplaceable and endangered resources.

13. Contain and reuse water on-site, to the extent practicable, as approved by the **DEPARTMENT**.
14. Reduce impact to land and ecosystems, to the extent practicable.

+ + END OF SECTION + +



Form A Summary of Green Remediation Metrics

Site Name: _____ Site Code: _____ Operable Unit: _____
Address: _____ City: _____
State: _____ Zip: _____ County: _____

Reporting Period

Contract Period From: _____ To: _____
Reporting Period From: _____ To: _____ Is this a Final Report? Yes ☐ No ☐

Contact Information

Preparer's Name: _____ Phone No.: _____
Preparer's Affiliation: _____ Company Code: _____

Waste Generation: Quantify the management of waste generated on-site.

	Current Reporting Period (Tons)	Total to Date (Tons)
Total waste generated on-site		
• Remedy generated waste		
• Contractor generated waste		
Of that total amount, provide quantity:		
• Transported off-site to landfills		
• Transported off-site to other disposal facilities		
• Transported off-site for recycling/reuse		
• Reused on-site		

Provide a description of any implemented waste reduction programs appropriate for this project in the space provided on Page 3.

Energy Usage: Quantify the amount of energy used on-site and portion of that voluntarily derived from renewable energy sources.

	Current Reporting Period (KWh)	Total to Date (KWh)
Total electricity usage		
Of that total amount, provide quantity:		
• Derived from renewable source (i.e. solar, wind)		

Provide a description in the space provided on Page 3 of all reported energy usage reduction programs appropriate to this project, including usage of electricity derived from renewable sources.

Emissions: Quantify the distance traveled for delivery of supplies and removal of waste.

	Current Reporting Period (Miles)	Total to Date (Miles)
Off-site mobile fuel combustion		

Provide a description in the space provided on Page 3 of practices such as use of local vendors within 150 miles of the site and on-site stationary fuel usage reduction programs.

Quantify the number of hours that diesel and other equipment with the potential to emit hazardous air pollutants (HAPs) or greenhouse gas (GHG) emissions was operated on-site.

	Current Reporting Period (Hours)	Total to Date (Hours)
On-site diesel excavation/construction equipment usage		
Other on-site processes potentially generating emissions		

Provide a description in the space provided on Page 3 of the type of excavation/construction equipment used, rating, emission control devices used and other means to reduce emissions, such as use of biodiesel. Also, include a description of other onsite processes that may result in emissions of HAPs or GHG emissions and any emission control devices that are utilized to reduce emissions.

Water Usage: Quantify the volume of water used on-site from difference sources

	Current Reporting Period (Gallons)	Total to Date (Gallons)
Total quantity of water used on-site		
Of that total amount, provide the quantity obtained from:		
• Public potable water supply usage		
• Surface water usage		
• On-site groundwater usage		
• Reclaimed water usage		
• Collected or diverted storm water usage		

Provide a description in the space provided on Page 3 of any reported water usage reduction programs appropriate for this project.

Land and Ecosystem: Provide a description of the amount of land and/or ecosystems disturbed construction and the area of land and/or ecosystems restored to a natural condition.

	Current Reporting Period (Acres)	Total to Date (Acres)
Land Disturbed		
Land Restored		

Provide a description of the amount of land and/or ecosystems remediated.

	Current Reporting Period (Acres)	Total to Date (Acres)
Total area of land impacted by contamination		
Of the total acres provide the:		
Area of Land Remediated		

Other: *Provide a description in the space provided on page 3 of any other green remediation practices performed during the project.*

Description of green remediation programs reported above (Attach additional sheet if needed) Waste Generation:
Energy Usage:
Emissions:
Water Usage:
Land and Ecosystem:
Other:

CERTIFICATION BY CONTRACTOR	
<p>I, _____ (Name) do hereby certify that I am _____ (Title) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including the last day of the period covered by this application.</p>	
<p>_____</p> <p>Date</p>	<p>_____</p> <p>Contractor</p>

SECTION XI

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SUMMARY OF WORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Table of Articles for this Section is:

<u>Article</u>	<u>Title</u>
1.1	Section Includes
1.2	Location and Description of Work
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1.10	Easements and Rights-of-Way
1.11	Notices to Owners and Authorities of Properties Adjacent to the Work
1.12	Salvage of Equipment and Materials

1.2 LOCATION AND DESCRIPTION OF WORK

A. The Work is located in the Market Street Industrial Park on McKinley Street in Wappingers Falls, Dutchess County, New York. On the 8.5 acre site are:

1. Occupied and unoccupied commercial buildings;
2. Remnants of destroyed buildings;
3. Vegetated and paved areas which are external to the buildings;
4. Piles of rubble and debris;
5. The former Raceway;
6. Roadways and parking areas;
7. Overhead and underground utilities and easements; and
8. A Lagoon.

B. The Work to be performed under this Contract includes, but is not limited to, constructing the Work described below and all related associated Work and appurtenances. The Work shall be as follows:

1. Site mobilization, demobilization, and general conditions as required for the execution of all Work throughout the duration of the Work.

2. Vat demolition and removal including, but not limited to, temporary building stabilization, construction of access roads, protection of utilities, removal and off-site disposal of fencing, storage tanks and utilities associated with the Vats, removal and off-site disposal of debris, sludge and liquids from the Vats, asbestos containing material (ACM) abatement or removal and off-site disposal of material as ACM, cleaning and decontamination of Vat concrete or removal and off-site disposal as contaminated concrete, removal and off-site disposal of contaminated soil, installation of new fencing, backfilling, and restoration of the Vat Area.
 3. Lower Raceway remediation including, but not limited to, removal and off-site disposal of fencing, protection of utilities, cleaning of a culvert pipe, construction of access roads, removal and off-site disposal of storage tanks, excavation and off-site disposal of contaminated soil, backfill and restoration of the excavation areas with a soil cover, installation of fencing, and seeding of the soil cover.
 4. Three Star Lagoon remediation including, but not limited to, protection of utilities and structures, installation of sediment control systems, construction, use and subsequent removal of a temporary dewatering and treatment facility, dewatering and off-site disposal of contaminated sediment, treatment of associated water, backfill of the Lagoon, regrading the Lagoon banks, restoration of Lagoon banks with a soil cover, and seeding the Lagoon banks.
 5. MGP Area remediation including, but not limited to, construction of temporary access roads, excavation and off-site disposal of contaminated soil in the vicinity of former Gas Holders, demolition and off-site disposal of the Gas Holder foundations, excavation and off-site disposal of contaminated soil and debris from the MGP Area, backfill and regrading of the excavation areas, installation of a soil cover, and seeding of the soil cover.
 6. Axton Cross Building Area remediation including, but not limited to, protection of structures and utilities, excavation and off-site disposal of contaminated soil from near the building and dry well/leach field, backfill and surface restoration with asphalt, regrading surface soil, installation of a soil cover, and seeding of the soil cover.
- C. Contracting Method: Work shall be constructed under one prime contract.
- D. Hazardous Environmental Conditions: The Site is listed on the NYSDEC registry of inactive Hazardous Waste Sites and Work related to Hazardous Environmental Conditions, described in reports referenced in Section IV, Article 5 is included in the Work.
- E. Special Construction Conditions: Refer to Section XI-01 11 15, Special Construction Conditions for specific requirements for project phasing and coordination of work elements.

1.3 OTHER CONSTRUCTION CONTRACTS

- A. None.

1.4 WORK BY OTHERS

- A. CONTRACTOR shall note that portions of the Site are being utilized by businesses. Tenants actively use the Axton Cross Building and buildings and areas to the north and east of the Site. There is an occupied residence on property bounded upon three sides by the Site, and other occupied residences immediately adjacent to the Site. McKinley Street and the roads through the Market Street Industrial Park are used by businesses on a daily basis. Utilities along McKinley Street and in the Market Street Industrial Park must remain in service to support the commercial and residential customers in the vicinity of the Site. The Site shall be maintained during all construction activities as further described in the Contract Documents.

1.5 WORK BY OWNER

- A. Owner will perform the following prior to the beginning of the Work:
 - 1. A Sub-Slab Depressurization System (SSDS) to be installed by the NYSDEC will be in place and operational at the Axton Cross Building during the Work.
 - 2. Chemical oxidants will have been injected into the subsurface under the Former Drum Storage Area and the Axton Cross Building prior to the Work.

1.6 OWNER-FURNISHED EQUIPMENT AND MATERIALS

- A. Items of equipment and materials to be furnished by Owner for installation by Contractor are:
 - 1. None.

1.7 ASSIGNED PROCUREMENT CONTRACTS

- A. Contracts for procurement of goods described in this paragraph will be assigned to Contractor as specified in the Agreement:
 - 1. None.

1.8 SEQUENCE AND PROGRESS OF WORK

- A. Sequencing:
 - 1. Incorporate sequencing of the Work into the Progress Schedule.

1.9 CONTRACTOR'S USE OF SITE

- A. Contractor's use of the Site shall be confined to the areas within the Limits of Work shown on the Contract Drawings.
- B. Move stored products that interfere with operations of Owner, other contractors, and others performing work for Owner.

1.10 EASEMENTS AND RIGHTS-OF-WAY

- A. Easements and rights-of-way will be provided by Owner in accordance with the General Conditions. Confine construction operations within the Limits of Work, public rights-of-way, and easements obtained by the Owner. Use care in placing construction tools, equipment, excavated materials, and materials and equipment to be incorporated into the Work to avoid damaging property and interfering with traffic. Do not enter private property outside the Limits of Work without permission from the owner of the property.
- B. On Private Property:
 - 1. General limits of easements are shown on the Contract Drawings.
- C. Within Roadways: Permits shall be obtained by Contractor. All Work performed and all operations of Contractor within the limits of roadways shall conform to requirements of the roadway owner and applicable work permits, or authority having jurisdiction over right-of-way. Comply with Section XI-01 14 33, Work in Highway Rights-of-Way.

1.11 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

- A. Notify owners of adjacent property and utilities when prosecution of the Work may affect their property, facilities, or use of property.
- B. When it is necessary to temporarily obstruct access to property, or when utility service connection will be interrupted, provide notices sufficiently in advance to enable affected persons to provide for their needs. Conform notices to Laws and Regulations and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
- C. Notify utility owners, municipalities and other concerned entities at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near Underground Facilities or exposed utilities.

1.12 SALVAGE OF EQUIPMENT AND MATERIALS

- A. Existing equipment and materials removed and not shown or specified to be reused in the Work shall become Contractor's property.
- B. Existing equipment and materials removed by Contractor shall not be reused in the Work, except where so specified or indicated.
- C. Carefully remove in manner to prevent damage all equipment and materials specified or indicated to be salvaged and reused. Store and protect salvaged items specified or indicated to be used in the Work. Replace in kind or with new items equipment,

materials, and components damaged in removal, storage, or handling through carelessness or improper procedures.

D. Not Used.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SPECIAL CONSTRUCTION CONDITIONS

PART 1 - GENERAL

1.1 MILESTONE ACTIVITY (NOT USED)

1.2 COORDINATION OF OWNER ACTIVITIES

- A. CONTRACTOR is advised that this site contains active businesses that occupy the Axton Cross Building. Also, traffic routinely accesses these businesses and others in the Industrial Park via McKinley Street. Additionally there are residences on McKinley Street abutting the MGP area and Lagoon which require continuous access to McKinley Street. The CONTRACTOR shall be responsible for providing sufficient traffic signage, traffic controls and, if necessary, flagmen to control traffic during the construction. The CONTRACTOR shall take any and all precautions and measures necessary to coordinate activities.
- B. CONTRACTOR shall coordinate Work with the tenants of the Axton Cross Building. Access to the building entrances and overhead doors by the tenants and the public shall be maintained during the hours of 6 AM to 6 PM, Monday through Saturday, except during Axton Cross Area excavation activities. During that Work, alternative means of ingress and egress to the building shall be developed, implemented and coordinated by the CONTRACTOR.

1.3 COORDINATION OF CONSTRUCTION ACTIVITIES

- A. CONTRACTOR is advised that project execution requires the sequencing of Work activities to minimize the potential for cross contamination of areas as well as to support required staging efforts during certain Work elements. The following is the assumed sequence-of-work for the critical path that should be the basis of the project bid and execution:
1. Establish temporary water treatment tankage.
 2. Installation of erosion and sediment controls at the MGP Area.
 3. Clearing and grubbing of the MGP Area.
 4. Removal of Gas Holder foundations and excavation and disposal of contaminated soil at MGP Area.
 5. Regrading and installation of intermediate cover at MGP Area.
 6. Construction of dewatering, dredge spoil staging and water treatment containment area(s).
 7. Clearing and grubbing of the Lagoon banks and installation of turbidity curtain/cofferdam outlet control at the Lagoon outlet. Installation of stormwater bypass at the Lower Raceway to divert stormwater flow from the Lagoon during dredging activities.

8. Dredging of Lagoon including: dredging of contaminated soil; dewatering of dredge spoils, stabilization, characterization, loading and disposal of stabilized dredge spoils; collection and treatment of decant or filtrate water; and, discharge of treated decant or filtrate water to the Lagoon.
9. Backfill placement in the Lagoon Area.
10. Culvert Cleaning
11. Demobilization of the Lower Raceway stormwater bypass.
12. Demobilization of dredge spoil dewatering and handling facilities.
13. Installation of final cap at the MGP Area, Lagoon banks and areas west and north of the Axton Cross Building.
14. Restoration of disturbed surfaces.

B. Non-sequence-critical work includes:

1. Lower Raceway remediation.
2. The Axton Cross Building southern area remediation.
3. The Vat Area remediation.

1.4 COORDINATION WITH WAPPINGER CREEK

- A. CONTRACTOR shall note that Wappinger Creek is under tidal influence and shall coordinate work accordingly.
- B. Work activities in the vicinity of the Wappinger Creek are subject to the requirements of the Coastal Zone Concurrence for Nationwide Permits in the State of New York. Specifically, the CONTRACTOR shall note the following requirements of the permit:
1. All erosion and sediment controls and stormwater management practices shall be designed, installed and maintained in accordance with the latest version of the New York Standard Specifications for Erosion and Sediment Control and the New York Stormwater Management Design Manual.

1.5 CONFIRMATION SAMPLING

- A. CONTRACTOR shall note that NYSDEC and/or its representative may conduct confirmation sampling at all contaminated soil excavation areas.
- B. CONTRACTOR shall assist in the access and collection of samples.
- C. The ENGINEER will have 72-hour turn-around-time (TAT) analysis on the samples. CONTRACTOR shall protect and maintain excavation until ENGINEER approves backfilling of excavation which is assumed to be 96-hours from time of sampling.

1.6 WORK ADJACENT TO AXTON CROSS BUILDING

- A. CONTRACTOR shall note that excavation and dredging is required adjacent to the Axton Cross Building. The building is a masonry block building. CONTRACTOR shall be responsible for protecting the building from damage resulting from excavation near the building. The CONTRACTOR shall provide excavation support/bracing and building monitoring to protect the existing structure from damage. Any damage shall be repaired at no additional cost to the OWNER.

1.7 FORMER THREE STAR FACILITY BUILDINGS ADJACENT TO VAT AREA

- A. CONTRACTOR shall note that existing masonry and wood framed buildings exist adjacent to the Vat remediation area. The excavation of the Vats may potentially compromise the integrity of the existing building. The CONTRACTOR shall provide necessary protection of the existing structure and workers safety. The CONTRACTOR may provide necessary excavation support/bracing and/or building wall bracing and building monitoring to protect the existing structure from damage during Vat remediation activities. Alternatively, the CONTRACTOR may opt to selectively demolish a portion of the existing buildings, as necessary, to complete the work at no additional cost to the OWNER.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 14 16

COORDINATION WITH OWNER'S OPERATIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes requirements for coordinating with OWNER's operations during the Work, and includes requirements for tie-ins and shutdowns necessary to complete the Work without impact on OWNER's operations except as allowed in this Section.
 - 2. CONTRACTOR shall provide labor, materials, tools, equipment and incidentals shown, specified and required to coordinate with OWNER's operations during the Work.
- B. Coordination:
 - 1. Review installation procedures under other Specification sections and coordinate Work that must be performed with or before the Work specified in this Section.
- C. Related Sections:
 - 1. Section IX – Supplementary Conditions
 - 2. Section XI-01 11 13, Summary of Work.
 - 3. Section XI-01 11 15, Special Construction Conditions.
- D. Except for shutdowns specified in this Section, perform the Work such that OWNER's facility remains in continuous satisfactory operation during the Project. Schedule and conduct the Work such that the Work does not: impede OWNER's production or processes, create potential hazards to the public, operating equipment and personnel, reduce the quality of the facility's products, or cause other nuisances.
- E. Work not specifically covered in this Section or in referenced Sections may, in general, be completed at any time during regular working hours in accordance with the General Conditions and Supplementary Conditions, subject to the requirements in this Section.
- F. CONTRACTOR has the option of providing additional temporary facilities that can eliminate or mitigate a constraint without additional cost to the NYSDEC, provided such additional temporary facilities: do not present hazards to the public, personnel, structures, and equipment; that such additional temporary facilities do not adversely affect OWNER's ability to comply with Laws and Regulations, permits, and operating requirements; that such temporary facilities do not generate or foster the generation of other nuisances; and that requirements of the Contract Documents are fulfilled.

- G. Coordinate shutdowns with OWNER and ENGINEER. When possible, combine multiple tie-ins into a single shutdown to minimize impacts on OWNER's operations and processes.
- H. Do not shut off or disconnect existing operating systems, unless accepted by ENGINEER in writing.

1.2 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Substitute Sequence Submittal: When deviation from specified sequence is proposed, provide submittal explaining in detail the proposed sequence change and its effects, including evidence that OWNER's operations will not be adversely affected by proposed change. List benefits of proposed sequence change, including benefits to Progress Schedule. Submit in accordance with Section VIII, "Or Equal" or Substitute Items.
- B. Informational Submittals: Submit the following:
 - 1. Shutdown Planning Submittal:
 - a. For each shutdown, submit an inventory of labor and materials required to perform the shutdown and tie-in tasks, an estimate of time required to accomplish the complete shutdown including time for OWNER to take down and start up existing equipment, systems, or conduits, and written description of steps required to complete the Work associated with the shutdown.
 - b. Furnish submittal to ENGINEER at least fifteen days prior to proposed shutdown start date. Do not start shutdown until obtaining ENGINEER's acceptance of shutdown planning submittal.
 - 2. Shutdown Notification: After acceptance of shutdown planning submittal and prior to starting the shutdown, provide written notification to OWNER and ENGINEER of date and time each shutdown is to start. Provide notification at least 48 hours in advance of each shutdown.

1.3 GENERAL CONSTRAINTS

- A. Specified in the Contract Documents are any sequence and shutdown durations and constraints, where applicable, for OWNER'S equipment, systems, and conduits that are to be taken out of service temporarily for the Work. New equipment, materials, and systems may be used by OWNER after the specified field quality controls and testing are successfully completed and the materials or equipment are Substantially Complete.
- B. The following constraints apply to coordination with OWNER's operations:
 - 1. Operational Access: OWNER'S personnel shall have access to equipment and areas that remain in operation.
 - 2. Temporary Partitions and Enclosures: Not Used.

3. Schedule and perform equipment and system start-ups for Monday through Friday. Equipment and systems shall not be placed into operation on Saturday, and Sunday without prior approval of OWNER.
4. Dead End Valves or Pipe: Provide blind flanges, watertight bulkheads, or valve at temporary and permanent terminuses of pipes and conduits. Blind flanges and bulkheads shall be suitable for the service and braced and blocked, as required, or otherwise restrained as directed by ENGINEER. Temporary valves shall be suitable for their associated service. Where a valve is provided at a permanent terminus of pipe or conduit, also provide on downstream side of valve a blind flange with drain/flushing connection.

1.4 SEQUENCE OF WORK

- A. Perform the Work in the specified sequence. Certain phases or stages of the Work may require working 24-hour days or work during hours outside of regular working hours. Work may be accelerated from a later stage to an earlier stage if OWNER's operations are not adversely affected by proposed sequence change, with ENGINEER's acceptance.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 GENERAL

- A. In addition to requirements of this Section, conform to requirements of Section XI-01 73 29, Cutting and Patching.

+ + END OF SECTION + +

SECTION XI-01 14 19

USE OF SITE

PART 1 – GENERAL

1.1 USE OF PREMISES

- A. Limit use of premises at the Site to work areas shown or indicated on the Drawings and as specified in this Section. Do not disturb portions of the Site beyond Limit of the Work.
 - 1. Limits:
 - a. Confine construction operations to the following areas: areas within the Limit of Work.
 - b. Confine storage of materials and equipment, and locations of temporary facilities to the following areas: areas within the Limit of Work.
 - c. Do not enter the following areas: any areas outside the Limit of Work.
 - 2. Access to Site, Access Roads, and Parking Areas: Refer to Section XI-01 55 13, Access Roads and Parking Areas.
- B. Use of Existing Buildings: The use of existing buildings is prohibited:
 - 1. Use of Existing Utilities, Sanitary Facilities, and First-aid Facilities: Refer Section XI-01 51 05, Temporary Utilities.
- C. Promptly repair damage to premises caused by construction operations. Upon completion of the Work, restore premises to specified condition; if condition is not specified, restore to pre-construction condition.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 14 33

WORK IN HIGHWAY RIGHTS-OF-WAY

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall obtain necessary permits, arrange inspections required by the highway owner, and pay all charges for the Work in the associated highway right-of-way. Comply with applicable rules and regulations of highway owner.
- B. Highway owners having jurisdiction over the Work include:
 - 1. Town of Wappingers Falls.
 - 2. Village of Wappingers Falls.
 - 3. Private Owners.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION AND PROTECTION

- A. CONTRACTOR shall implement means necessary to prevent accidents caused or influenced by the Work. Provide flagmen, temporary barricades, lights, signs, and other precautions to provide safe conditions during the Work.

3.2 INSTALLATION

- A. Work shall be located as shown on the Drawings. Install materials, equipment, piping, and appurtenances required for crossings of existing Underground Facilities and above-ground utilities and structures. Furnish and maintain at the Site a supply of pipe fittings, adapters, and short lengths of pipe to expedite utility crossings required.
- B. Pavement: When fill is stabilized in accordance with requirements of highway owner and the Contract Documents, replace highway subbase material and pavement with pavement of similar type and equal thickness to the pavement in place prior to start of the Work. Pavement shall comply with requirements of highway owner and the Contract Documents.

++ END OF SECTION ++

SECTION XI-01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section expands upon provisions of the General Conditions and Supplementary Conditions, and includes:
 - a. Requests for interpretation.
 - b. Clarification notices.
 - c. Minor changes in the Work and Field Orders.
 - d. Work Change Directives.
 - e. Proposal requests.
 - f. Change Order proposals.
 - g. Change Orders.
- B. Submit Contract modification documents to ENGINEER's contact person and address in Section XI-01 33 00, Submittal Procedures.
- C. Retain at CONTRACTOR's office and at the Site complete copy of each Contract modification document and related documents, and ENGINEER's response.

1.2 REQUESTS FOR INTERPRETATION

- A. General:
 - 1. Submit written requests for interpretation to ENGINEER. CONTRACTOR and OWNER may submit requests for interpretation.
 - 2. Submit request for interpretation to obtain clarification or interpretation of the Contract Documents. Report conflicts, errors, ambiguities, and discrepancies in the Contract Documents using requests for interpretation.
 - 3. Do not submit request for interpretation when other form of communication is appropriate, such as submittals, requests for substitutions or "or equals", notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate requests for interpretation will be returned without response or action.
- B. Procedure:
 - 1. Submit one original of each request for interpretation. Submit each request for interpretation with separate letter of transmittal.
 - 2. ENGINEER will provide timely review of requests for interpretation. Allow sufficient time for review and response.

3. ENGINEER will maintain log of requests for interpretation. Copy of log will be provided upon request.
 4. ENGINEER will provide written response to each request for interpretation. One copy of ENGINEER's response will be distributed to:
 - a. CONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative (RPR).
 - d. ENGINEER.
 5. If ENGINEER requests additional information to make an interpretation, provide information requested within ten days, unless ENGINEER allows additional time, via correspondence referring to request for interpretation number.
 6. If CONTRACTOR or OWNER believes that a change in the Contract Price or Contract Times or other change to the Contract is required, notify ENGINEER in writing before proceeding with the Work associated with the request for interpretation.
- C. Submit each request for interpretation on the request for interpretation form included with this Section, or other form acceptable to ENGINEER:
1. Number each request for interpretation as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First request for interpretation on the general contract for project titled, "Contract MP15" would be, "RFI No. MP15-GC-001".
 2. In space provided on form, describe the interpretation requested. Provide additional sheets as necessary. Include text and sketches as required in sufficient detail for ENGINEER's response.
 3. When applicable, request for interpretation shall include CONTRACTOR's recommended resolution.

1.3 CLARIFICATION NOTICES

- A. General:
1. Clarification notices, when required, will be initiated and issued by ENGINEER.
 2. Clarification notices do not change the Contract Price or Contract Times, and do not alter the Contract Documents.
 3. Clarification notices will be issued as correspondence or using clarification notice form, with additional information as required.
- B. Procedure:
1. One copy of each written clarification notice will be distributed to:
 - a. CONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative.
 - d. ENGINEER.

2. If CONTRACTOR or OWNER believes that a change in the Contract Price or the Contract Times or other change to the Contract is required, notify ENGINEER in writing before proceeding with the Work associated with clarification notice.
3. If clarification notice is unclear, submit request for interpretation.

1.4 MINOR CHANGES IN THE WORK AND FIELD ORDERS

A. General:

1. Field Orders, when required, will be initiated and issued by ENGINEER.
2. Field Orders authorize minor variations in the Work but do not change the Contract Price or Contract Times.
3. Field Orders will be in the form of Engineers Joint Contract Documents Committee (EJCDC) document C-942, "Field Order".
4. ENGINEER will maintain a log of Field Orders issued.

B. Procedure:

1. One copy of each Field Order will be distributed to:
 - a. CONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative.
 - d. ENGINEER.
2. If CONTRACTOR or OWNER believes that a change in the Contract Price or the Contract Times or other change to the Contract is required, immediately notify ENGINEER in writing before proceeding with the Work associated with the Field Order.
3. If the Field Order is unclear, submit request for interpretation.

1.5 WORK CHANGE DIRECTIVES

A. General:

1. Work Change Directives, when required, order additions, deletions, or revisions to the Work.
2. Work Change Directives do not change the Contract Price or Contract Times but are evidence that the parties to the Contract expect that the change ordered or documented by the Work Change Directive will be incorporated in subsequently issued Change Order following negotiations by the parties as to
3. Work Change Directives will be in the form of EJCDC document C-940, "Work Change Directive".

B. Procedure:

1. Three originals of Work Change Directive signed by OWNER and ENGINEER will be furnished to CONTRACTOR, who shall promptly sign each original Work Change Directive and, within five days of receipt, return all originals to ENGINEER.
2. Original, signed Work Change Directives will be distributed as follows:
 - a. CONTRACTOR: One original.

- b. OWNER: One original.
 - c. ENGINEER: One original.
- 3. One copy of each Work Change Directive will be distributed to:
 - a. Resident Project Representative.
- 4. When required by ENGINEER, document for the Work performed under each separate Work Change Directive, for each day, the number and type of workers employed and hours worked; equipment used including manufacturer, model, and year of equipment, and number of hours; materials used, receipts for and descriptions of materials and equipment incorporated into the Work, invoices and labor and equipment breakdowns for Subcontractors and Suppliers, and other information required by OWNER or ENGINEER, in a format acceptable to ENGINEER. Submit this documentation to ENGINEER as a Change Order proposal.

1.6 PROPOSAL REQUESTS

A. General:

- 1. Proposal requests may be initiated by ENGINEER or OWNER.
- 2. Proposal requests are for requesting the effect on the Contract Price and the Contract Times and other information relative to contemplated changes in the Work. Proposal requests do not authorize changes or variations in the Work, and do not change the Contract Price or Contract Times or terms of the Contract.
- 3. Proposal requests will be furnished using the proposal request form included with this Section.

B. Procedure:

- 1. One copy of each signed proposal request will be furnished to CONTRACTOR with one copy each to:
 - a. OWNER.
 - b. Resident Project Representative.
 - c. ENGINEER.
- 2. Submit request for interpretation to clarify conflicts, errors, ambiguities, and discrepancies in proposal request.
- 3. Upon receipt of proposal request, CONTRACTOR shall prepare and submit a Change Order proposal, in accordance with this Section, for the proposed Work described in the proposal request.

1.7 CHANGE ORDER PROPOSALS

A. General:

- 1. Submit written Change Order proposal to ENGINEER in response to each proposal request, and when CONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required.

B. Procedure:

1. Submit to ENGINEER one original and two copies of each Change Order proposal with accompanying documentation, and simultaneously submit one copy to OWNER. Submit each Change Order proposal with separate letter of transmittal.
2. ENGINEER will review Change Order proposal and either request additional information from CONTRACTOR or provide to OWNER recommendation regarding approval of the Change Order proposal.
3. When, ENGINEER requests additional information to render a decision, submit required information within five days of receipt of ENGINEER's request, unless ENGINEER allows more time. Submit the required information via correspondence that refers to Change Order proposal number.
4. Upon completing review, one copy of ENGINEER's written response, if any, will be distributed to:
 - a. CONTRACTOR.
 - b. OWNER.
 - c. Resident Project Representative.
 - d. ENGINEER.
5. If Change Order proposal is recommended for approval by ENGINEER and approved by OWNER, a Change Order will be issued.
6. If parties do not agree on terms for the change, OWNER or CONTRACTOR may file a Claim against the other, in accordance with the General Conditions and the Supplementary Conditions.

C. Each Change Order proposal shall be submitted on the Change Order proposal form included with this Section, or other form acceptable to ENGINEER:

1. Number each Change Order proposal as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First Change Order proposal for the general contract for project named "Contract MP15" would be, "Proposal No. MP15-GC-001".
2. In space provided on form:
 - a. Describe scope of each proposed change. Include text and sketches on additional sheets as required to provide detail sufficient for ENGINEER's review and response. If a change item is submitted in response to proposal request, write in as scope, "In accordance with Proposal Request No." followed by the proposal request number. Provide written clarifications, if any, to scope of change.
 - b. Provide justification for each proposed change. If change is in response to proposal request, write in as justification, "In accordance with Proposal Request No." followed by the proposal request number.
 - c. List the total change in the Contract Price and Contract Times for each proposed change.
3. Unless otherwise directed by ENGINEER, attach to the Change Order proposal detailed breakdowns of pricing (Cost of the Work and CONTRACTOR's fee) including:
 - a. List of Work tasks to accomplish the change.

- b. For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.
- c. Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.
- d. Detailed breakdown of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
- e. Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and materials and equipment incorporated into the Work, other costs, and Subcontractor fees.
- f. Breakdown of other costs eligible, in accordance with the General Conditions and the Supplementary Conditions.
- g. Other information required by ENGINEER.
- h. CONTRACTOR's fees applied to eligible CONTRACTOR costs and eligible Subcontractor costs.

1.8 CHANGE ORDERS

A. General:

- 1. Change Orders will be recommended by ENGINEER and signed by OWNER and CONTRACTOR, to authorize additions, deletions, or revisions to the Work, or changes to the Contract Price or Contract Times.
- 2. Change Orders will be in the form of EJCDC document C-941, "Change Order".

B. Procedure:

- 1. Three originals of each Change Order will be furnished to CONTRACTOR, who shall sign each original Change Order and return all originals to ENGINEER within five days of receipt.
- 2. ENGINEER will sign each original Change Order and forward them to OWNER.
- 3. After approval and signature by OWNER, original Change Orders will be distributed as follows:
 - a. CONTRACTOR: One original.
 - b. OWNER: One original.
 - c. ENGINEER: One original.
- 4. One copy of each Change Order will be distributed to:
 - a. Resident Project Representative.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The forms listed below, following the “End of Section” designation, are part of this Specification Section:
1. Request for Interpretation form (one page).
 2. Proposal Request form (one page).
 3. Change Order Proposal form (one page).

+ + END OF SECTION + +

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Three Star Anodizing Site
Site No. 314058**

REQUEST FOR INTERPRETATION

Contractor: _____ RFI No. _____
Date Transmitted: _____ Date Received: _____
Date Response Requested: _____ Date Response Transmitted: _____

Subject: _____
Specification Section and Paragraph: _____

Drawing References: _____

INTERPRETATION REQUESTED:

Signature: _____ Date: _____

ENGINEER'S RESPONSE:

Signature: _____ Date: _____

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Three Star Anodizing Site
Site No. 314058**

PROPOSAL REQUEST

Proposal Request No.: _____ Date: _____

Contract Name and No.: _____

Contractor: _____

Other Contracts Involved in Proposed Change: _____

TO CONTRACTOR: Please submit a complete Change Order proposal for the proposed modifications described below. If the associated Change Order proposal is approved, a Change Order will be issued to authorize adjustment so the scope of the Work. This Proposal Request is not a Change Order, Work Change Directive, or an authorization to proceed with the proposed Work described below.

SCOPE OF PROPOSED WORK:

1. *Item:*
2. *Item:*
3. *Item:*

Proposal Requested By: _____

Signature of Requestor: _____

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Three Star Anodizing Site
Site No. 314058**

CHANGE ORDER PROPOSAL

Change Order Proposal No.: _____ Date: _____

Submitted in Response to Proposal Request No.: _____

Contract Name and No.: _____

Contractor: _____

Subject: _____

The following changes to the Contract are proposed:

SCOPE OF WORK: *(attach and list supporting information as required)*

1. *Item:*
2. *Item:*

JUSTIFICATION:

1. *Item:*
2. *Item:*

CHANGES IN CONTRACT PRICE AND CONTRACT TIMES:

We propose that the Contract Price and Contract Times be changed as follows:

For Contract Price, when requested by Engineer, attach detailed cost breakdowns for Contractor and Subcontractors, Supplier quotations, and other information required.

For the Contract Times, state increase, decrease, or no change to Contract Times for Substantial Completion, readiness for final payment, and Milestones, if any. If increase or decrease, state specific number of days for changes to the Contract Times.

Description	Amount	Contract Times (days)	
		Substantial	Final
1. Item	\$0.00	0	0
2. Item	\$0.00	0	0
Total This Change Order Proposal	\$0.00	0	0

Changes to Milestones, if any: _____

The adjustment proposed is the entire adjustment to the Contract to which the proposer believes it is entitled as a result of the proposed change.

Change Order Proposal By: _____

Signature of Proposer: _____

SECTION XI-01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Submit to ENGINEER for acceptance a Schedule of Values that allocates cost to each item of the Work. Schedule of Value list of line items shall correspond to each aspect of the Work, establishing in detail the portion of the Contract Price allocated to each major component of the Work.
- B. Upon request of ENGINEER, support values with data that substantiate their correctness.
- C. Submit preliminary Schedule of Values to ENGINEER for initial review. CONTRACTOR shall incorporate ENGINEER's comments into the Schedule of Values and resubmit to ENGINEER. ENGINEER may require corrections and re-submittals until Schedule of Values is acceptable.
- D. Schedule of Values and the Progress Schedule updates specified in Section X- 00001, Progress Schedule, shall be basis for preparing each Application for Payment. Schedule of Values may be used as a basis for negotiating price of changes, if any, in the Work.
- E. Include in Schedule of Values unit price payment items with their associated quantity. Provide in the Schedule of Values detailed breakdown of unit prices when required by ENGINEER.
- F. Requirements for preliminary Schedule of Values and Schedule of Values are:
 - 1. Schedule of Values shall show division of Work between CONTRACTOR and Subcontractors. Line items for Work to be done by Subcontractor shall include the word, "(SUBCONTRACTED)".
 - 2. Schedule of Values shall include breakdown of costs for materials and equipment, installation, and other costs used in preparing the Bid by CONTRACTOR and each Subcontractor. List purchase and delivery costs for materials and equipment for which CONTRACTOR may apply for payment as stored materials.
 - 3. Include separate amounts for each Specification Section in the Contract Documents by structure, building, and work area.
 - 4. Identify each line item with number corresponding to the associated Specification Section number. List sub-items of major products or systems, as appropriate or when requested by ENGINEER.

5. Sum of individual values shown on the Schedule of Values shall equal the total of associated payment item. Sum of payment item totals in the Schedule of Values shall equal the Contract Price.
6. Include in each line item a directly proportional amount of CONTRACTOR's overhead and profit. Do not include overhead and profit as separate item(s).
7. Include separate line item for each allowance, and for each unit price item.
8. Include line item for bonds and insurance in payment item for Bid Item UP-1.
9. Include items for the General Conditions, permits (when applicable), construction Progress Schedule, and other items required by ENGINEER. Include such items in Applications for Payment on schedule accepted by ENGINEER
10. Line items for Site maintenance such as dust control, snow removal, compliance with storm water pollution prevention plans and permits, spill prevention control and countermeasures plans, and for construction photographic documentation; temporary utilities and temporary facilities, field offices, temporary controls, field engineering, and similar Work shall be included in the Schedule of Values and proportioned in Applications for Payment throughout duration of the Work.
11. Include separate payment items for mobilization and demobilization. Document for ENGINEER the activities included in the mobilization and demobilization payment items.
12. Costs for submittals, operations and maintenance manuals, field testing, and training of operations and maintenance personnel shall be as follows, unless otherwise accepted by ENGINEER:
 - a. Up to eight percent of cost (including overhead and profit) of each equipment item, exclusive of transportation and installation costs associated with that item, may be allocated to preparation of submittals and may be included in the Application for Payment following ENGINEER's approval of Shop Drawings (and acceptance of other submittals, as applicable) required for fabricating or purchasing for that item for the Work.
 - b. Up to three percent of total cost of each item (including overhead and profit), including materials and equipment, and installation, may be apportioned to testing and included in the Application for Payment following ENGINEER's acceptance of the associated written Site testing report(s).
 - c. Up to a total of four percent of equipment cost (including overhead and profit), exclusive of transportation and installation costs, may be apportioned to operations and maintenance manuals and training of operations and maintenance personnel, which may be included in the Application for Payment following completion of training for that item.
13. Schedule of Values shall include an itemized list of Work by work area, as applicable, for Work included in Section XI-01 14 16, Coordination with Owner's Operations.
14. Submit Schedule of Values on 8.5-inch by 11-inch white paper, using the continuation sheets of the Application for Payment form specified in Section XI-01 29 76, Progress Payment Procedures.

15. Coordinate Schedule of Values with the Progress Schedule, in accordance with Section X-00001, Progress Schedule.

1.2 SUBMITTALS

- A. Informational Submittals: Submit the following:
 1. Submit to ENGINEER six copies of Schedule of Values.
 2. Content of Schedule of Values submittals shall conform to Article 1.1 of this Section.
 3. Time Frames for Submittals:
 - a. Submit preliminary Schedule of Values within ten days of date that the Contract Times commence running in accordance with the Notice to Proceed.
 - b. Submittal of the Schedule of Values shall be in accordance with the General Conditions. ENGINEER will not accept Applications for Payment without an acceptable Schedule of Values.
 - c. When required by ENGINEER, promptly submit updated Schedule of Values to include cost breakdowns for changes in the Contract Price.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION XI-01 29 76

PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 PROGRESS PAYMENTS

A. General:

1. CONTRACTOR's requests for payment shall be in accordance with the Agreement, General Conditions and Supplementary Conditions, and the Specifications.
2. Applications for Payment shall be in the form of the New York state Department of Environmental Conservation Division of Management and Budget's Contractor's Application for Payment (CAP) form.

B. Procedure:

1. Review with Resident Project Representative (RPR) quantities and the Work proposed for inclusion in each progress payment. Contractor's Application for Payment shall cover only the Work and quantities recommended by the RPR.
2. Submit to ENGINEER four originals of each complete Contractor's Application for Payment and other documents to accompany the Contractor's Application for Payment.
3. ENGINEER will act on request for payment in accordance with the General Conditions and Supplementary Conditions.

C. Each request for progress payment shall include:

1. Completed Contractor's Application for Payment form, including summary/signature page, progress estimate sheets, and stored materials summary. Progress estimate sheets shall have the same level of detail as the Schedule of Values.
2. For materials and equipment not incorporated in the Work but suitably stored, submit documentation in accordance with the General Conditions and Supplementary Conditions. Legibly indicate on invoice or bill of sale the specific materials or equipment included in the payment request and corresponding bid/payment item number for each.
3. Owner's Vouchers and Certified Payroll.
4. For payment requests that include payment for Work under an allowance, submit documentation acceptable to OWNER of the authorization of allowance Work.
5. For payment requests (other than request for final payment) that include reduction or payment of retainage in an amount greater than that required in the Contract Documents, submit on form acceptable to OWNER consent of surety to partial release or reduction of retainage.

- D. Requirements for request for final payment are in the General Conditions, as may be modified by the Supplementary Conditions, and Section XI-01 77 19, Closeout Requirements.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION XI-01 31 13

PROJECT COORDINATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall coordinate the Work, including testing agencies whether hired by CONTRACTOR, OWNER, or others; Subcontractors, Suppliers, and others with whom coordination is necessary, in accordance with the General Conditions, Supplementary Conditions, and this Section, to complete the Work within the Contract Times and in accordance with the Contract Documents.
- B. In accordance with the General Conditions as may be modified by the Supplementary Conditions, CONTRACTOR shall cooperate with and coordinate the Work with other contractors, utility service companies, OWNER's employees working at the Site, and other entities working at the Site, in accordance with Section XI-01 11 13, Summary of Work and Section XI-01 11 15, Special Construction Conditions.
- C. CONTRACTOR will not be responsible or liable for damage unless damage is through negligence of CONTRACTOR, or Subcontractors, Supplier, or other entity employed by CONTRACTOR.
- D. Attend and participate in all project coordination and progress meetings, and report on the progress of the Work and compliance with the Progress Schedule.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 31 19.13

PRE-CONSTRUCTION CONFERENCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. A pre-construction conference will be held for the Project.
 - 2. CONTRACTOR shall attend the conference prepared to discuss all items on the agenda.
 - 3. ENGINEER will distribute an agenda, preside at conference, and prepare and distribute minutes to all conference participants and others as requested.
- B. Purpose of conference is to designate responsible personnel, establish working relationships, discuss preliminary schedules submitted by CONTRACTOR, and review administrative and procedural requirements for the Project. Matters requiring coordination will be discussed and procedures for handling such matters will be established.
- C. Date, Time and Location: Conference will be held after execution of the Contract and before Work starts at the Site. ENGINEER will establish the date, time, and location of conference and notify the interested and involved parties.
- D. Prior to the conference, submit the following preliminary schedules in accordance with the General Conditions:
 - 1. Progress Schedule.
 - 2. Schedule of Submittals.
 - 3. Schedule of Values.
- E. CONTRACTOR shall provide information required and contribute appropriate items for discussion. CONTRACTOR shall bring to the conference the following, with sufficient number of copies for each attendee:
 - 1. Preliminary Progress Schedule, as submitted to ENGINEER.
 - 2. Preliminary Schedule of Submittals, as submitted to ENGINEER.
 - 3. Preliminary Schedule of Values, as submitted to ENGINEER.
 - 4. List of emergency contact information, in accordance with Article 1.4 of this Section.
 - 5. CONTRACTOR's Site-specific health and safety plan, as submitted to ENGINEER.

1.2 REQUIRED ATTENDANCE

- A. Representative of each entity attending the conference shall be authorized to act on that entity's behalf.
- B. Contractor Attendance: Conference shall be attended by CONTRACTOR's project manager, Site superintendent, project managers for major Subcontractors, and major equipment Suppliers as CONTRACTOR deems appropriate.
- C. Other attendees will be representatives of:
 - 1. OWNER.
 - 2. ENGINEER.
 - 3. Authorities having jurisdiction over the Work, if available.
 - 4. Utility owners, as applicable.
 - 5. Others as requested by OWNER, CONTRACTOR, or ENGINEER.

1.3 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revisions to this agenda, if any, will be furnished to CONTRACTOR prior to conference:
 - 1. Procedural and Administrative:
 - a. Personnel and Teams:
 - 1) Designation of roles and personnel.
 - 2) Limitations of authority of personnel, including personnel who will sign Contract modifications and make binding decisions.
 - 3) Lists of proposed Subcontractors and manufacturers (where applicable).
 - 4) Authorities having jurisdiction.
 - b. Procedures for communications and correspondence.
 - c. Copies of the Contract Documents and availability.
 - d. Subcontractors.
 - e. The Work and Scheduling:
 - 1) Scope of the Work.
 - 2) Contract Times, including Milestones (if any).
 - 3) Phasing and sequencing.
 - 4) Preliminary Progress Schedule.
 - 5) Critical path activities.
 - f. Safety:
 - 1) Responsibility for safety.
 - 2) Designation of Contractor's safety representative.
 - 3) Emergency procedures and accident reporting.
 - 4) Emergency contact information.
 - 5) Confined space entry procedures.
 - 6) Hazardous materials communication program.

- 7) Impact of Project on public safety.
- g. Permits.
- h. Review of insurance requirements and insurance claims.
- i. Coordination:
 - 1) Project coordination, and coordination among contractors.
 - 2) Coordination with Owner's operations.
 - 3) Progress meetings.
- j. Products and Submittals:
 - 1) Preliminary Schedule of Submittals.
 - 2) Shop Drawings, Samples, and other submittals.
 - 3) Product options, "or equals", and substitutions..
 - 4) Construction photographic documentation.
- k. Contract Modification Procedures:
 - 1) Requests for interpretation.
 - 2) Clarification notices.
 - 3) Field Orders.
 - 4) Proposal requests.
 - 5) Change Order proposals.
 - 6) Work Change Directives.
 - 7) Change Orders.
 - 8) Procedure for filing Claims.
- l. Payment:
 - 1) Owner's Project financing and funding, as applicable.
 - 2) Owner's tax-exempt status.
 - 3) Preliminary Schedule of Values, and procedures for measuring for payment.
 - 4) Retainage.
 - 5) Progress payment procedures.
 - 6) Prevailing wage rates and payrolls.
- m. Testing and inspections, including notification requirements.
- n. Disposal of materials.
- o. Record documents.
- p. Preliminary Discussion of Contract Closeout:
 - 1) Procedures for Substantial Completion.
 - 2) Contract closeout requirements.
 - 3) Correction period.
 - 4) Duration of bonds and insurance.
- 2. Site Mobilization (if not covered in a separate meeting):
 - a. Working hours and overtime.
 - b. Field offices, trailers, and staging areas.
 - c. Temporary facilities.
 - d. Temporary utilities and limitations on utility consumption (where applicable).
 - e. Utility company coordination (if not done as a separate meeting).
 - f. Access to Site, access roads, and parking for construction vehicles.
 - g. Maintenance and protection of traffic.

- h. Use of premises.
- i. Protection of existing property.
- j. Security.
- k. Temporary controls, such as sediment and erosion control, noise control, dust control, storm water control, and other such measures.
- l. Site barriers and temporary fencing.
- m. Storage of materials and equipment.
- n.. Reference points and benchmarks; surveys and layouts.
- o. Site maintenance during the Project.
- p. Cleaning and removal of trash and debris.
- q. Restoration.
- 3. General discussion and questions.
- 4. Next meeting.
- 5. Site visit, if required.

1.4 EMERGENCY CONTACT INFORMATION

- A. CONTRACTOR shall provide list of emergency contact information for 24-hour use throughout the Project. Emergency contact information shall be updated and kept current throughout the Project. If personnel or contact information change, provide updated emergency contact information list at the next progress meeting.
- B. CONTRACTOR's list of emergency contact information shall include:
 - 1. CONTRACTOR's project manager's office, field office, cellular, and home telephone numbers.
 - 2. CONTRACTOR's Site superintendent's office, field office, cellular, and home telephone numbers.
 - 3. CONTRACTOR's foreman's field office, cellular (if available), and home telephone numbers.
 - 4. Major Subcontractors' and Suppliers' office, cellular, and home telephone numbers of project manager and foreman (when applicable).
- C. Additional Emergency Contact Information:
 - 1. OWNER's Project Manager: office, cellular, and home telephone numbers.
 - 2. OWNER's central 24-hour emergency telephone number.
 - 3. ENGINEER's project manager's office, cellular, and home telephone numbers.
 - 4. ENGINEER's project engineer's office, cellular, and home telephone numbers.
 - 5. Resident Project Representative's office, field office, cellular, and home telephone numbers.
 - 6. Utility companies' 24-hour contact telephone number(s), including gas, water, sewer, oil, telephone, cable television/telecommunications, and other companies or concerns having utilities in the vicinity of the Work.
 - 7. Highway and street owners' 24-hour telephone number(s).
 - 8. Emergency telephone numbers, including: "Emergency: Dial 911", and seven-digit telephone numbers for the hospital, ambulance, police, and fire department nearest to the Site. Provide names of each of these institutions.

9. Emergency contact and notification information for the businesses operating on the site.
10. Other involved entities as applicable.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 31 19.23

PROGRESS MEETINGS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. Progress meetings will be held throughout the Project. CONTRACTOR shall attend each progress meeting prepared to discuss in detail all items on the agenda.
 - 2. ENGINEER will preside at progress meetings and will prepare and distribute minutes of progress meetings to all meeting participants and others as requested.
- B. Date and Time:
 - 1. Regular Meetings: Every two weeks on a day and time agreeable to OWNER, ENGINEER, and CONTRACTOR.
 - 2. Other Meetings: As required.
- C. Place: CONTRACTOR's field office at the Site or other location mutually agreed upon by OWNER, CONTRACTOR, and ENGINEER.
- D. Handouts: CONTRACTOR shall bring to each progress meeting a minimum of ten copies of each of the following:
 - 1. List of Work accomplished since the previous progress meeting.
 - 2. Up-to-date Progress Schedule.
 - 3. Up-to-date Schedule of Submittals.
 - 4. Detailed "look-ahead" schedule of Work planned through the next progress meeting, with specific starting and ending dates for each activity, including shutdowns, deliveries of important materials and equipment, Milestones (if any), and important activities affecting the OWNER, Project, and Site.
 - 5. When applicable, list of upcoming, planned time off (with dates) for personnel with significant roles on the Project, and the designated contact person in their absence.

1.2 REQUIRED ATTENDANCE

- A. Representatives present for each entity shall be authorized to act on that entity's behalf.
- B. Required Attendees:
 - 1. CONTRACTOR:

- a. Project manager.
 - b. Site superintendent.
 - c. Safety representative.
 - d. When needed for the discussion of a particular agenda item, representatives of Subcontractors and Suppliers shall attend meetings.
2. ENGINEER:
 - a. Project manager or designated representative
 - b. Resident Project Representative (if any).
 - c. Others as required by ENGINEER.
 3. OWNER's representative(s), as required.
 4. Testing and inspection agencies, as required.
 5. Others, as appropriate.

1.3 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revised agenda, if any, will be furnished to CONTRACTOR prior to first progress meeting. Progress meeting agenda may be modified by ENGINEER during the Project as required:
 1. Review, comment, and amendment (if required) of minutes of previous progress meeting.
 2. Review of progress since the previous progress meeting.
 3. Planned progress through next progress meeting.
 4. Review of Progress Schedule:
 - a. Contract Times, including Milestones (if any).
 - b. Critical path.
 - c. Schedules for fabrication and delivery of materials and equipment.
 - d. Corrective measures, if required.
 5. Submittals:
 - a. Review of status of critical submittals.
 - b. Review revisions to Schedule of Submittals.
 6. Contract Modifications:
 - a. Requests for interpretation.
 - b. Clarification notices.
 - c. Field Orders.
 - d. Proposal requests.
 - e. Change Order proposals.
 - f. Work Change Directives.
 - g. Change Orders.
 - h. Claims.
 7. Applications for progress payments.
 8. Problems, conflicts, and observations.
 9. Quality standards, testing, and inspections.
 10. Coordination between parties.
 11. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.

12. Safety.
13. Permits.
14. Construction photographic documentation.
15. Record documents status.
16. Punch list status, as applicable.
17. Other business.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 32 33

PHOTOGRAPHIC DOCUMENTATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall retain professional photographer or designate one of the CONTRACTOR's personnel to perform services specified, including:
 - 1. Digital photography.
- B. Provide photographic documentation for the following:
 - 1. Pre-construction.
 - 2. Construction progress.
 - 3. Final.
- C. Image Quality:
 - 1. Photographic documentation shall be in color.
 - 2. Photographic images shall be suitably staged and set up ("framed"), focused, and shall have adequate lighting.
 - 3. For still photographs, use camera with minimum 7.0-megapixel resolution.

1.2 SUBMITTALS

- A. Informational Submittals: Submit the following:
 - 1. Pre-construction Photographic Documentation: Submit acceptable pre-construction photographic documentation (prints and discs) prior to mobilizing to and disturbing the Site. Provide pre-construction photographic documentation no later than first Application for Payment, unless other schedule is accepted by ENGINEER.
 - 2. Construction Progress Photographic Documentation: Submit acceptable construction progress photographic documentation (prints and discs) monthly. Submit with each Application for Payment, unless otherwise agreed to by ENGINEER.
- B. Closeout Submittals: Submit the following:
 - 1. Final Photographic Documentation: Submit acceptable final photographic documentation (prints and discs) prior to submitting final Application for Payment.

1.3 PHOTOGRAPHIC DOCUMENTATION, GENERAL

- A. Digital Files of Photographs:

1. For each photograph taken, provide high-quality digital image on compact disc (CD) in “JPG” file format compatible with Microsoft Windows XP and Microsoft Windows Vista.
2. Image resolution shall be sufficient for clear, high-resolution prints. Minimum resolution shall be 150 dots per inch (dpi). Minimum size of digital images shall be equal to specified print size.
3. Do not imprint date and time in the image.
4. Electronic image filename shall describe the image; do not submit filenames automatically created by digital camera. For example, an acceptable electronic filename would be, “Dewatering Building – Looking West at Centrifuge No. 2.jpg”.
5. Submit three copies of each disc with photographic images.
6. Label each CD.

1.4 PRE-CONSTRUCTION PHOTOGRAPHIC DOCUMENTATION

A. Pre-construction Photographic Documentation:

1. Obtain and submit sufficient pre-construction photographic documentation to record Site conditions prior to construction. Photographs shall document work areas of all prime contracts and conditions of structures, facilities, landscaping and other built elements within and adjacent to the Work.
2. Submit specified number of photographs. Pre-construction photographs are not part of required number of construction progress photographs specified in Article 1.6 of this Section.

B. If disagreement arises on condition of the Site and insufficient pre-construction photographic documentation was submitted prior to the disagreement, restore the grounds or area in question to extent directed by ENGINEER and to complete satisfaction of ENGINEER.

1.5 CONSTRUCTION PROGRESS PHOTOGRAPHIC DOCUMENTATION

A. Progress Photographs:

1. Take photographs at least twice per month.
2. Take at least 24 photographs each time photographer is at the Site.
3. Maximum number of progress photographs required will be 1000, based on the Contract Times and scope of Project on date Contract Times commence running. Proportionately modify amount of photographic documentation if scope of Project or Contract Times are modified.
4. Provide interior and exterior photographic documentation of each structure as directed by ENGINEER at the time photographic documentation is taken.

1.6 FINAL PHOTOGRAPHIC DOCUMENTATION

A. Final Photographs:

1. Take photographs at time and day acceptable to ENGINEER. Do not take final photographs prior to Substantial Completion. Work documented in final

photographs shall be generally complete, including painting and finishing, furnishings, landscaping, and other visible Work

2. Take at least 48 final photographs, based on scope of the Project at the time Contract Times commence running. Proportionately modify the number of final photographs if scope of Project is modified. Final photographs are not part of construction progress photographs required under Paragraph 1.6.A of this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide submittals in accordance with the General Conditions as modified by the Supplementary Conditions, and this Section.
2. Provide submittals well in advance of need for the material or equipment, or procedure (as applicable), in the Work and with ample time required for delivery of material or equipment and to implement procedures following ENGINEER's approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.
3. CONTRACTOR is responsible for dimensions to be confirmed and corrected at the Site, for information pertaining solely to the fabrication processes and to techniques of construction, and for coordinating the work of all trades. CONTRACTOR's signature of submittal's stamp and letter of transmittal shall be CONTRACTOR's representation that CONTRACTOR has met his obligations under the Contract Documents relative to that submittal.

B. Samples:

1. Conform submittal of Samples to the General Conditions as modified by the Supplementary Conditions, this Section, and the Specification Section in which the Sample is specified.
2. Furnish at the same time Samples and submittals that are related to the same unit of Work or Specification Section. ENGINEER will not review submittals without associated Samples, and will not review Samples without associated submittals.
3. Samples shall clearly illustrate functional characteristics of product, all related parts and attachments, and full range of color, texture, pattern, and material.

1.2 TYPES OF SUBMITTALS

- ###### A. Submittal types are classified as follows: 1) Action Submittals, 2) Informational Submittals, 3) Closeout Submittals, and 4) Maintenance Material submittals. Type of each required submittal is designated in the respective Specification Sections; when type of submittal is not specified in the associated Specification Section, submittal will be classified as follows:

1. Action Submittals include:
 - a. Shop Drawings.
 - b. Product data.

- c. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional retained by CONTRACTOR, Subcontractor, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specification Section. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.
- d. Samples.
- e. Testing plans, procedures, and testing limitations.
- 2. Informational Submittals include:
 - a. Certificates.
 - b. Design data not sealed and signed by a design professional retained by CONTRACTOR, Subcontractor, or Supplier.
 - c. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, potential Hazardous Environmental Condition, and similar reports.
 - d. Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.
 - e. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.
 - f. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.
 - g. Supplier reports.
 - h. Sustainable design submittals (other than sustainable design closeout documentation).
 - i. Special procedure submittals, including health and safety plans and other procedural submittals.
 - j. Qualifications statements.
- 3. Closeout Submittals include:
 - a. Maintenance contracts.
 - b. Operations and maintenance data.
 - c. Bonds, such as maintenance bonds and bonds for a specific product or system.
 - d. Warranty documentation.
 - e. Record documentation.
 - f. Sustainable design closeout documentation.
 - g. Software.
- 4. Maintenance Material Submittals include:
 - a. Spare parts.
 - b. Extra stock materials.
 - c. Tools.
- 5. When type of submittal is not specified and is not included in the list above, ENGINEER will determine the type of submittal.

- B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:
1. Requests for interpretations of the Contract Documents.
 2. Change Orders, Work Change Directives, and Field Orders.
 3. Applications for Payment.
 4. Progress Schedules.
 5. Photographic documentation.
 6. Reports and documentation required in accordance with applicable permits.
 7. Site survey data.

1.3 SUBMITTALS REQUIRED IN THIS SECTION

- A. Informational Submittals: Provide the following:
1. Schedule of Submittals:
 - a. Timing:
 - 1) Provide submittal within time frames specified in the Contract Documents.
 - 2) Provide updated Schedule of Submittals with each submittal of the updated Progress Schedule.
 - b. Content: In accordance with the General Conditions as modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:
 - 1) Date by which submittal will be provided to ENGINEER.
 - 2) Whether submittal will be for a substitution or "equal". Procedures for substitutions and "or equals" are specified in the General Conditions.
 - 3) Date by which ENGINEER's response is required. At least 14 days shall be allowed from ENGINEER's receipt of each submittal. Allow increased time for large or complex submittals.
 - 4) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors.
 - c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules.
 - d. Coordinate Schedule of Submittals with the Progress Schedule.
 - e. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's critical path, or that that places extraordinary demands on ENGINEER for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.
 - f. In preparing Schedule of Submittals:
 - 1) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.

- 2) Reasonable time shall be allowed for: ENGINEER's review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to CONTRACTOR.
- 3) Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.4 PROCEDURE FOR SUBMITTALS

- A. Submittal Identification System: Use the following submittal identification system, consisting of submittal number and review cycle number:
1. Submittal Number: Shall be separate and unique number correlating to each individual submittal required. CONTRACTOR shall assign submittal number as follows:
 - a. First part of submittal number shall be the applicable Specification Section number, followed by a hyphen.
 - b. Second part of submittal number shall be a three-digit number (sequentially numbered from 001 through 999) assigned to each separate and unique submittal provided under the associated Specification Section.
 - c. Typical submittal number for the third submittal provided for Section 40 05 19, Ductile Iron Process Pipe, would be "40 05 19-003".
 2. Review Cycle Number: Shall be a letter designation indicating the initial submittal or re-submittal associated with each submittal number:
 - a. "A" = Initial (first) submittal.
 - b. "B" = Second submittal (e.g., first re-submittal).
 - c. "C" = Third submittal (e.g., second re-submittal).
 3. Examples:

Example Description	Submittal Identification	
	Submittal No.	Review Cycle
Initial (first) review cycle of the third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	A
Second review cycle (first re-submittal) of third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	B

- B. Letter of Transmittal for Submittals:
1. Provide separate letter of transmittal with each submittal. Each submittal shall be for one Specification Section.
 2. At beginning of each letter of transmittal, provide a reference heading indicating: CONTRACTOR's name, OWNER's name, Project name, Contract name and number, transmittal number, and submittal number.
 3. For submittals with proposed deviations from requirements of the Contract Documents, letter of transmittal shall specifically describe each proposed variation.

C. Contractor's Review and Stamp:

1. Contractor's Review: Before transmitting submittals to ENGINEER, review submittals to:
 - a. assure proper coordination of the Work.
 - b. determine that each submittal is in accordance with CONTRACTOR's desires.
 - c. verify that submittal contains sufficient information for ENGINEER to determine compliance with the Contract Documents.
2. Incomplete or inadequate submittals will be returned without review.
3. Contractor's Stamp and Signature:
 - a. Each submittal provided shall bear CONTRACTOR's stamp of approval and signature, as evidence that submittal has been reviewed by CONTRACTOR and verified as complete and in accordance with the Contract Documents.
 - b. Submittals without CONTRACTOR's stamp and signature will be returned without review. Signatures that appear to be computer-generated will be regarded as unsigned and the associated submittal will be returned without review.
 - c. CONTRACTOR's stamp shall contain the following:

"Project Name: _____

Contractor's Name: _____

Date: _____

----- *Reference* -----

Item/Submittal Title: _____

Specifications:

Section: _____

Page No.: _____

Paragraph No.: _____

Drawing No.: _____ of _____

Location of Work: _____

Submittal No. and Review Cycle: _____

Coordinated by Contractor with Submittal Nos.: _____

I hereby certify that the Contractor has satisfied Contractor's obligations under the Contract Documents relative to Contractor's review and approval of this submittal.

Approved By (for Contractor): _____"

D. Submittal Marking and Organization:

1. Mark on each page of submittal and each individual component submitted with submittal number and applicable Specification paragraph.

2. Arrange submittal information in same order as requirements are written in the associated Specification Section.
 3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to ENGINEER.
 4. Package together submittals for the same Specification Section. Do not provide required information piecemeal.
- E. Format of Submittal and Recipients:
1. Action Submittals and Informational Submittals: Furnish in accordance with Table 01 33 00-A, except that submittals of Samples shall be as specified elsewhere in this Section:

**TABLE 01 33 00-A: SUBMITTAL CONTACTS
AND REQUIRED COPIES**

	Address for Deliveries	Contact Person	E-mail Address	No. of Hard-copies	Remarks
a.	Engineer: Malcolm Pirnie, Inc., 855 Route 146, Suite 210 Clifton Park, NY 12065	David Hiss	David.Hiss@Arcadis-us.com	Six	
b.	Resident Project Representative: At the Site.	TBD	TBD	One	
Notes: TBD = To Be Determined					

2. Samples:
 - a. Securely label or tag Samples with submittal identification number. Label or tag shall include clear space at least three inches by three inches in size for affixing ENGINEER's review stamp. Label or tag shall not cover, conceal, or alter appearance or features of Sample. Label or tag shall not be separated from the Sample.
 - b. Submit number of Samples required in Specifications. If number of Samples is not specified in the associated Specification Section, provide at least two identical Samples of each item required for ENGINEER's approval. Samples will not be returned to CONTRACTOR. If CONTRACTOR requires Sample(s) for CONTRACTOR's use, notify ENGINEER in writing and provide additional Sample(s). CONTRACTOR is responsible for furnishing, shipping, and transporting additional Samples.
 - c. Deliver one Sample to ENGINEER's field office at the Site. Deliver balance of Samples to ENGINEER at address listed in Table 01 33 00-A, unless otherwise directed by ENGINEER.
3. Closeout Submittals:
 - a. Provide the following Closeout Submittals in accordance with Table 01 33 00-A: maintenance contracts; bonds for specific products or systems; warranty documentation; and sustainable design closeout documentation. On documents such as maintenance contracts and bonds, include on each document furnished original signature of entity issuing

- the document.
 - b. Record Documentation: Submit in accordance with Section XI-01 78 39, Project Record Documentation.
 - c. Software: Submit number of copies required in Specification Section where the software is specified. If number of copies is not specified, provide two copies on compact disc in addition to software loaded on to OWNER's computer(s) or microprocessor(s).
 - 4. Maintenance Material Submittals: For spare parts, extra stock materials, and tools, submit quantity of items specified in associated Specification Section.
- F. Distribution:
- 1. Distribution of Hardcopies: ENGINEER will distribute each reviewed submittal requiring ENGINEER's written response as follows:
 - a. CONTRACTOR: Three copies (except closeout submittals and maintenance material submittals).
 - b. Other Prime Contractors: One copy each (except closeout submittals and maintenance material submittals).
 - c. OWNER: One copy.
 - d. Resident Project Representative: One copy (except closeout submittals and maintenance material submittals).
 - e. ENGINEER's File: One copy.
- G. Resubmittals: Refer to the General Conditions for requirements regarding resubmitting required submittals.

1.5 ENGINEER'S REVIEW

- A. Timing: ENGINEER's review will conform to timing accepted by ENGINEER in the accepted Schedule of Submittals.
- B. Submittals not required in the Contract Documents will not be reviewed by ENGINEER and will not be recorded in ENGINEER's submittal log. All hardcopies of such submittals will be returned to CONTRACTOR.
- C. Action Submittals, Results of ENGINEER's Review: Each submittal will be given one of the following dispositions:
 - 1. Approved: Upon return of submittal marked "Approved", order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.
 - 2. Approved as Corrected: Upon return of submittal marked "Approved as Corrected", order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with corrections indicated.

3. Approved as Corrected – Resubmit: Upon return of submittal marked “Approved as Corrected – Resubmit”, order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER’s approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, provided it is in accordance with corrections indicated. Provide to ENGINEER record re-submittal with all corrections made. Receipt of corrected re-submittal is required before materials or equipment covered in the submittal will be eligible for payment.
4. Revise and Resubmit: Upon return of submittal marked “Revise and Resubmit”, make the corrections indicated and re-submit to ENGINEER for approval.
5. Not Approved: This disposition indicates material or equipment that cannot be approved. Upon return of submittal marked “Not Approved”, repeat initial submittal procedure utilizing approvable material or equipment.

D. Informational Submittals, Results of ENGINEER’s Review:

1. Each submittal will be given one of the following dispositions:
 - a. Accepted: Information included in submittal conforms to the applicable requirements of the Contract Documents, and is acceptable. No further action by CONTRACTOR is required relative to this submittal, and the Work covered by the submittal may proceed, and products with submittals with this disposition may be shipped or operated, as applicable.
 - b. Not Accepted: Submittal does not conform to applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and conformance with the Contract Documents.
2. The following types of Informational Submittals, when acceptable to ENGINEER, will not receive a written response from ENGINEER. Disposition as “accepted” will be recorded in ENGINEER’s submittal log. When submittals of the following are not acceptable, ENGINEER will provide written response to CONTRACTOR:
 - a. Material safety data sheets (MSDS).
 - b. Compaction testing reports.
 - c. Concrete testing reports.
 - d. Manufacturer’s instructions.

E. Closeout Submittals, Results of ENGINEER’s Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Closeout Submittals will not receive a written response from ENGINEER. Disposition as “accepted” will be recorded in ENGINEER’s submittal log. When Closeout Submittal is not acceptable, ENGINEER will provide written response to CONTRACTOR.

F. Maintenance Material Submittals, Results of ENGINEER’s Review: Dispositions and meanings are the same as specified for Informational Submittals. When

acceptable, Maintenance Material Submittals will not receive a written response from ENGINEER. Disposition as “accepted” will be recorded in ENGINEER’s submittal log. When Maintenance Material Submittal is not acceptable, ENGINEER will provide written response to CONTRACTOR, and CONTRACTOR is responsible for costs associated with transporting and handling of maintenance materials until compliance with the Contract Documents is achieved.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 35 26.23

CONFINED SPACE ENTRY PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. OWNER has determined that portions of the Site may constitute confined spaces or permit-required confined spaces, as defined in this Section.
2. CONTRACTOR shall provide appropriate measures, including labor, supervision, equipment, protective devices, and incidentals, to protect the health and safety of personnel at the Site relative to confined spaces, and who may be affected by the Work in confined spaces including, without limitation: employees and agents of CONTRACTOR, Subcontractors, Suppliers, OWNER, ENGINEER, and ENGINEER's consultants, while engaged in performance of their respective duties at Site.
3. Comply with requirements of OWNER's confined space entry program, if any.

1.2 TERMINOLOGY

A. The following words or terms are not defined but, when used in this Section, have the following meaning:

1. "Confined spaces" are areas on or about the Site as defined in 29 CFR 1910.146(b) and 29 CFR 1926.21(b)(6). Confined spaces include, but are not limited to: storage tanks, process vessels, bins, boilers and similar spaces; ventilation or exhaust ducts and stacks; manholes, underground utility vaults and chambers, sewers, pipelines, tunnels; and open-topped spaces greater than four feet deep, such as pits, tubs, vaults, and vessels.
2. "Entry permit" means the written or printed document provided by the employer of personnel entering permit-required confined space, to allow and control entry into permit-required confined space and that contains the information specified in 29 CFR 1926.146(f).
3. "Permit-required confined space" means confined space as defined in 29 CFR 1926.146(b) and that has one or more of the following characteristics:
 - a. Contains or has potential to contain a hazardous atmosphere.
 - b. Contains material that has potential for engulfing an entrant.
 - c. Has internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or floors, or by floor that slopes downward and tapers to a smaller cross-section.
 - d. Contains other recognized serious safety or health hazard.
4. "Hot work permit" means the written authorization of employer of personnel entering a confined space to perform operations, such as riveting, welding, cutting, burning, and heating, capable of providing a source of ignition.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with Laws and Regulations related to protecting personnel working in or entering confined spaces, including:
 - 1. Code of Federal Regulations (CFR), Title 29, Part 1910, Occupational Safety and Health Standards.
 - 2. CFR, Title 29, Part 1926, Safety and Health Regulations for Construction.

1.4 SUBMITTALS

- A. Informational Submittals: If acceptable, written response for Informational Submittals required in this Section will not be returned to CONTRACTOR. Submit the following to OWNER; if submittals under this Section are furnished to ENGINEER, ENGINEER will forward all submittals under this Section to OWNER without review:
 - 1. Procedures: Site-specific confined space entry plan, submitted upon request of OWNER.
 - 2. Permits and Reports: For each time personnel enter a confined space, copies of completed permits required for confined space entry, and completed confined space data sheets, submitted upon request of OWNER.

1.5 CONFINED SPACE ENTRY PLAN

- A. Prepare Site-specific confined space entry plan which shall be incorporated into CONTRACTOR's Site-specific health and safety plan. Maintain copy of the confined space entry plan at the Site for access by employees, OWNER and authorities having jurisdiction. Confined space entry plan shall include:
 - 1. Results of CONTRACTOR's Site-specific hazard assessment to identify confined spaces that are permit-required confined spaces, including list of all such spaces that will be accessed for the Work. Update the list as required throughout the Project.
 - 2. Requirements for safeguarding access to, and restricting non-permitted personnel from access to, permit-required confined spaces during the Work.
 - 3. Project-specific procedures to be followed when entering or accessing permit-required confined spaces.
 - 4. Documentation of training provided to each person that will enter, or work in conjunction with entry to, permit-required confined spaces
 - 5. Update the plan by adding copies of permits issued and records of entry to permit-required confined spaces, as required in Article 1.6 of this Section.

1.6 CONFINED SPACE SAFETY

- A. Personnel entering confined space shall be trained in accordance with 29 CFR 1926.21 (b)(6) and 29 CFR 1910.146(g).
- B. Comply with 29 CFR 1910.146 and requirements of authorities having jurisdiction.

- C. Recordkeeping: Using the example forms attached to this Section, or other forms required by CONTRACTOR, OWNER, or authority having jurisdiction, issue for each instance of access to permit-required confined space, completed permit(s) and complete associated data sheet. File completed permits and data sheets in the Site-specific confined space entry plan, and submit in accordance with Article 1.4 of this Section:
1. Permit for entry to permit-required confined space(s).
 2. Permit for hot work in permit-required confined space(s).
 3. Complete confined space data sheet.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 SUPPLEMENTS

- A. The example forms listed below, following the “End of Section” designation, are part of this Specification Section:
1. “Confined Space Data Sheet” (one page).
 2. “Confined Space Entry Permit (two pages).
 3. “Confined Space Hot Work Permit” (one page).

+ + END OF SECTION + +

CONFINED SPACE DATA SHEET

Name of Confined Space: _____

Location of Confined Space: _____

Contractor/Subcontractor Accessing Confined Space: _____

PRE-ENTRY SYSTEM CONTROL

Mechanical: Isolate, lockout and de-energize to zero potential energy.

Engulfment: Blank/block/cap/bleed off lines. Lock out gates, valves, pumps.

Electrical: Lockout/Tag-out

Inerting: Flush/Purge/Vent

Special Precautions: _____

Check

☐☐☐☐

ATMOSPHERE

Date of Last-measured Values: _____

	Oxygen	Explosive	H ₂ S/Toxic	CO	Date/Time Completed	Initials
Permissible Range	19.5%-23.5%	< 10% LFL	< 10 ppm H ₂ S	< 35 ppm	--	--
Last Measured						
Values This Entry						

SITE AND PERSONAL SAFETY (check if required, list type where applicable)

Personal Protective Equipment:

Safety Harness ☐. Life Lines ☐. Hard Hats ☐. Fall Protection ☐. Retrieval ☐. Eye ☐. Ear ☐. Face ☐. Hand ☐.

Foot ☐. Respiratory ☐ (type) _____. Clothing ☐ (type) _____

Other: ☐ _____

Rescue and Emergency Equipment:

Retrieval Equipment ☐. Fire Extinguishers ☐. Radios/Telephone ☐. Ladder ☐. Other ☐ _____

Equipment on Standby for Rescue Personnel ☐ _____

Site Safety:

Explosion-Proof Lighting ☐. Barriers/Shield/Barricades ☐ (type) _____

Postings/Flagging ☐.

Other ☐ _____

List specific equipment isolated, de-energized, and locked out.

CONFINED SPACE ENTRY PERMIT

ENTRY TEAM

Contractor/Subcontractor Accessing Confined Space: _____

Facility: _____

Specific Confined Space Being Entered: _____

Purpose of Entry (describe the work to be done): _____

Date: _____ Time: _____ Expected Job Duration (days/hours): _____

Entry Supervisor: _____ Designated Attendant: _____

Authorized/Qualified Entrants: _____

Entry Team Rotation:

Date: _____ Time: _____

Entry Supervisor: _____ Designated Attendant: _____

Authorized/Qualified Entrants: _____

Entry Team Rotation:

Date: _____ Time: _____

Entry Supervisor: _____ Designated Attendant: _____

Authorized/Qualified Entrants: _____

Communication Procedures:

Entry Team: _____

Standby/Rescue Personnel: _____

Sign Offs:

Person Authorizing This Entry: _____

Entry Supervisor: _____

Person Terminating Permit: _____ Date: _____ Time: _____

Distribution to: _____

Attach to this permit a list of rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services.

Confined Space Entry Permit (PAGE 2 of 2)

PRE-ENTRY SYSTEM CONTROL

Mechanical: Isolate, lockout and de-energize to zero potential energy.

Engulfment: Blank/block/cap/bleed off lines. Lock out gates, valves, pumps.

Electrical: Lockout/Tag-out

Inerting: Flush/Purge/Vent

Special Precautions: _____

Check **Date/Initials**

Completed ☐ _____

Completed ☐ _____

Completed ☐ _____

Completed ☐ _____

ATMOSPHERE - Tested by portable atmospheric monitor with audible and visual alarms.

No one will enter a space with an unsafe atmosphere without approval from the Division Superintendent/Assistant Superintendent.

	Oxygen	Explosive	H ₂ S/Toxic	CO	Date/Time Completed	Initials
Permissible Range	19.5%-23.5%	< 10% LFL	< 10 ppm H ₂ S	< 35 ppm	--	--
Pre-Entry						
Post Ventilation						
Continuous						
Continuous						
Continuous						

Ventilation Used (circle one): Mechanical Natural

Special Precautions: (See Confined Space Data Sheet) _____

SITE AND PERSONAL SAFETY (check if required, list type where applicable)

Personal Protective Equipment:

Safety Harness ☐. Life Lines ☐. Hard Hats ☐. Fall Protection ☐. Retrieval ☐. Eye ☐. Ear ☐. Face ☐. Hand ☐.

Foot ☐. Respiratory ☐ (type) _____. Clothing ☐ (type) _____.

Other: ☐ _____

Rescue and Emergency Equipment:

Retrieval Equipment ☐. Fire Extinguishers ☐. Radios/Telephone ☐. Other ☐ _____.

Equipment on Standby for Rescue Personnel ☐ _____

Site Safety:

Explosion-Proof Lighting ☐. Barriers/Shield/Barricades ☐ (type) _____. Postings/Flagging ☐.

Other ☐ _____

List specific equipment isolated, de-energized, and locked out.

CONFINED SPACE HOT WORK PERMIT

Contractor/Subcontractor Accessing Confined Space for Hot Work: _____

Facility: _____

Specific Confined Space Being Entered: _____

Date: _____ **Time:** _____

Expected Job Duration (days/hours): _____

Purpose of Entry (describe the work to be done): _____

Explain Why Work Cannot be Done Outside of the Confined Space: _____

Safety Equipment Required:

Fire Extinguishers: Yes _____ No _____ Number _____

 Type _____

Respirators: Yes _____ No _____ Number _____

 Type _____

Other Equipment: _____

Authorizing Supervisor:

Print Name _____

Signature _____

Date Signed _____

SECTION XI-01 35 43.13

ENVIRONMENTAL PROCEDURES FOR HAZARDOUS MATERIALS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall develop, implement, and maintain a Hazardous Materials management program (HMMP) throughout the Project, in accordance with Laws and Regulations:
 - 1. Hazardous Materials Brought to Site by Contractor: Transport, handle, store, label, use, and dispose of in accordance with this Section, and Laws and Regulations.
 - 2. Hazardous Material Generated by Contractor:
 - a. Hazardous Material shall be properly handled, stored, labeled, transported and disposed of by CONTRACTOR in accordance with Laws and Regulations, and this Section.
 - b. If CONTRACTOR will generate or has generated Hazardous Material at the Site, obtain a United States Environmental Protection Agency (EPA) identification number listing CONTRACTOR's name and address of the Site as generator of the Hazardous Material. Obtain identification number from state environmental agency or similar authority having jurisdiction at the Site.
 - c. CONTRACTOR shall be responsible for identifying, analysis of, profiling, transporting, and disposing of Hazardous Material generated by CONTRACTOR.
 - 3. Fines or civil penalties levied against OWNER for violations committed at the Site by CONTRACTOR, and costs to OWNER (if any) associated with cleanup of Hazardous Materials shall be paid by CONTRACTOR.
- B. Enforcement of Laws and Regulations:
 - 1. Interests of OWNER are that accidental spills and emissions, Site contamination, and injury of personnel at the Site are avoided.
 - 2. When OWNER is aware of suspected violations, OWNER will notify CONTRACTOR, and authorities having jurisdiction if OWNER reasonably concludes that doing so is required by Laws or Regulations.
- C. Related Sections:
 - 1. Section XI-01 35 44, Spill Prevention Control and Countermeasures Plan.

1.2 DEFINITIONS

- A. The following terms are defined for this Section and supplement the terms defined in the General Conditions:

1. Hazardous Material: Material, whether solid, semi-solid, liquid, or gas, that, if not stored or used properly, may cause harm or injury to persons through inhalation, ingestion, absorption or injection, or that may negatively impact the environment through use or discharge of the material on the ground, in water (including groundwater), or to the air. Hazardous Material includes, but is not limited to, chemicals, Asbestos, Hazardous Waste, PCBs, Petroleum, Radioactive Material, and which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 United States Code (USC) §§9601 et seq. (“CERCLA”); [b] the Hazardous Materials Transportation Act, 49 USC §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 USC §§6901 et seq. (“RCRA”); [d] the Toxic Substances Control Act, 15 USC §§2601 et seq.; [e] the Clean Water Act, 33 USC §§1251 et seq.; [f] the Clean Air Act, 42 USC §§7401 et seq.; and [g] any other Law or Regulation regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Laws and Regulations applying to the Work under this Section include:
 1. Code of Federal Regulations (CFR), Title 29, Part 1910, Occupational Safety and Health Standards.
 2. CFR, Title 29, Part 1926, Safety and Health Regulations for Construction.
 3. CFR Title 40, Protection of Environment.
 4. CFR, Title 49, Transportation.
 5. Occupational health and safety requirements of state labor department or similar entity; environmental Laws and Regulations of state environmental agency, Laws and Regulations of state department of transportation.
 6. New York State Department of Environmental Protection.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following to the entity(ies) specified for each:
 1. Hazardous Materials (including Chemicals) Proposed for Use at the Site: Submit current (dated within the past two years) material safety data sheets (MSDS) in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard), manufacturer, Supplier (if different than manufacturer), container size(s) and number of containers proposed to be at the Site, minimum and maximum volume of material intended to be stored at the Site, and description of process or procedures in which Hazardous Material will be used. Furnish information in sufficient time to obtain OWNER’s acceptance no later than least three days before bringing Hazardous Material to the Site. Submit to ENGINEER and OWNER’s environmental representative.
 2. Hazardous Material Generated at the Site: Submit for each Hazardous Material generated at the Site identification number, analysis results, and number and size of storage containers at the Site. Furnish information not less three days of

- CONTRACTOR's receipt of analytical results. Submit to ENGINEER and OWNER's environmental representative.
3. Permits: Copies of permits for storing, handling, using, transporting, and disposing of Hazardous Materials, obtained from authorities having jurisdiction. Submit to OWNER's environmental representative and ENGINEER.
 4. Other Documents required for the HMMP: Submit to OWNER's environmental representative requested documents within three days of CONTRACTOR's receipt of request. HMMP documents may include emergency/spill response plan, communication plan, and other documents.
 5. Qualifications Statements:
 - a. Contractor's Safety Representative: Submit qualifications of proposed safety representative, including summary of experience, training received, and valid certifications applicable to the Project.

1.5 HAZARDOUS MATERIALS MANAGEMENT

- A. Obtain OWNER's environmental representative's acceptance before bringing each Hazardous Material to the Site.
- B. Communication Plan: CONTRACTOR shall develop a Hazardous Materials communication plan. At minimum, maintain at the Site two notebooks containing: 1) Inventory of Hazardous Materials (including all chemicals); and, 2) Current (dated within the past two years) material safety data sheets (MSDS) for all materials being used to accomplish the Work, whether or not defined as Hazardous Material in this Section. Keep one notebook in CONTRACTOR's field office at the Site; keep second notebook at location acceptable by OWNER's environmental representative. Keep notebooks up-to-date as materials are brought to and removed from the Site.
- C. Emergency/Spill Response Plan: Develop, implement, and maintain an emergency/spill response plan, for each Hazardous Material or each class/group of Hazardous Materials as applicable. At minimum, response plan shall include the following:
 1. Description of equipment available at the Site to contain or respond to emergency related to or spill of the material.
 2. Procedures for notifying, and contact information for: authorities having jurisdiction, emergency responders, OWNER, ENGINEER, the public as applicable, and other entities as required.
 3. Response coordination procedures between CONTRACTOR, OWNER, and others as appropriate.
 4. Site plan showing proposed location of Hazardous Materials storage area and location of spill containment/response equipment, and location of storm water drainage inlets and drainage routes.
 5. Description of Hazardous Material handling and spill response training provided to CONTRACTOR's and Subcontractors' employees, in accordance with 29 CFR 1926.21(b) and other Laws and Regulations.

6. Comply with Section XI-01 35 44, Spill Prevention Control and Countermeasures Plan.
- D. Storage of Hazardous Materials and Non-Hazardous Materials:
1. Hazardous Materials containers shall bear applicable hazard diamond(s).
 2. Container Labeling:
 - a. Properly label each container of consumable materials, whether or not classified as Hazardous Materials under this Section.
 - b. Stencil CONTRACTOR's name and, as applicable, Subcontractor's name, on each vessel containing Hazardous Material and, for non-Hazardous Materials, on each container over five-gallon capacity. Containers shall bear securely-attached label clearly identifying contents. Label containers that are filled from larger containers.
 - c. If OWNER becomes aware of unlabeled containers at the Site, OWNER's environmental representative will notify CONTRACTOR. Properly label container(s) within one hour of receipt of notification or remove container from the Site.
 3. To greatest extent possible, store Hazardous Materials off-Site until required for use in the Work.
- E. Hazardous Materials Storage Area:
1. Maintain designated storage area for Hazardous Materials that includes secondary containment. Storage area shall include barriers to prevent vehicles from colliding with storage containers, and shall include protection from environmental factors such as weather.
 2. Provide signage in accordance with Laws and Regulations, clearly identifying the Hazardous Materials storage area.
- F. CONTRACTOR's safety representative shall meet at least monthly with OWNER's environmental representative to review CONTRACTOR's HMMP documents, procedures, and inspect storage areas and the Site in general, to verify compliance with this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 35 44

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall provide all labor, materials, equipment, tools, professional engineering (when required), and incidentals as shown, specified, and required to comply with Laws and Regulations regarding spill prevention control and countermeasures (SPCC) planning and compliance, including 40 CFR Part 112.
- B. CONTRACTOR shall determine whether a SPCC Plan is required. If SPCC Plan is required, CONTRACTOR shall prepare, implement and maintain SPCC Plan as required by Laws and Regulations. If SPCC Plan is not required, CONTRACTOR shall comply with the Laws and Regulations of the jurisdiction regarding petroleum and chemical bulk storage and management, including, but not limited to those contained in 40 CFR Part 280-81, 6 NYCRR Parts 612-614 and 6 NYCRR Parts 595-599.
- C. Determination of Need for SPCC Plan:
 - 1. CONTRACTOR shall determine need for SPCC Plan.
 - 2. Professional Engineer:
 - a. If the Site will include storage of more than 10,000 gallons of oil in above-ground storage, or if the Site does not comply with oil discharge history criteria specified in 40 CFR 112, CONTRACTOR shall retain a qualified professional engineer to determine need for SPCC Plan and, if SPCC Plan is required, professional engineer shall prepare or supervise preparation of SPCC Plan.
 - b. If a professional engineer is not required to prepare the full SPCC Plan, but the SPCC Plan includes environmentally-equivalent SPCC measures, or impracticality determinations, CONTRACTOR shall retain a qualified professional engineer to prepare and certify those portions of the SPCC Plan dealing with environmentally equivalent measures and impracticality determinations; the balance of the SPCC Plan may be prepared by and self-certified by CONTRACTOR.
 - 3. Submit to ENGINEER letter presenting results of evaluation of whether a SPCC Plan is required for the Project in accordance with Laws and Regulations.
- D. SPCC Plan is required if the Project activities at the Site meet the following criteria:
 - 1. The Site and activities thereon are not exempt from Laws and Regulations.
 - 2. Oil is stored, used, transferred, or otherwise handled at the Site.

3. Maximum oil storage capacity at the Site equals or exceeds either of the following thresholds: 42,000 gallons of completely buried capacity, or 1,320 of above-ground capacity. Capacity includes total storage tank volume and operational storage volume at the Site for contractors and Subcontractors, including bulk storage tanks, containers with 55-gallon storage capacity and larger, mobile tanks located at the Site, and other containers covered by Laws and Regulations. Motive storage containers, such as those on construction equipment and vehicles, is not included. Oil includes petroleum products, fuel oil, hydraulic fluid, oil sludge, oil refuse, oil mixed with wastes other than dredged material, synthetic oil, vegetable oil, animal fats and oils, and other oils defined in Laws and Regulations.
 4. There is reasonable expectation, based on location of the Site, that oil spill would reach navigable waters of the United States or adjoining shorelines.
- E. If SPCC Plan is not required, CONTRACTOR shall ensure that conditions that preclude the need for SPCC Plan, including the activities of all contractors and Subcontractors at the Site, are maintained throughout duration of the Project. Should changes that affect the storage, use, or handling of oil at the Site occur, reassess the need for SPCC Plan at no additional cost to OWNER and provide to ENGINEER evaluation letter regarding need for SPCC Plan.
- F. If SPCC Plan is required, develop SPCC Plan and submit for acceptance by OWNER, with copy to ENGINEER. SPCC Plan shall be specific to the Site and shall include the following:
1. Stamp, original signature, and license number of CONTRACTOR'S professional engineer, when self-certification by CONTRACTOR is not allowed by Laws and Regulations.
 2. Site plan identifying the name (or tag number) and location of each tank and container that will contain a substance regulated in 40 CFR 112 and other Laws and Regulations, including above-ground and buried tanks. Site plan shall indicate general directions of storm water runoff, including storm sewers and drainage inlets, and storm sewer outfall locations.
 3. For each tank and container on the Site plan, provide a table that lists the tank or container's name and tag number, type of oil stored, and maximum storage capacity. List total storage capacity of all tanks and containers at the Site covered by SPCC Laws and Regulations.
 4. Predictions of direction, rate of flow, and total quantity of oil that could be discharged from the Site as result of storage tank or container failure.
 5. Operating procedures that prevent oil spills, including procedures for oil handling, details of secondary containment structures at fuel and oil transfer areas, and details and descriptions of equipment to be used for oil handling, including piping.
 6. Details of and descriptions of control measures installed at the Site by CONTRACTOR to prevent spill from reaching navigable waters, including secondary containment and diversionary structures. For on-shore Sites, one of the following must be used, at minimum: dikes, berms, or retaining walls; curbing; culverts, gutters, or other drainage systems; weirs, booms, or other barriers; spill diversion ponds; retention ponds; sorbent materials. Where

appropriate, the SPCC Plan shall clearly demonstrate that containment or diversionary structures or equipment are not practical. Include brittle fracture evaluation, where required, for field-constructed above-ground storage containers undergoing repair, alteration, construction, or change in service.

7. Plans for countermeasures to contain, clean up, and mitigate effects of oil spill that reaches navigable waters, including written commitment of manpower, equipment, and materials to quickly control and remove spilled oil. Include estimation of time required to contain spill after spill occurs.
 8. Contact list and telephone numbers for facility response coordinator, National Response Center, cleanup contractors, and all appropriate federal, state, and local authorities having jurisdiction to be contacted in event of spill or discharge.
 9. Program for monthly inspections of the Site by CONTRACTOR for SPCC Plan compliance. Notify OWNER of each inspection at least 72 hours in advance.
 10. Measures for Site security relative to oil storage.
 11. Procedures for safely handling mobile containers such as totes, drums, and fueling vehicles and construction equipment which remain at the Site.
 12. Procedures and schedules for periodic testing of integrity of tanks and containers, and associated piping and valves.
 13. Plans for bulk storage container compliance.
 14. Plans for personnel training and oil spill prevention briefings.
 15. For SPCC Plans that do not follow the format listed in Laws and Regulations, provide cross-reference to requirements of Laws and Regulations, including 40 CFR 112.7.
- G. Obtain acceptance of SPCC Plan by OWNER, for coordination with OWNER's Site-specific SPCC Plan, if any.
- H. SPCC Plan shall be reviewed by CONTRACTOR's professional engineer (when professional engineer is required) and OWNER every five years, as applicable.
- I. Post a copy of accepted, certified SPCC Plan in conspicuous location at the Site and provide copies to OWNER, ENGINEER, other contractors, and Subcontractors as appropriate. All contractors shall comply with SPCC Plan.
- J. In event of violation of SPCC Plan or release of oils attributable to construction operations, CONTRACTOR shall:
1. Immediately issue notifications in accordance with Laws and Regulations, including 40 CFR 110 and 40 CFR 112. When required by Laws and Regulations, report to National Response Center, US Environmental Protection Agency, and other authorities having jurisdiction, if any.
 2. Have spill clean-up performed in conformance with Laws and Regulations and the SPCC Plan.
 3. Pay fines or civil penalties (or responsible portion thereof) imposed on OWNER by authorities having jurisdiction, and pay costs associated with clean-up of spills.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Professional Engineer:
 - a. When required by Laws and Regulations, engage a registered professional engineer legally qualified to practice in the jurisdiction where the Site is located and experienced in providing engineering services of the kind indicated.
 - b. Submit qualifications data.
 - c. Responsibilities include but are not necessarily limited to:
 - 1) Carefully reviewing Laws and Regulations relative to SPCC.
 - 2) Preparing written requests for clarifications or interpretations of criteria specified in the Contract Documents for submittal to ENGINEER by CONTRACTOR, and obtaining from authorities having jurisdiction clarifications regarding Laws and Regulations as required.
 - 3) Preparing or supervising the preparation of letter-report evaluation of need for SPCC Plan in accordance with the Contract Documents. Evaluation shall include professional engineer's seal, registration number, and original signature.
 - 4) When SPCC Plan is required, preparing, supervising the preparation of, or reviewing the SPCC Plan (or designated portions thereof when oil storage at the Site will be 10,000 gallons or less) in accordance with the Contract Documents. SPCC Plan (or designated portions thereof) shall include professional engineer's seal, registration number, and original signature.
 - 5) Periodically re-evaluating the need for SPCC Plan and issuing findings as letter-reports with seal, license number, and signature. When SPCC Plan is required, periodically evaluating the SPCC Plan and providing recommendations for compliance with Laws and Regulations, in accordance with the Contract Documents.
 - 6) Certifying that:
 - a) it is familiar with the Laws and Regulations, including 40 CFR 112, and
 - b) it has visited, examined, and is familiar with the Site, planned modifications to the Site under the Project as such modifications pertain to SPCC Laws and Regulations, and
 - c) it has performed the evaluations and prepared SPCC Plan in accordance with the Contract Documents, and
 - d) procedures for required testing and inspections have been established, and
 - e) the said evaluations and SPCC Plan are adequate for the Project, and
 - f) the said evaluations and SPECC Plan conform to all Laws and Regulations, applicable industry standards, and to prevailing standards of practice.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Certifications: With each evaluation letter and SPCC Plan submittal, include certification signed by preparer of submittal that the submittal conforms to the Contract Documents and Laws and Regulations. Signature on all certifications shall be original.
 2. Evaluations:
 - a. Submit letter presenting results of evaluation of whether a SPCC Plan is required for the Project. Submit evaluation no later than fourteen days after the Contract Times commence running, unless longer time is allowed by ENGINEER.
 - b. Submit updated evaluations as required when conditions at the Site change. Submit updated evaluation no later than seven days after the conditions at the Site change, or within seven days of ENGINEER's request, unless longer time is allowed by ENGINEER.
 3. SPCC Plan: When SPCC Plan is required:
 - a. Submit jointly to OWNER and ENGINEER. Submit within fourteen days of receipt of ENGINEER's acceptance of evaluation submittal.
 - b. Update and resubmit the SPCC Plan, or acceptable SPCC Plan amendments, as required when conditions at the Site change. Submit updated SPCC Plan or amendments no later than seven days after the change in conditions at the Site change giving rise to the SPCC Plan change or amendment, or within seven days of ENGINEER's request, unless longer time is allowed by ENGINEER.
 4. SPCC Plan Distribution: When SPCC Plan is required, submit copies of letters transmitting SPCC Plan and amendments (if any) to contractors and Subcontractors working at the Site.
 5. Qualifications Statements: CONTRACTOR's professional engineer, when requested by ENGINEER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

STORMWATER POLLUTION PREVENTION PLAN AND PERMIT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall comply with the Project's State Pollutant Discharge Elimination System (SPDES) General Permit for Construction in the State of New York. CONTRACTOR shall be a co-permittee with OWNER and is responsible for providing necessary materials and taking appropriate measures to comply with requirements of the permit and minimize pollutants in storm water runoff from the Site.
- B. Documents: The following are part of the Work included under this Section:
 - 1. Storm Water Pollution Prevention Plan (SWPPP): Prepared by CONTRACTOR and filed with authority having jurisdiction over storm water discharges during construction.
 - 2. Sediment and Erosion Control Permit: Prepared by CONTRACTOR and filed with the authority having jurisdiction over sediment and erosion control during construction.
 - 3. SWPPP Revisions: Prepared by CONTRACTOR and submitted to ENGINEER. Coordinate with excavation plan submittals required in Division 31 of the Specifications. Should CONTRACTOR propose deviations to the initial SWPPP or if Project-specific modifications of the initial SWPPP are required to conform to field conditions, CONTRACTOR shall provide additional SWPPP Revisions as necessary, in accordance with requirements of authorities having jurisdiction and applicable permits. SWPPP Revisions shall use the SWPPP Revision form included in this Section, with supporting documents attached as required, or forms provided by authorities having jurisdiction. SWPPP Revisions that do not comply with the Contract Documents and are not required by authorities having jurisdiction will be regarded as substitutions, in accordance with the General Conditions and substitution procedures in the Specifications.
 - 4. Storm Water Certification Statement: To be provided by CONTRACTOR to ENGINEER on the form included with this Section, or on a form provided by authority having jurisdiction. Do not perform Work at the Site until the Storm Water Certification has been submitted to ENGINEER.
 - 5. Notice of Intent (NOI): Prepared by CONTRACTOR and submitted to authorities having jurisdiction following ENGINEER's receipt and acceptance of CONTRACTOR's SWPPP Revision and preliminary Progress Schedule. NOI will be filed with authorities having jurisdiction by CONTRACTOR within ten days of ENGINEER's acceptance of CONTRACTOR's SWPPP

- Revision and preliminary Progress Schedule. Do not perform Work at Site until NOI is submitted to authorities having jurisdiction.
6. Co-permittee Agreement: Prepared by CONTRACTOR using forms included with the SWPPP, and submitted to ENGINEER within five days of the date the Contract Times commence running, for signature by OWNER. ENGINEER will file co-permittee agreement with authorities having jurisdiction. Do not perform Work at the Site until co-permittee agreement is submitted to authorities having jurisdiction.
 7. Storm Water Inspection Report: Prepared by CONTRACTOR using the form included with this Section, or a form provided by authority having jurisdiction. Storm water inspection reports will be filed in a log book kept at the Site by CONTRACTOR. Copy of each report will be furnished to ENGINEER upon request. Storm water inspection report will be completed for each of the following:
 - a. Pre-construction: After placement of storm water management measures, including sediment and erosion controls, and temporary field offices and other temporary facilities, prior to starting other Work at the Site.
 - b. During the Work: Every seven days until Notice of Termination is completed. When the Site is stabilized relative to storm water, erosion, and discharge of sediment, inspection frequency during temporary shutdowns and seasonal shutdowns is once per month until Notice of Termination is completed.
 - c. Final: Final inspection report will be prepared prior to completion of Notice of Termination.
 8. Notice of Termination (NOT): Prepared by CONTRACTOR on the form included with storm water permit and provided to ENGINEER for review and signature by OWNER. ENGINEER will submit the NOT to authority having jurisdiction. Submit the NOT following completion of all Work that may result in pollution in storm water discharges, including landscaping Work. Final Payment will not be made until the NOT is filed with authority having jurisdiction.
- D. Prevent discharge of sediment to and erosion from the Site to surface waters, drainage routes, public streets and rights-of-way, and private property, including dewatering operations. Prevent trash and demolition and construction debris from leaving the Site via storm water runoff. Provide berms, dikes, and other acceptable methods of directing storm water around work areas to drainage routes. Prior to starting the Work associated with such discharge, construction-related discharges to publicly owned conveyance or treatment systems shall be approved by owner of system to which the discharge will be directed. Prevent storm water which has contacted contaminated soil or other media from discharge to surface or groundwater without prior treatment in accordance with Specification XI-44 00 05.
- E. Do not cause or contribute to a violation of water quality standards, Laws, or Regulations. Notify ENGINEER of revisions to the SWPPP necessary to protect receiving water quality and comply with applicable permits. Provide and implement measures to control pollutants in storm water runoff from the Site to prevent:

1. Turbidity increases that will cause a substantial visible contrast to natural conditions.
 2. Increase in suspended, colloidal, and settleable solids that would cause sediment deposition or impair receiving water quality and use.
 3. Presence of residue from oil and floating substances, visible oil, and globules of grease.
- F. CONTRACTOR shall pay civil penalties and other costs incurred by OWNER, including additional engineering, RPR, and inspection services, associated with non-complying with applicable permits related to storm water discharges associated with construction activity and sediment and erosion controls associated with the Work.
- G. Contract Price includes all material, labor, and other permits and incidental costs related to:
1. Preparing SWPPP Revisions and other documents that are CONTRACTOR's responsibility, in accordance with this Section.
 2. Installing and maintaining structural and non-structural items used in complying with the SWPPP and its revisions.
 3. Clean-up, disposal, and repairs following wet weather events or spills caused by CONTRACTOR.
 4. Implementing and maintaining "best management practices", as defined in applicable permits and Laws or Regulations, to comply with requirements that govern storm water discharges at the Site.
 5. Inspections of storm water, sediment, and erosion controls as specified.
- H. Coordinate requirements of this Section with requirements for earthwork, erosion control, and landscaping in the Contract Documents, applicable permit requirements, and Laws and Regulations.
- I. Implement SWPPP controls and practices prior to starting other Work at the Site. Each contractor and subcontractor identified in the SWPPP and SWPPP Revisions shall sign a copy of the storm water certification statement.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with Laws and Regulations relative to environmental protection and restoration, including:
1. Storm water permit applicable to the Work and Site.
 2. State and local erosion and sediment control guidelines and requirements,
 3. State and local storm water regulations and guidance.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Submit the following, in accordance with Article 1.1 and Article 1.4 of this Section; for Projects involving Work at multiple Sites, submit each of the following for each Site, as applicable:

- a. SWPPP Revisions.
- b. Co-permittee Agreement.
- c. Storm Water Certification Statement.
- d. Notice of Termination
2. Approval to Discharge to Publicly-owned Treatment Works: For storm water discharges associated with construction activity that are discharged to a publicly owned conveyance or treatment system, prior to commencing discharges, submit system owner's written approval for such discharges.
3. Storm Water Site Plan Updates: Within three days after each storm water inspection, submit updated storm water site plan.

1.4 SWPPP REVISIONS

- A. CONTRACTOR shall prepare a SWPPP Revision in accordance with the Project's storm water permit when:
 1. There is a significant change in design, construction, operation, or maintenance of the Project that significantly affects the potential of discharging pollutants to Waters of the United States, and has not otherwise been addressed in the initial SWPPP.
 2. SWPPP proves to be ineffective relative to:
 - a. eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by this permit, or
 - b. achieving general objectives of controlling pollutants in storm water discharges from permitted construction activity.
 3. Prepare and submit SWPPP Revision identifying contractors and subcontractor responsible for implementing part of the SWPPP.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 INSPECTIONS AND REPAIRS

- A. Perform Site inspections and assessments as required in applicable storm water permit and this Section. Inspections and assessments shall be done by CONTRACTOR's site superintendent or project manager, together with ENGINEER's RPR.
- B. Inspections:
 1. During the Work, Site inspections shall be performed:
 - a. After SWPPP controls are provided and prior to starting other Work at the Site.
 - b. During the Work: Every seven days until Notice of Termination is completed. When the Site is stabilized relative to storm water, erosion, and discharge of sediment, inspection required frequency during

temporary shutdowns and seasonal shutdowns is once per month until Notice of Termination is completed.

- c. Prior to CONTRACTOR submitting the Notice of Termination.
2. During each inspection, verify sediment control practices and record approximate degree of sediment accumulation as percentage of acceptable sediment storage volume; inspect erosion and sediment control practices and record maintenance performed; observe and record deficiencies relative to implementation of the SWPPP. RPR or ENGINEER will complete Storm Water Inspection Reports and CONTRACTOR shall record and submit the following:
 - a. Storm Water Site Plan: On a copy of the Site plan included in the Contract Documents or other map of the Site acceptable to ENGINEER, indicate extent of all disturbed areas and drainage pathways. Indicate areas expected to undergo initial disturbance or significant site work within the next fourteen days.
 - b. Indicate on storm water site plan areas of Site that have undergone temporary or permanent stabilization.
 - c. Indicate on storm water site plan all disturbed areas that have not undergone active site Work during the previous fourteen days.
- C. Maintain at the Site a copy of storm water site plans from storm water inspection submit each storm water map to ENGINEER and RPR. RPR will maintain at the Site a log book with a copy of each Storm Water Inspection Reports.
- D. Cooperate with representatives of authorities having jurisdiction during periodic visits to Site, and promptly provide information requested by authorities having jurisdiction.
- E. Complete repairs to SWPPP controls in accordance with applicable requirements and to satisfaction of ENGINEER within two calendar days of each inspection.

3.2 ATTACHMENTS

- A. The documents listed below, following the “End of Section” designation, are part of this Specification Section. Notice of Intent (NOI) form, Co-permittee Agreement form, and Notice of Termination (NOT) form are included with storm water permit:
 1. Storm Water Inspection Report form (two pages).
 2. Storm Water Permit Certification form (one page).
 3. SWPPP Revision Form (two pages).

+ + END OF SECTION + +

STORM WATER INSPECTION REPORT

Owner: Site: Project: Contractor:	Date of Inspection: _____ Day of Week: <table border="1" style="display: inline-table; text-align: center; width: 100px;"> <tr> <td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td> </tr> </table>	S	M	T	W	T	F	S
S	M	T	W	T	F	S		
Sheets _____ of _____								

If pertinent to the Operation	
Weather	
Temperature	

This inspection and maintenance form is to be used when the Work is subject to a Storm Water General Permit for Construction Activity. Inspections must be performed at least once every seven calendar days; for sites that are stabilized and temporarily shut down inspections may be reduced to once per month. Each erosion and sediment control measure installed on the Site is to be inspected and the Contractor must complete all required maintenance within two calendar days from the date of inspection.

Reason for this inspection: ☐ Pre-construction Site assessment
☐ Seven calendar day inspection
☐ Monthly inspection (when Site is stabilized and shut down)
☐ Post-construction inspection prior to Notice of Termination

Key for erosion and sediment control measures to be inspected: [Use the following designations in the table below] (1) mulch, (2) seed and mulch, (3) check dams, (4) haybale/strawbales, (5) silt fence, (6) sediment trap, (7) turbidity curtains, (8) pipe slope drains, (9) drainage structure inlet protection, (10) rolled erosion control products, (11) soil stabilizers, (12) construction entrances, (13) pipe inlet/outlet protection, (14) water diversion structures, (15) sedimentation basins, (16) cofferdams, (17) Other _____.

ID	Location	Disturbance		Measure		Remarks (Evaluate integrity of measure, describe evidence of erosion)	Approximate Sediment Accumulation (% of Depth)	Maintenance Required? (Y or N) (If Yes, Describe Below)
		Existing? (Y or N)	Next 14 Days? (Y or N)	Code #	Temp or Perm? (T, P or NA)			
1								
2								
3								
4								
5								
6								
7								
8								

ID	Location	Disturbance		Measure		Remarks (Evaluate integrity of measure, describe evidence of erosion)	Approximate Sediment Accumulation (% of Depth)	Maintenance Required? (Y or N) (If Yes, Describe Below)
		Existing? (Y or N)	Next 14 Days? (Y or N)	Code #	Temp/Perm or N/A? (T, P or NA)			
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

DESCRIPTION OF REQUIRED MAINTENANCE AND ANY EXISTING DEFICIENCIES IN THE SWPPP:

Specify for each location using row ID number.

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein may be punishable by Law.

Signature: _____ Prepared: _____ Copy to Contractor: _____
Resident Project Representative (Date) (Date)

Qualified Professional Name _____
(w/Firm Name, if Consultant)

STORM WATER PERMIT CERTIFICATION

Contract Number: _____

Project: _____

Owner: _____

Each Contractor and Subcontractor identified in the Storm Water Pollution Prevention Plan (SWPPP) must certify that they understand the permit conditions and their responsibilities. Every Contractor and Subcontractor performing an activity that involves soil disturbance shall sign this certification and submit it to the Engineer prior to performing the Work. This certification shall be signed by an owner, principal, president, secretary, or treasurer of the firm.

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction Site identified in such SWPPP as a condition of authorization to discharge storm water. I also understand that my firm and its employees and Subcontractors shall comply with the terms and conditions of Owner's general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards, Laws, or Regulations.

Firm: _____

Address: _____

City: _____ State _____ Zip _____

Name (Print)

Signature

Date

Title

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REVISION

Owner: Site: Project: Contractor:
--

Date of Inspection: _____

Sheet No. _____ of _____

This form shall be used when revisions to the current Storm Water Pollution Prevention Plan (SWPPP) are required by the Storm Water General Permit for Construction Activity or the Contract Documents.

Reason for the Revision(s): Revisions were requested by State: ☐ Yes ☐ No

Describe the Revision(s) to the SWPPP: _____

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein may be punishable by Law.

Signature: _____ Prepared: _____ Submitted: _____
(Date) (Date)

Copy to: ☐ Engineer ☐ Contractor _____

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VAPOR AND DUST CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall comply with regulations required for earthmoving, vapor, and dust-generating operations related to the Work, and develop and comply with provisions of vapor and dust control plan.
2. Provide necessary labor, materials, equipment, and incidentals to: apply sufficient vapor and dust suppressants; properly clean all track-out areas to driveways, roadways, and highways; and provide adequate physical stabilizations of soils to comply with regulations and accepted community air monitoring plan. Control fugitive vapor and dust generation from CONTRACTOR's operations including the following areas:
 - a. Construction and excavation areas.
 - b. Contaminated soil staging and loading areas.
 - c. Vehicle and equipment parking areas.
 - d. Material and equipment storage areas.
 - e. Site office, trailer, and staging areas.
 - f. Haul and access roadways.
 - g. Track-out areas.
 - h. Other areas where CONTRACTOR will work, store materials or equipment, or park vehicles and equipment.
3. Do not cause or allow vapor and/or dust-generating operations, earthmoving operations, use of property, or other operations that result in fugitive vapor and/or dust emissions that exceed limits prescribed by authorities having jurisdiction.
4. Pay permit fees, fines and civil penalties incurred by OWNER because of CONTRACTOR's actions or violations of regulations, earthmoving permits, or vapor and dust control plan.

B. Post copy of permits, vapor and dust control plan at conspicuous location at the Site.

C. Recordkeeping:

1. Maintain daily written log to record the actual application or implementation of reasonably available control measures (RACM) described in the accepted vapor and dust control plan.
2. Maintain the written log and supporting documentation at the Site, and submit copies to ENGINEER or OWNER upon request.

3. Retain copies of vapor and dust control plan, RACM implementation records, and supporting documentations for at least three years after Substantial Completion.

1.2 SUBMITTALS

- A. Informational Submittals: Submit the following:
 - 1 Vapor and Dust Control Plan:
 - a. In accordance with Article 1.3 of this Section. Submit within the earlier of 30 days after the Contract Times commence running or prior to commencing earth-disturbing operations at the Site.
 - 2 Daily Logs and RACM Records:
 - a. Submit upon request of OWNER or ENGINEER.
 - 3 Field Quality Control Submittals:
 - a. When opacity monitoring is required, submit results no later than two business days following completion of observations.

1.3 VAPOR AND DUST CONTROL PLAN

- A. Develop and submit to ENGINEER and OWNER a vapor and dust control plan that shall include the following:
 1. Names, address, and telephone number of person(s) responsible for preparing and overseeing implementation of vapor and dust control plan. Designate one person responsible for overseeing implementation of vapor and dust control plan for the Project.
 2. Name(s), address(es), and telephone number(s) of person(s) responsible for vapor and dust generating operations.
 3. Site plan delineating total area of land surface to be disturbed. Delineate each area of phased disturbances if applicable.
 4. Total disturbed area in acres; earthmoving, vapor, and dust-generating operations and activities to be performed at the Site; actual and potential sources of fugitive vapor and dust emissions; and delivery, transportation, and storage areas for the Site, including types of materials stored and appropriate size of material stockpiles.
 5. Description of reasonably available control measures (RACM) to be implemented during vapor and dust-generating operations at actual and potential sources of fugitive vapor and dust.
 6. Description of vapor and dust suppressants to be used including product data and material safety data sheets (MSDS); method, frequency, and intensity of application; type, number, and capacity of application equipment; and certifications related to the suppressant's appropriate and safe use. Calcium chloride is not allowed.
 7. Description of specific surface treatment(s) or RACM proposed for controlling material deposition along paved surfaces (e.g., "track-out) where unpaved Site surfaces or Site access points meet paved surfaces.
 8. As contingency measure, designate and include description of at least one alternative RACM for each actual and potential fugitive vapor and dust source.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FIELD QUALITY CONTROL

A. Monitoring:

1. Upon direction of OWNER or ENGINEER, obtain opacity observations for visible emissions of fugitive vapor and dust in accordance with:
 - a. TAGM 4031, Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites.
 - b. New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 1A, NYSDOH Generic Community Air Monitoring Plan.
2. Obtain opacity observations from at least six locations at downwind perimeter of the Site during construction operations. Submit written report of observations.
3. Opacity observations shall be by person trained and experienced with the method specified.
4. No additional compensation or time will be authorized for opacity observations.

++ END OF SECTION ++

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REFERENCES

PART 1 – GENERAL

1.1 DEFINITIONS

- A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions and Supplementary Conditions.
- B. Terminology used in the Specifications includes:
 - 1. “Indicated” refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs or schedules in the Specifications and similar locations in the Contract Documents. Terminology such as “shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference without limitation on the location.
 - 2. “Installer”, “applicator”, or “erector” is CONTRACTOR or another entity engaged by CONTRACTOR, either as an employee or Subcontractor, to perform a particular construction activity, including installation, erection, application or similar Work. Installers shall be experienced in the Work that installer is engaged to perform:
 - a. The term “experienced”, when used with the term “installer” means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction, and complying with requirements of the Supplier of the material or equipment being installed.
 - 3. Trades: Use of a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter”, unless otherwise indicated in the Contract Documents or required by Laws or Regulations. Such terminology also does not imply that specified requirements apply exclusively to trade personnel of the corresponding generic name.

1.2 APPLICABLE CODES

- A. References in the Contract Documents to local code(s) shall mean the following:
 - 1. Building Code of the State of New York.
 - 2. National Electric Code.
 - 3. NFPA 101, Life Safety Code.

1.3 OWNER'S REFERENCED SPECIFICATIONS – NOT USED

1.4 ABBREVIATIONS

- A. Common abbreviations that may be found in the Contract Documents are listed below, alphabetically by their written-out meaning:

alternating current	a-c
ampere	A
Architectural Barriers Act	ABA
Americans with Disabilities Act	ADA
Americans with Disabilities Act Accessibility Guidelines	ADAAG
ante meridian	a.m.
average	avg
biochemical oxygen demand	BOD
brake horsepower	bhp
British thermal unit	Btu
Centigrade (or Celsius)	C
chlorinated polyvinyl chloride	CPVC
chlorofluorocarbons	CFC
Code of Federal Regulations	CFR
cubic inch	cu in
cubic foot	cu ft
cubic yard	cu yd, or CY
cubic feet per minute	cfm
cubic feet per second	cfs
decibel	db
degree Centigrade (or Celsius)	degrees C or °C
degrees Fahrenheit	degrees F or °F
diameter	dia
direct current	d-c
dollars	\$
each	ea
efficiency	eff
Fahrenheit	F
feet	ft
feet per hour	Fph

feet per minute	fpm
feet per second	fps
figure	Fig
flange	flg
foot-pound	ft-lb
gallon	gal
gallons per hour	gph
gallons per minute	gpm
gallons per second	gps
gram	g
grams per liter	g/L
Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
inch	in.
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID
iron pipe size	IPS
thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilowatt	kw
kilowatt-hour	kwhr or kwh
linear foot	lin ft or LF
liter	L
Leadership in Energy and Environmental Design (USGBC)	LEED
maximum	max
mercury	Hg
milligram	mg
milligrams per liter	mg/l or mg/L
milliliter	ml
millimeter	mm
million gallon	MG

minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
nitrogen oxide (total concentration of mono-nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO ₂))	NOx
nominal pipe size	NPS
number	no.
operator interface terminal	OIT
ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	ppb
polyvinyl chloride	PVC
post meridian	p.m.
pound	lb
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
revolutions per minute	rpm
second	sec
specific gravity	sp gr, or SG
square	sq
square foot	sq ft, or sf
square inch	sq in.
square yard	sq yd, or SY
standard	std
standard cubic feet per minute	scfm
total dynamic head	TDH
totally-enclosed fan-cooled	TEFC

volt	V
volts alternating current	vac
volts direct current	vdc
volatile organic compounds	VOC

1.5 REFERENCE STANDARDS

- A. Refer to Article 3 of the General Conditions, as may be modified by the Supplementary Conditions, relative to reference standards and resolving discrepancies between reference standards and the Contract Documents. Provisions of reference standards are in effect in accordance with the Specifications.
- B. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.
- C. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only. Following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACS	American Chemical Society
AEIC	Association of Edison Illuminating Companies
AF&PA	American Forest and Paper Association
ABMA	American Bearing Manufacturers Association (formerly Anti-Friction Bearing Manufacturers Association (AFBMA))
AGMA	American Gear Manufacturers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction

AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMA	Acoustical Materials Association
AMCA	Air Movement and Control Association
AMP	National Association of Architectural Metal Manufacturers, Architectural Metal Products Division
ANSI	American National Standards Institute
APA	The Engineered Wood Association
API	American Petroleum Institute
APHA	American Public Health Association
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industry
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association
CBMA	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CEMA	Conveyor Equipment Manufacturers Association
CGA	Compressed Gas Association
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute

CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DIN	Deutsches Institut für Normung eV (German Institute for Standardization)
DIPRA	Ductile Iron Pipe Research Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ETL	Intertek Testing Services, Inc. (formerly ETL Testing Laboratories, Inc.)
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FM	Factory Mutual (FM Global)
FRPI	Fiberglass Reinforced Plastics Institute
FS	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
HEW	United States Department of Health, Education and Welfare
HI	Hydraulic Institute
HMI	Hoist Manufacturers Institute
HUD	United States Department of Housing and Urban Development
IBC	International Building Code
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IFI	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
ISO	Insurance Services Office
ISO	International Organization for Standardization
LPI	Lightning Protection Institute
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSS	Manufacturers' Standardization Society
MMA	Monorail Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers

NACE	National Association of Corrosion Engineers
NAPF	National Association of Pipe Fabricators, Inc.
NARUC	National Association of Regulatory Utilities Commissioners
NBHA	National Builders Hardware Association
NCMA	National Concrete Masonry Association
NEC	National Electric Code
NELMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NHPMA	Northern Hardwood and Pine Manufacturers Association
NIST	United States Department of Commerce, National Institute of Standards and Technology
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NSSGA	National Stone, Sand, and Gravel Association
NTMA	National Terrazzo and Mosaic Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PFI	Pipe Fabrication Institute
PPI	Plastics Pipe Institute
PGMC	Primary Glass Manufacturers Council
PS	Product Standards Section, United States Department of Commerce
RCSC	Research Council on Structural Connections (part of AISC)
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
SCAQMD	Southern California Air Quality Management District
SCPRF	Structural Clay Products Research Foundation
SCTE	Society of Cable Telecommunications Engineers

SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturing Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SPI	Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SWI	Steel Window Institute
TEMA	Tubular Exchanger Manufacturers Association
TCNA	Tile Council of North America
UL	Underwriters Laboratories, Inc.
USAB	United States Access Board
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
USGS	United States Geological Survey
USPHS	United States Public Health Service
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association
WCMA	Wood Component Manufacturers Association
WDMA	Window and Door Manufacturers Association
WWEMA	Water and Wastewater Equipment Manufacturers Association
WWPA	Western Wood Products Association

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 45 29.13

TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall employ and pay for services of independent testing laboratory to perform specified services.
2. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
 - a. Section XI-02 51 41, Off-Site Transportation and Disposal.
 - b. Section XI-02 82 13, Asbestos Abatement.
 - c. Section XI-31 23 05, Excavation and Fill.
 - d. Section XI-35 20 23, Dredging.
 - e. Section XI-35 20 24, Geotextile Dewatering Container.
 - f. Section XI-44 00 05, Water Treatment.
3. CONTRACTOR shall pay for:
 - a. Tests not specifically indicated in the Contract Documents as being OWNER's responsibility.
 - b. Tests made for CONTRACTOR's convenience.
 - c. Repeat tests required because of CONTRACTOR's negligence or defective Work, and retesting after failure of test for the same item to comply with the Contract Documents.
4. Testing laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents; and perform duties of CONTRACTOR.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
2. ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.
3. NIST SRM, Standard Reference Materials.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:
 - a. Comply with applicable requirements of ASTM E329.

- b. Testing laboratory shall be licensed to operate in the same state as the Site. Where applicable, laboratory shall be certified by the authority having jurisdiction for the types of testing required.
- c. Testing equipment used by laboratory shall be calibrated at maximum intervals of twelve months by devices of accuracy traceable to one of the following: NIST SRM, ISO/IEC 17025, certified by state or local bureau of weights and measures, or values of natural physical constants generally accepted in the engineering and scientific community.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following:
 - 1. Quality Control Submittals and Test Reports: Testing laboratory shall promptly submit to CONTRACTOR results of testing and inspections, including:
 - a. Date issued.
 - b. Project title, number, and name of the Site.
 - c. Testing laboratory name and address.
 - d. Name and signature of inspector or person obtaining samples.
 - e. Date of inspection or sampling.
 - f. Record of temperature and weather.
 - g. Date of test.
 - h. Identification of material or product tested, and associated Specification Section.
 - i. Location in the Project.
 - j. Type of inspection or test.
 - k. Results of tests and observations regarding compliance with the Contract Documents.
 - 2. Qualifications Statements:
 - a. Testing Laboratory:
 - 1) Qualifications statement indicating experience and facilities for tests required under the Contract Documents.
 - 2) Copy of report of inspection of facilities during most recent NIST inspection tour. Include memorandum of remedies of deficiencies reported during inspection.
 - 3) Copy of certificate of calibration for each instrument or measuring device proposed for use, by accredited calibration agency.

1.5 TESTING LABORATORY DUTIES

- A. Testing laboratory shall:
 - 1. Cooperate with CONTRACTOR and provide qualified personnel promptly on notice.
 - 2. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and the Contract Documents; and ascertain compliance with requirements of the Contract Documents.

3. Promptly notify ENGINEER and CONTRACTOR of irregularities or deficiencies in the Work that are observed during performance of services.
4. Promptly submit to CONTRACTOR copies of reports of inspections and tests.
5. Perform additional tests and services, as required by CONTRACTOR.

1.6 CONTRACTOR'S RESPONSIBILITIES

A. CONTRACTOR shall:

1. Cooperate with testing laboratory personnel.
2. Provide to testing laboratory preliminary representative samples of materials and products to be tested, in required quantities.
3. Promptly submit to ENGINEER copies of results of tests and inspections received from testing laboratory.
4. Provide to laboratory the preliminary design mix proposed for concrete and other material mixes to be tested by testing laboratory.
5. Provide labor and facilities:
 - a. For access to the Work to be tested, and where required, to Suppliers' operations.
 - b. For obtaining and handling samples at the Site.
 - c. For facilitating inspections and tests.
 - d. For testing laboratory's exclusive use for storing and curing of test samples.
 - e. Forms for preparing concrete test beams and cylinders.
6. Notify laboratory and ENGINEER sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
7. Arrange with laboratory and pay for additional services, sampling, and testing required for CONTRACTOR's convenience.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 51 05

TEMPORARY UTILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall provide all temporary utilities required for the Project:
 - 1. Make all arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities.
 - 2. Pay all utility service costs, including cost of electricity, water, fuel, and other utility services required for the Work.
 - 3. Continuously maintain adequate utilities for all purposes during the Project, including maintaining services or constructing temporary services for all on-site and nearby businesses and residences for which existing services will be disturbed by the Work, until removal of temporary utilities and temporary facilities. At minimum, provide and maintain temporary utilities through Substantial Completion and removal of temporary field offices and sheds.
 - 4. Should OWNER occupy part of the Project prior to Substantial Completion of the entire Work, cost of utilities consumed via temporary utilities serving the portion occupied by OWNER will be shared proportionately between OWNER and CONTRACTOR as mutually agreed to by the parties.
 - 5. Maintain, including cleaning, temporary utilities and continuously provide consumables as required.
 - 6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and requirements of Project.
 - 7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.
- B. Provide the following temporary utilities:
 - 1. Electricity and Gas.
 - 2. Lighting.
 - 3. Telephone and communications.
 - 4. Heating, ventilating, and temporary enclosures.
 - 5. Water.
 - 6. Sanitary facilities.
 - 7. First-aid facilities.
 - 8. Fire protection.

1.2 REQUIREMENTS FOR TEMPORARY UTILITIES AND TEMPORARY FACILITIES

A. Electrical:

1. Provide temporary electrical service required for the Work, including continuous power for temporary field offices and sheds. Provide temporary outlets with circuit breaker protection and ground fault protection.

B. Lighting:

1. Minimum lighting shall be five foot-candles for open areas and ten foot-candles for stairs and shops. Provide minimum of one, 300-watt lamp every 15 feet in indoor Work areas. Provide night security lighting of five foot-candles, minimum, within 50 feet of all parts of the Site during hours of darkness, controlled by photocell.

C. Telephone and Communications:

1. Provide temporary telephone and communications required for CONTRACTOR's operations at the Site and for summoning emergency medical assistance.

D. Heating, Ventilating, and Enclosures:

1. Provide sufficient temporary heating, ventilating, and enclosures to ensure safe working conditions and prevent damage to existing facilities and the Work.
2. Except where otherwise specified, temporary heating shall maintain temperature of the area served between 50 degrees F and maximum design temperature of building or facility and its contents.
3. Maintain temperature of areas occupied by OWNER's personnel or electronic equipment, including offices, lunch rooms, locker rooms, toilet rooms, and rooms containing computers, microprocessors, and control equipment, between 65 degrees F and 80 degrees F with relative humidity less than 75 percent.
4. Required temperature range for storage areas and certain elements of the Work, including preparation of materials and surfaces, installation or application, and curing as applicable, shall be in accordance with the Contract Documents for the associated Work and the Supplier's recommended temperature range for storage, application, or installation, as appropriate.
5. Provide temporary ventilation sufficient to prevent accumulation in construction areas and areas occupied by OWNER of hazardous and nuisance levels or concentrations of dust and particulates, mist, fumes or vapors, odors, and gases, associated with construction.
6. Provide temporary enclosures and partitions required to maintain required temperature and humidity.

E. Water:

1. Provide temporary water facilities including piping, valves, meters if not provided by owner of existing waterline, backflow preventers, pressure regulators, and other appurtenances. Provide freeze-protection as required.
2. Provide water for temporary sanitary facilities, field offices, Site maintenance

- and cleaning and, when applicable, disinfecting and testing of systems.
3. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water system.
- F. Sanitary Facilities:
1. Provide suitably-enclosed chemical or self-contained toilets for CONTRACTOR's employees and visitors to the Site. Location of temporary toilets shall be acceptable to OWNER.
 2. Provide supply of potable drinking water and related facilities and consumables for all personnel using the Site.
 3. Provide suitable temporary washing facilities for employees and visitors.
- G. First-aid Facilities:
1. Provide temporary first-aid stations at or immediately adjacent to the Site's major work areas, and inside CONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by CONTRACTOR's safety representative.
 2. Provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section XI-01 31 19.13, Pre-Construction Conference.
- H. Fire Protection:
1. Provide temporary fire protection, including portable fire extinguishers rated not less than 2A or 5B in accordance with NFPA 10, Portable Fire Extinguishers, for each temporary building and for every 3,000 square feet of floor area under construction.
 2. Comply with NFPA 241, Safeguarding Building Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

1.3 USE OF OWNER'S SYSTEM

- A. Use of Permanent Utility Systems Provided Under the Project:
1. Permanent electrical, lighting, water, heating, ventilating, and fire protection systems and first-aid facilities may be used to provide temporary utilities and temporary facilities if the following are met:
 - a. Obtain OWNER's written permission to use permanent systems.
 - b. Permanent systems to be used for temporary utilities or temporary facilities shall have achieved Substantial Completion, including complete functionality of all controls.
 - c. CONTRACTOR shall pay all costs while using permanent system, including operation, maintenance, replacement of consumables, and provide replacement parts.
 2. Do not use the following permanent facilities:
 - a. Telephone and communication facilities.
 - b. Sanitary facilities.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary systems may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.
- B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.
- B. Location of Temporary Utilities and Temporary Facilities:
 - 1. Locate temporary systems for proper function and service.
 - 2. Temporary systems shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of utility companies.
 - 3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, and similar systems in place for short durations.
- C. Modify and extend temporary systems as required by progress of the Work.

3.2 USE

- A. Maintain temporary systems to provide safe, continuous service as required.
- B. Properly supervise operation of temporary systems:
 - 1. Enforce compliance with Laws and Regulations.
 - 2. Enforce safe practices.
 - 3. Prevent abuse of services.
 - 4. Prevent nuisances and hazards caused by temporary systems and their use.
 - 5. Prevent damage to finishes.
 - 6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.

- C. At end of each work day, check temporary systems and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary utilities, facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.
- B. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.
- C. When permanent utilities and systems that were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

+ + END OF SECTION + +

SECTION XI-01 52 11

ENGINEER'S FIELD OFFICE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide and maintain field office for ENGINEER's sole use. Provide field office at location approved by ENGINEER, near CONTRACTOR's field office.
2. Field office shall be complete and fully functional within 14 days after date on which the Contract Times commence running.
3. Obtain required permits for field offices.

1.2 SUBMITTALS

A. Action Submittals: Obtain ENGINEER's approval of the following prior to staging field office to the Site:

1. Field Office Submittal: Submit all of the following as one submittal which shall include:
 - a. Site plan indicating proposed location of field office, parking for field office, facilities related to the field office, and material of both field office parking and sidewalk or walkway to field office.
 - b. Information on proposed field office size, construction, exterior appearance, interior finishes, and field office security measures.
 - c. Proposed layout of field office interior, showing location of offices, common areas, restroom, closet, other areas specified (if any), with dimensions indicated for each.
 - d. Proposed layout of field office exterior identifying sign, showing all text, font, colors, and graphics (if any).
 - e. Proposed type of Internet service; name of proposed Internet service provider; and product data and technical information on equipment (if any) required for Internet service.
 - f. Office Equipment: Product data and technical information for copier, fax (if any), telephones, and other office equipment.
 - g. Computer System: Product data and technical information on the complete computer system.
 - h. Digital Camera: Product data and technical information on camera and accessories.

PART 2 – PRODUCTS

2.1 FIELD OFFICE CONSTRUCTION AND SITE REQUIREMENTS

- A. Site at Field Office:
1. Allocate total of six reserved parking spaces for use by ENGINEER and OWNER in close proximity to ENGINEER's field office. Parking area shall be paved with bituminous paving, concrete, crushed stone, or other material acceptable to ENGINEER. Parking area shall be suitably drained and free of standing water during wet weather.
 2. Provide sidewalk or walkway, at least four feet wide, of bituminous paving, concrete, crushed stone, or other material acceptable to ENGINEER, for the full distance between parking area and field office.
- B. Field Office, Minimum Construction: Field office shall conform to the following:
1. Structurally sound foundation and superstructure.
 2. Size: Minimum floor area of 430 square feet, at least 10 feet wide.
 3. Completely weather-tight and insulated, with minimum R-19 insulation.
 4. Exterior finish approved by ENGINEER.
 5. New interior finishes approved by ENGINEER, including resilient floor covering in first-class condition.
 6. Field Office Ingress and Egress:
 - a. Two doors for ingress and egress for each field office unit, each with landing, stairs, and railing conforming to building codes in effect at the Site.
 - b. Landing and stairs shall have slip-resistant walking surfaces, and be metal, pressure-treated wood, fiberglass, or concrete.
 - c. Railing shall be metal, wood, or fiberglass.
 - d. Doors shall be secure and lockable, and each furnished with suitable, lockable security bar by MasterLock or equal.
 7. Windows: Window area equal to at least ten percent of floor area. Windows shall each have insect screen and operable sash. Provide each window with lock and exterior security bars approved by ENGINEER.
 8. One lockable closet for storage.
 9. Furnish to ENGINEER two identical sets of keys suitable for operating all keyed locks, including ingress/egress door locks, security bars for doors, window locks, closets, and office furnishings.
 10. Field office identifying exterior sign, approved by ENGINEER. Sign shall be durable, weatherproof, suitable for long-term exposure to sunlight, at least two feet high by three feet wide, installed at location determined in field and acceptable to ENGINEER. Text of first two lines shall be six-inch high arial font, and text of third and fourth lines shall be three-inch high arial font, unless otherwise approved by ENGINEER, with black letters on white background. At minimum, sign shall read,

FIELD OFFICE
MALCOLM PIRNIE, INC., The Water Division of ARCADIS, US
Environmental Engineers, Scientists, and Consultants
www.arcadis-us.com

- C. Field Office Optional Construction:
1. Provide mobile office trailer in first-class condition approved by ENGINEER, specifically designed for use as construction field office and conforming to requirements of this Section.
 2. Provide skirting around perimeter of each mobile field office trailer.
 3. Supplier: Provide field office by one of the following:
 - a. Pac-Van, Inc.
 - b. GE Modular Space Corporation.
 - c. Or equal.

2.2 FIELD OFFICE UTILITIES

- A. Comply with Section XI-01 51 05, Temporary Utilities.
- B. Provide the following for the ENGINEER's field office:
1. Electrical System and Lighting:
 - a. Electric service as required, including paying all costs. Provide electrical submeter if electrical service is obtained from OWNER's system.
 - b. Interior lighting of 50 foot-candles at desktop height.
 - c. Minimum of eight 120-volt, wall-mounted, duplex convenience electrical receptacles.
 - d. Exterior, wall-mounted lighting at entrance to field office, 250-watt.
 - e. Exterior security light for ENGINEER's field office parking area. Provide at least one 1000-watt, pole-mounted fixture with photocell control.
 2. Heating, Ventilating, and Air Conditioning System:
 - a. Automatic heating to maintain indoor temperature of at least 65 degrees F in cold weather. Furnish all fuel and pay all utility costs.
 - b. Automatic cooling to maintain indoor temperature no warmer than 75 degrees F in warm weather.
 3. Telephone Service:
 - a. Private telephone service for ENGINEER's sole use, including payment of installation, monthly, and service costs.
 - b. Provide two telephone lines as follows: one voice, one fax. Each line shall have separate telephone number assigned by the telephone company.
 - c. Pay for unlimited local and long distance service for duration of the Project.
 - d. Cellular Service:
 - 1) In addition to the field office telephone lines required, furnish to ENGINEER one cellular telephone with charger. Phone will be returned to CONTRACTOR at end of the Project.

- 2) For duration of the Project, arrange for and pay for cellular telephone service. Cellular telephone service shall have unlimited use and shall, at minimum, reliably cover the following areas: Dutchess County, New York.
5. Internet Access: Obtain and pay for Internet service until removal of the field office, with unlimited (untimed) Internet access. Set up system and appurtenances required and verify functionality in the field office. Internet service shall be one of the following, listed in order of preference; provide a lower type of access only when higher levels are unavailable:
 - a. Fiber-optic or cable connection with appropriate modem and appurtenances.
 - b. DSL: Minimum 750 kilobits per second (Kbps) symmetrical digital subscriber line. Provide dedicated telephone line for Internet access.
 - c. Mobile Broadband Wireless 3G Network: Provide the following for ENGINEER's sole use:
 - 1) Mobile broadband wireless router. Product and Manufacturer: Linksys Wireless-G Router for Mobile Broadband, or equal.
 - 2) Mobile broadband air-card for field office. Product and Manufacturer: Sierra Wireless 597E, Novatel Merlin EX720, or equal.
 - 3) Mobile broadband wireless 3G network service by AT&T, Verizon, Sprint, or equal, with minimum speed of 600 Kbps.
 - 4) Router and air-card will remain CONTRACTOR's property upon removal of field office from the Site.
 - d. Satellite: Stargate server with Breezecom equipment, with telephone modem provided in computer for file uploads.
- C. Should actions of utility companies delay the complete set up of field office, CONTRACTOR shall provide temporary electricity, heat, water supply, sanitary facilities, and telephone service as required at no additional cost to OWNER.

2.3 FURNISHINGS AND EQUIPMENT

- A. Provide the following furnishings and equipment:
 1. Desks: Two 5-drawer desks, each five feet long by 2.5 feet wide with at least one file drawer per desk, suitable for storing 8.5-inch by 11-inch documents.
 2. Desk Chairs: Two new or used (in good condition) five-point, high backed, cushioned swivel chairs.
 3. Other Chairs: Four side chairs with arm rests and padded seats and backs, and eight metal folding chairs without arm rests.
 4. Two new or used (in good condition) folding tables each eight feet long by 2.5 feet wide.
 5. Two new or used (in good condition) folding tables each six feet long by 2.5 feet wide.
 6. Plan rack(s) to hold minimum of eight sets of the Drawings.
 7. Two 4-drawer file cabinets.
 8. One 2-door storage cabinet.

9. Shelving or bookcase with a total of 12 feet of shelf length at least 12 inches deep.
10. Four polyethylene waste baskets, each with minimum seven-gallon capacity.
11. Suitable doormat at each exterior ingress/egress door.
12. One tack board 2.5 feet by three feet, with thumbtacks.
13. One white board for use with dry markers, approximately six feet by four feet, with marker holding tray, installed by CONTRACTOR at location directed by ENGINEER in the field. Furnish supply of colored markers and eraser for the white board.
14. Fire extinguishers with associated signage, and smoke detector, in accordance with Laws and Regulations. At minimum, for each field office structure, provide two wall-mounted fire extinguishers and one battery operated ceiling-mounted smoke detector.
15. First-aid kit, by Zee Medical Service Co., Item 0125, “Kit, Utility, Metal, Full (ANSI)”, www.zeemedical.com, or equal.
16. Temperature and Humidity Monitor: Sensor installed outdoors in shade, display installed inside field office. Unit shall display daily minimum and maximum temperature and current temperature, and be capable of displaying daily minimum and maximum relative humidity and current relative humidity, and have audible alarm and adjustable alarm setpoints. Provide Fisher Scientific “Fisherbrand Remote Alarm RH/Temperature Monitor” Catalog No. S90194, or equal. Provide batteries for unit as required.
17. Six protective helmets for use by ENGINEER, OWNER, and visitors.
18. Two electric clocks.
19. One electric coffee maker, with ten-cup capacity or larger.
20. Bottled water with electric cooler dispenser for five-gallon bottles, with cup dispenser.
21. Multi-function Copier:
 - a. One new or used (in good condition) machine with the following functions: photocopying, network printing, scanning to produce PDF and JPG files, e-mail, and fax via telephone line.
 - b. Products and Manufacturers: Provide one of the following:
 - 1) Xerox WorkCentre Pro 232.
 - 2) Canon imageRUNNER C3035.
 - 3) Toshiba eSTUDIO352.
 - 4) Or equal.
 - c. Minimum Memory: 640 MB.
 - d. Ten-bin sort capacity, 8.5-inch by 11-inch, 8.5-inch by 14-inch, and 11-inch by 17-inch paper capacity, enlarging and reducing capabilities, stream-feed capability, bypass feeder, stapling capability, and double-sided copying capability. Copier shall produce at least 32 copies per minute.
 - e. Provide necessary cables and appurtenances to enable all functions specified in this Section, including scan-and-email and printing from field office computers. Furnish services of manufacturer’s representative to set up and service copier.

22. Fax: One plain-paper fax machine with minimum of ten programmable numbers.
23. Telephone System:
 - a. Telephone System Features:
 - 1) Provide one cordless telephone with hands-free speaker.
 - 2) Telephone shall have speed dialing with minimum of 20 programmable numbers, volume control, mute, redial, and hold button.
 - b. Provide one digital telephone answering machine.
24. Computer System:
 - a. Computer: One desktop computer with the following:
 - 1) Display: 17-inch, flat-panel liquid crystal display (LCD) color monitor.
 - 2) Keyboard; optical wheel mouse with mouse pad; two speakers; and all required cables.
 - 3) Software: Provide on each computer the following licensed software: Microsoft Windows XP Professional or Microsoft Vista Business operating system; Microsoft Office 2007 Professional; and Norton Anti-Virus 2009 (or later). Maintain and pay for antivirus software update subscription until removal of field office from the Site.
 - 4) Computer shall be, at minimum, Dell "Optiplex 760 Desktop" or equal, with an Intel Celeron Processor 440 (2.0 GHz, 512 K, 800 MHz FSB); with memory of 1.0 GB DDR2 Non-ECC SDRAM, 800MHz, (1DIMM); minimum 150 GB hard drive; 52x32x52x CD-RW drive, 1.44 MB floppy disk drive for 3.5-inch disks; video card to be integrated video Intel GMA 4500 or equal; integrated gigabit Ethernet 10/100/1000 network card; housed in tower-style case.
 - b. Printer: Hewlett Packard HP LaserJet P4014, or equal, black-and-white laser printer; with all required cables, compatible with computer system provided. Minimum print speed: 40 pages per minute. Provide two paper trays for 8.5-inch by 11-inch paper, adjustable to 8.5-inch by 14-inch paper. Capable of printing two-sided originals. Minimum memory: 128 MB. Minimum processor speed: 540 MHz.
 - c. Computer system shall have at least one USB port beyond those required for specified equipment (including printer, mouse, and digital camera).
 - d. Provide surge-protected electrical power strips/plug boards as required.
25. Digital Camera:
 - a. Furnish one compact digital still camera with built-in flash for use by ENGINEER for duration of the Project.
 - b. Camera shall be Canon Powershot A580 or equal, having, at minimum, 4x optical zoom, 8.0 mega pixel resolution, equipped with 2.5-inch low temperature polycrystalline silicon color LCD.
 - c. Provide 2 GB memory card compatible with camera.
 - d. Furnish compatible USB type interface cable and software necessary to download photographs from camera to ENGINEER's computer.
 - e. Furnish four nickel-cadmium rechargeable batteries suitable for camera, with charger.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install field office and related facilities in accordance with Laws and Regulations.
- B. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions.

3.2 CLEANING, MAINTENANCE, AND SUPPLIES

- A. Provide the following maintenance services:
 - 1. Immediately repair malfunctioning, damaged, leaking, or defective field office structure, site improvements, systems, and equipment.
 - 2. Provide all computer supplies and pay for maintenance on computer system and copier.
 - 3. Promptly provide snow removal for field office, including parking area, walkways, and stairs and landings.
 - 4. Provide continuous maintenance and janitorial service of field office and sanitary facilities. Clean field office at least once per week.
 - 5. Properly dispose of trash as needed, at least twice per week. Dispose of other waste, if any, as required, to avoid creation of nuisances.
- B. Provide the following consumables as needed:
 - 1. Toner or ink cartridges for printer, copier, and fax machine, as required.
 - 2. Paper supplies for copier, fax machine, and printer.
 - 3. Dry markers in six colors and white board eraser set.
 - 4. Bottled water suitable for water dispenser and disposable cups.
 - 5. Coffee supplies, including cups, filters, coffee, sugar, creamer, and stir-sticks.
 - 6. Soap, paper towels, cleansers, sanitary supplies, and janitorial implements, including broom.
 - 7. Batteries for smoke detector and other battery-powered items furnished by CONTRACTOR.
 - 8. Replace fire extinguishers upon expiration.
 - 9. Replenish contents of first-aid kit as required.

3.3 REMOVAL

- A. Remove field office and furnishings when directed by ENGINEER. Deliver specified equipment to OWNER.

+ + END OF SECTION + +

SECTION XI-01 52 13

CONTRACTOR'S FIELD OFFICE AND SHEDS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide field office for CONTRACTOR's use with at least the minimum facilities specified.
 - 2. Provide required storage and work sheds.
 - 3. Pay for required permits and utilities. Field offices and sheds shall comply with Laws and Regulations.
- B. Location:
 - 1. Locate field offices and sheds in accordance with the Contract Documents and in accordance with the Site mobilization discussions at the preconstruction conference.
- C. Furnish in field office one complete set of the Contract Documents for ready reference by interested parties. In addition to the reference set, comply with Section XI-01 78 39, Project Record Documents.

PART 2 – PRODUCTS

2.1 FIELD OFFICE AND SHEDS, FURNISHINGS, AND EQUIPMENT

- A. Field Office and Furnishings:
 - 1. Construction: As required by CONTRACTOR and sufficient for Project meetings.
 - 2. Utilities and Services: Provide the following:
 - a. Telephone service.
 - b. Computer network and related facilities as required for CONTRACTOR needs.
 - c. Utilities and related facilities for lighting and maintaining temperature, in accordance with Section XI-01 52 11, Engineer's Field Office.
 - 3. Furnishings:
 - a. Conference Facilities: Provide conference area with conference table and chairs sufficient for twenty people. Conference facilities and furnishings shall be provided with suitable utilities, lighting, and temperature controls prior to the first progress meeting, unless otherwise approved by ENGINEER.
 - b. Other furnishings required by CONTRACTOR.

4. Provide on field office an exterior identification sign displaying CONTRACTOR's company name. Maximum size of sign shall be four feet by eight feet. Sign shall be suitable for outdoor use for the duration of the Project.
5. Furnish and maintain at CONTRACTOR's field office twelve protective helmets for use by visitors to the Site.

B. Storage and Work Sheds:

1. Provide storage and work sheds sized, furnished, and equipped to accommodate personnel, materials, and equipment involved in the Work, including temporary utility services and facilities required for environmental controls sufficient for personnel, materials, and equipment.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Installation:

1. Install field offices, sheds, and related facilities in accordance with Laws and Regulations.
2. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions.

3.2 MAINTENANCE AND REMOVAL

A. Maintenance:

1. Clean and maintain field offices and sheds as required.
2. Provide consumables as required.

B. Removal:

1. Do not remove field offices and sheds until after Substantial Completion of the entire Work, unless otherwise approved by ENGINEER.
2. Remove field offices and sheds and restore areas prior to final inspection.

+ + END OF SECTION + +

SECTION XI-01 52 16

FIRST AID FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide first-aid facilities during the Project, including:
 - a. Paying all costs for first-aid facilities, including installation, maintenance, and removal.
 - b. Maintaining, including cleaning, first-aid facilities. Keep first-aid facilities continuously supplied with consumables.
 - c. Facilities shall be adequate for personnel using the Site.
 - d. Providing facilities in compliance with Laws and Regulations.

B. First-aid facilities provided shall include:

1. Potable drinking water supply and cups.
2. Suitable washing facilities for employees.
3. First-aid stations at or immediately adjacent to the Site's major work areas, and inside CONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by CONTRACTOR's safety representative. Other contractors shall provide first-aid stations in their own field office.
4. Provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section XI-01 31 19.13, Pre-Construction Conference.
5. When work is in progress, provide at the Site at least one person trained in first-aid. First-aid-trained personnel shall possess valid certificate indicating that they have successfully completed first-aid training course by the American Red Cross or similar entity.

C. Restrictions:

1. Existing Facilities: Shall not be used by contractors without written permission of OWNER with conditions for use.
2. Permanent Facilities Provided Under the Project: Shall not be used by contractors.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Location of potable drinking water supply shall be as required by CONTRACTOR and convenient for access by personnel.
- B. Location of temporary first-aid facilities shall be as specified in Paragraph 1.1.B of this Section.

3.2 USE

- A. Use of Temporary Facilities:
 - 1. Properly supervise temporary facilities.
 - 2. Properly dispose of wastes.

3.3 REMOVAL

- A. Completely remove temporary facilities and materials when no longer required. Repair damage caused by temporary facilities and their removal and restore Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.

+ + END OF SECTION + +

SECTION XI-01 52 19

SANITARY FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall provide all temporary sanitary facilities required for the Project:
1. Make all arrangements with temporary sanitary facility companies for temporary sanitary services and obtain required permits and approvals for temporary sanitary services.
 2. Pay all temporary sanitary facility service costs, including cost of electricity, water, fuel, and other utility services required for the Work.
 3. Continuously maintain adequate temporary sanitary facilities for all purposes during the Project, until removal of temporary sanitary facilities. At minimum, provide and maintain temporary sanitary facilities through Substantial Completion and removal of temporary field offices and sheds.
 4. Maintain, including cleaning, temporary sanitary facilities and continuously provide consumables as required.
 5. Temporary sanitary facilities shall be adequate for personnel using the Site and requirements of Project.
 6. Provide temporary sanitary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

1.2 REQUIREMENTS FOR TEMPORARY SANITARY FACILITIES

- A. Sanitary Facilities:
1. Provide suitably-enclosed chemical or self-contained toilets for CONTRACTOR's employees and visitors to the Site. Location of temporary toilets shall be acceptable to OWNER.
 2. Provide supply of potable drinking water and related facilities and consumables for all personnel using the Site.
 3. Provide suitable temporary washing facilities for employees and visitors.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary sanitary facilities may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.

- B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary sanitary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.
- B. Location of Temporary Sanitary Facilities:
 - 1. Locate temporary sanitary facilities for proper function and service.
 - 2. Temporary sanitary facilities shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of utility companies.
- C. Modify and extend temporary sanitary facilities as required by progress of the Work.

3.2 USE

- A. Maintain temporary sanitary facilities to provide safe, continuous service as required.
- B. Properly supervise operation of temporary sanitary facilities:
 - 1. Enforce compliance with Laws and Regulations.
 - 2. Enforce safe practices.
 - 3. Prevent abuse of services.
 - 4. Prevent nuisances and hazards caused by temporary sanitary facilities and their use.
 - 5. Prevent damage to finishes.
 - 6. Ensure that temporary sanitary facilities do not interrupt continuous progress of construction.
- C. At end of each work day, check temporary sanitary facilities and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary sanitary facilities and materials when no longer required. Repair damage caused by temporary sanitary facilities and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.
- C. When permanent sanitary facilities were used for temporary sanitary facilities, upon Substantial Completion replace all consumables used during the Work.

+ + END OF SECTION + +

SECTION XI-01 55 13

ACCESS ROADS AND PARKING AREAS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide temporary construction roads, walks, parking areas, and appurtenances required during the Project for use by CONTRACTOR, other contractors employed on the Project, OWNER's, and emergency vehicles.
2. Temporary roads and parking areas shall be designed and maintained by CONTRACTOR and shall be fully passable to vehicles in all weather conditions.

B. Use of Existing Access Roads:

1. CONTRACTOR is allowed to use OWNER's existing roads and parking areas upon the Effective Date of the Agreement.
2. Prevent interference with traffic on existing roads and parking areas. At all times, keep access roads and entrances serving the Site and OWNER's businesses clear and available to OWNER, OWNER's employees, emergency vehicles, and other contractors. Do not use access roads, parking areas or Site entrances for parking or storage of materials or equipment.
3. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER from expenses caused by CONTRACTOR's operations over existing roads and parking areas.
4. Schedule deliveries to minimize use of driveways and Site entrances.

1.2 SITE ACCESS

A. Site Access:

1. CONTRACTOR access to the Site shall be as shown on the Contract Drawings.
2. Access to the Site is limited to a maximum road legal weight.

1.3 CONTRACTOR PARKING

- A. CONTRACTOR employee vehicles shall park in area(s) specified in Section XI-01 57 33, Security.
- B. Park construction vehicles and equipment in work areas off of permanent roads and parking areas, in areas of the Site designated for CONTRACTOR staging.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials for temporary roads and parking areas shall comply with the Contract Documents.
- B. Traffic controls shall comply with requirements of authorities having jurisdiction.

PART 3 – EXECUTION

3.1 TEMPORARY ROADS AND PARKING AREAS

- A. Temporary Roads and Parking in Areas Different from Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic loads during the Project. Locate temporary roads and parking areas as shown.
 - 2. Provide reasonably level, graded, well-drained subgrade of satisfactory soil material, compacted to at least 95 percent of maximum dry density in the upper six inches.
 - 3. Where required to support loads and provide separation between subgrade and subbase materials, provide separation and stabilization fabric, as required.
 - 4. Provide crushed stone or gravel subbase material a minimum of six inches thick, roller-compacted to level, smooth, dense surface. Subbase for temporary roads and areas traveled by construction vehicles shall be adequate for loads and traffic served.
- B. Temporary Roads and Parking in Same Areas as Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic and construction loads during the Project. Locate temporary roads and parking areas in same location as permanent roads and parking areas. Extend temporary roads and parking areas, within construction limits indicated, as required for construction operations.
 - 2. Coordinate elevations of temporary roads and parking areas with permanent roads and parking areas.
 - 3. Prepare subgrade, subbase, and base for temporary roads and parking areas in accordance with Contract Documents requirements for permanent roads. Where required by subgrade conditions and construction loads and traffic, provide separation and stabilization fabric, as required, on compacted subgrade for subbase support and separation of subbase and subgrade materials.
 - 4. Re-condition granular subbase of temporary roads and parking, including removing and properly disposing of granular material that has become intermixed with soil, re-grading, proof rolling, compacting, and testing.

3.2 TRAFFIC CONTROLS

A. Traffic Controls:

1. Provide temporary traffic controls at intersections of temporary roads, including intersections with other temporary roads, intersections with public roads, and intersections with permanent access roads at the Site.
2. Provide warning signs on permanent roads and drives, and provide “STOP” signs for traffic on temporary roads where required and at entrances to permanent pavement.
3. Comply with requirements of authorities having jurisdiction.

3.3 MAINTENANCE OF ROADS

A. General:

1. Maintain temporary roads and parking to continuously provide at the Site access for construction vehicles and trucks, OWNER vehicles, deliveries for OWNER, emergency vehicles, and parking areas for OWNER’s personnel.
2. Public roads shall be passable at all times unless a road closure is allowed in writing by authority having jurisdiction.
3. When granular material of temporary roads and parking without hard surfacing become intermixed with soil or when temporary roads otherwise create a nuisance, remove intermixed granular-and-soil material and replace with clean aggregate as required.
4. Provide snow and ice removal for temporary roads and parking areas.

B. Cleaning and Dust Control:

1. Cleaning: Clean paved surfaces over which construction vehicles travel. Perform cleaning minimum of two times per week or more frequently as directed by ENGINEER, by mechanical sweeping. Clean the following surfaces:
 - a. Roads within limits of the Project.
 - b. Permanent roads at the Site, between the Site entrance and the work areas, between the Site entrance and construction parking and staging areas.
 - c. Public roads that require sweeping and cleaning due to construction operations.
2. Dust Control:
 - a. Control dust resulting from construction activities to prevent nuisances at the Site and in nearby areas.
 - b. Apply water or use other methods subject to ENGINEER’s acceptance that will minimize airborne dust. Do not use water when water will cause hazardous or objectionable conditions such as ice, mud, ponds, and pollution.
 - c. Provide dust control that is non-polluting and does not contribute to tracking-out of dirt and dust onto pavement. Re-apply dust control treatment as required.

- d. Comply with Section XI-01 41 27, Vapor and Dust Control, and Section XI-01 57 05, Temporary Controls.
- C. Protection of Underground Facilities: Provide temporary, heavy-duty steel roadway plates to protect existing manholes, handholes, valve boxes, vaults, and other Underground Facilities near to or visible at the ground surface.

3.4 REMOVALS AND RESTORATION

A. Removals:

1. Remove temporary roads, walks, and parking areas that are not intended for, or acceptable for, integration into permanent pavement. Return areas of temporary roads, walks, and parking to pre-construction condition unless otherwise required by the Contract Documents. Remove temporary gates, fencing, and traffic controls associated with temporary roads and parking areas.
2. Where areas of temporary roads and parking will be permanently landscaped, remove pavement, aggregate, soil and other material that does not comply with the Contract Documents regarding fill, subsoil, and landscaping. Remove and properly dispose of materials contaminated with oil, bitumen, and other petrochemical compounds, and other substances that might impair growth of plants and lawns.

B. Restoration:

1. Repair or replace paving, curbs, gutters, and sidewalks affected by temporary roads and parking, and restore to required conditions in accordance with authorities having jurisdiction.
2. Restore to pre-construction conditions existing roads, walks, and parking areas damaged by CONTRACTOR, subject to approval of the owner of affected roads, walks, and parking areas.

+ + END OF SECTION + +

SECTION XI-01 55 26

MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall keep all streets and traffic ways open for passage of traffic and pedestrians during the Work, unless otherwise approved by owner of the street, traffic way, or right-of-way, as applicable.
2. Construction traffic shall access the Site only via entrances shown on the Contract Drawings.
3. Unless otherwise shown or indicated in the Contract Documents, maintenance and protection of traffic shall be in accordance with New York State Department of Transportation.

B. Coordination:

1. Coordinate with owner of the highway or street right-of-way, as applicable, for maintenance and protection of traffic requirements.
2. Give required advance notice to fire departments, police departments, and other emergency services as applicable of proposed construction operations.
3. Give reasonable notice to owners or tenants of private property who may be affected by construction operations. Give such notice not less than two days prior to when such property will or may be affected by construction operations.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment used for maintenance and protection of traffic shall comply with the reference specification indicated in Paragraph 1.1.A.3 of this Section.

PART 3 – EXECUTION

3.1 GENERAL PROVISIONS

- A. When required to cross, obstruct or temporarily close a street or traffic way, provide and maintain suitable bridges, detours, or other acceptable temporary expedient for the accommodation of traffic. Closings shall be for shortest duration practical, and passage shall be restored immediately after completion of filling and temporary paving or bridging.

- B. Provide signs, signals, barricades, flares, lights and other equipment, service, and personnel required to regulate and protect all traffic and warn of hazards. Such Work shall comply with requirements of OWNER and authorities having jurisdiction at the Site. Remove temporary equipment and facilities when no longer required, and restore grounds to original or to specified conditions, as applicable.
- C. Hydrants, valves, fire alarm boxes, postal boxes and delivery service boxes, and other facilities that may require access during construction shall be kept accessible for use.

3.2 TRAFFIC SIGNALS AND SIGNS

- A. Provide and operate traffic control and directional signals required to direct and maintain an orderly flow of traffic in areas under CONTRACTOR's control, and areas affected by construction operations.
- B. Provide traffic control and directional signs, mounted on temporary barriers or standard posts, at the following locations:
 - 1. Each change of direction of a roadway and at each crossroad.
 - 2. Detours and areas of hazard.
 - 3. Parking areas.
 - 4. Traffic entrance to and exit from each construction area.

3.3 TRAFFIC CONTROL PERSONNEL

- A. When construction operations encroach on traffic lanes, furnish qualified and suitably-equipped traffic control personnel as required for regulating traffic and in accordance with requirements of authorities having jurisdiction. Traffic control personnel shall use appropriate flags or mobile signs.

3.4 FLARES AND LIGHTS

- A. During periods of low visibility provide flares and lights for the following:
 - 1. To clearly delineate traffic lanes, to guide traffic, and to warn of hazardous areas.
 - 2. For use by traffic control personnel directing traffic.
- B. Provide adequate illumination of critical traffic and parking areas.

3.5 PARKING CONTROL

- A. Control all CONTRACTOR-related vehicular parking at the Site to preclude interfering with: traffic and parking, access by emergency vehicles, OWNER's operations, and construction operations. Provide temporary parking facilities for the public, as required because of construction or operations.
- B. Control parking of construction and private vehicles at the Site as follows:
 - 1. Maintain free vehicular access to and through parking areas.

2. Prohibit parking on or adjacent to access roads, and in non-designated areas.
3. Construction vehicles shall possess current vehicle registration.
4. Private vehicles shall park only in designated areas.

3.6 HAUL ROUTES

- A. Submit proposed haul routes to ENGINEER and OWNER and obtain approval of authorities having jurisdiction.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to expedite traffic flow, and to minimize interference with normal traffic.

3.7 REMOVAL

- A. Maintain and protect traffic throughout the Project. Provide maintenance and protection of traffic measures at the Site until no longer required due to the progress of the Work. When no longer required, completely remove maintenance and protection of traffic measures and restore the Site to pre-construction condition or to condition required by the Contract Documents, as applicable.

+ + END OF SECTION + +

SECTION XI-01 57 05

TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide and maintain methods, equipment, and temporary construction as required to control environmental conditions at the Site and adjacent areas.
2. Maintain controls until no longer required.
3. Temporary controls include, but are not limited to, the following:
 - a. Erosion and sediment controls.
 - b. Noise controls.
 - c. Dust control.
 - d. Pest and rodent control.
 - e. Control of water, including storm water runoff.
 - f. Pollution control.

B. Related Sections:

1. Section XI-01 11 15, Special Construction Conditions.
2. Section XI-01 35 44, Spill Prevention Control and Countermeasures Plan.
3. Section XI-01 41 26, Stormwater Pollution Prevention Plan and Permit.
4. Section XI-01 35 43.13, Environmental Procedures for Hazardous Materials.
5. Section XI-01 41 27, Vapor and Dust Control.

1.2 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions and recommendations of the following:

1. New York State Department of Environmental Conservation.

1.3 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Plan for construction staging and maintenance of the Site relative to erosion and sediment controls. Indicate on a Site plan approximate areas of planned disturbance of soils and soil cover over time during the Project. For areas not indicated in the Contract Documents as being disturbed and that CONTRACTOR proposes to disturb, Shop Drawing shall include proposed erosion and sediment control measures for the additional area.

2. Product Data:
 - a. Silt fencing materials.
- B. Informational Submittals: Submit the following:
 1. Procedural Submittals:
 - a. Proposed dust control measures, when submittal is requested by ENGINEER.

PART 2 – PRODUCTS

2.1 MATERIALS FOR TEMPORARY EROSION AND SEDIMENT CONTROLS

- A. Materials for temporary erosion and sediment controls shall be as shown or indicated on the Drawings.
- B. Silt Fencing:
 1. Filter Cloth:
 - a. Mirafi Envirofence, or equal.
 - b. Height: Two feet, minimum.
 - c. Securely fasten filter cloth to wire mesh using ties spaced at maximum intervals of two feet on centers at top and mid-height of wire mesh.
 2. Wire Mesh: Support filter cloth with wire mesh complying with the following:
 - a. Woven wire mesh, 14-gauge steel wire, maximum mesh size six-inch by six-inch.
 - b. Height: To match filter cloth height.
 - c. Fasten wire mesh to fence supports with wire ties or staples.
 3. Fence Support Posts:
 - a. Length: Three feet, minimum.
 - a. Material: Metal or other acceptable material with "U" or "I" cross section, or minimum 1.25-inch by 1.25-inch hardwood.
- C. Straw Bale Dike:
 1. Bales shall be firmly-packed, unrotted straw bound firmly with baling wire. Cross-sectional area on the small end of each bale shall be approximately 12 inches by 12 inches or larger.
 2. Posts shall comply with requirements for silt fencing support posts, or may be suitable reinforcing steel.
- D. Mulch Materials and Soil Stabilization:
 1. Mulch shall be unrotted straw or salt hay.
 2. Soil stabilization emulsions, when used, shall be an inert, eco-friendly chemical manufactured for the specific purpose of erosion control and soil stabilization, applied with mulch or stabilization fibers.
 3. Wood-fiber or paper-fiber, when used, shall be 100 percent natural and biodegradable.

4. Erosion control mat or netting shall be biodegradable. Acceptable materials include jute, excelsior, straw or coconut fiber, and cotton.
- E. Protection of Storm Water Drainage Inlets and Catch Basins:
1. Inlet Filter Bag:
 - a. Product and Manufacturer: Provide one of the following for each drainage inlet or catch basin to be protected:
 - 1) Silt Sack, by Atlantic Construction Fabrics (ACF) Environmental.
 - 2) Or equal.
 - b. Inlet filter bag permeability shall be not less than 40 gallons per square foot of bag area exposed to the flow. Fabric shall be woven polypropylene with double stitching to prevent bursting.
 - c. Inlet filter bags shall fit inside the drainage inlet or catch basin and shall be secured by the structure's grate or by other acceptable means.
 - d. Inlet filter bags shall have means of removing inlet filter bag and the silt and sediment collected in the bag, without dumping filter bag's contents into the drainage inlet or catch basin.
- F. Filter Bag on Dewatering Pump Discharge:
1. Provide filter bag on discharge of each dewatering pump drawing from an excavation. Filter bag is not required on pumps associated with dewatering wells.
 2. Products and Manufacturers: Provide one of the following:
 - a. UltraTech Dewatering Bag, by Interstate Products.
 - b. Filter Bag, by US Fabrics.
 - c. Dewatering (Filter) Bag, Indian Valley Industries.
 - d. DirtBag, by Atlantic Construction Fabrics (ACF) Environmental.
 - e. Or equal.
 3. Size filter bags for maximum flow of the pump. Filter bags shall be specifically fabricated for use as a dewatering pump filter bag.
 4. Provide sufficient spare filter bags for continuous dewatering operations.
- G. Temporary Stone Construction Entrance:
1. Stone: Tough, hard, durable stone complying with the following gradation requirements:

Sieve Size	Total Percent Passing
Four-inch (100 mm)	100
3.5-inch (90 mm)	90 to 100
2.5-inch (65 mm)	25 to 60
1.5-inch (37.5 mm)	Zero to 15

2. Geotextile: As recommended by geotextile manufacturer for separating stone from subgrade, for the vehicle weight and traffic frequency required.

PART 3 – EXECUTION

3.1 NOISE CONTROL

- A. Noise Control – General:
 - 1. CONTRACTOR's vehicles and equipment shall minimize noise emissions to greatest degree practicable. Provide mufflers, silencers, and sound barriers when necessary.
 - 2. Noise levels shall comply with Laws and Regulations, including OSHA requirements and local ordinances.
 - 3. Noise emissions shall not interfere with the work of OWNER or others.

3.2 DUST CONTROL

- A. Dust Control – General:
 - 1. Control objectionable dust caused by CONTRACTOR's operation of vehicles and equipment, clearing, and other actions. To minimize airborne dust, apply water or use other methods subject to acceptance of ENGINEER and approval of authorities having jurisdiction.
 - 2. CONTRACTOR shall prevent blowing and movement of dust from exposed soil surfaces and access roads to reduce on- and off-Site damage, nuisances, and health hazards associated with dust emissions. Control may be achieved by irrigation in which the Site shall be sprinkled with water until the surface is moist. Apply dust controls as frequently as required without creating nuisances such as excessive mud and ponding of water at the Site.
 - 3. Remove dust from roadways and access roads at maximum intervals of seven days by mechanical brooming or other method acceptable to ENGINEER.
- B. Comply with Section XI-01 41 27, Vapor and Dust Control.

3.3 PEST AND RODENT CONTROL

- A. Pest and Rodent Control – General:
 - 1. Provide rodent and pest control as required to prevent infestation of the Site and storage areas.
 - 2. Employ methods and use materials that do not adversely affect conditions at the Site or on adjoining properties.
 - 3. In accordance with Laws and Regulations, promptly and properly dispose of pests and rodents trapped or otherwise controlled.

3.4 WATER CONTROL

- A. Water Control – General:
 - 1. Provide methods to control surface water and water from excavations and structures to prevent damage to the Work, the Site, and adjoining properties.

2. Control fill, grading, and ditching to direct water away from excavations, pits, tunnels and other construction areas and to direct drainage to proper runoff courses to prevent erosion, damage, or nuisance.
- B. Equipment and Facilities for Water Control: Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
 - C. Discharge and Disposal: Dispose of drainage water in manner to prevent flooding, erosion, and other damage to any and all parts of the Site and adjoining areas, and that complies with Laws and Regulations.

3.5 POLLUTION CONTROL

- A. Pollution Control – General:
 1. Provide means, methods, and facilities required to prevent contamination of soil, water, and atmosphere caused by discharge of noxious substances from construction operations.
 2. Equipment used during construction shall comply with Laws and Regulations.
 3. Refer to Section XI-01 35 43.13, Environmental Procedures for Hazardous Materials.
- B. Spills and Contamination:
 1. Provide equipment and personnel to perform emergency measures required to contain spills and to remove contaminated soils and liquids.
 2. Excavate contaminated material and properly dispose of off-Site, and replace with suitable compacted fill and topsoil.
 3. Refer to Section XI-01 35 44, Spill Prevention Control and Countermeasures Plan
- C. Protection of Surface Waters: Implement special measures to prevent harmful substances from entering surface waters. Prevent disposal of wastes, effluents, chemicals, and other such substances in or adjacent to surface waters and open drainage routes, in sanitary sewers, or in storm sewers.
- D. Atmospheric Pollutants:
 1. Provide systems for controlling atmospheric pollutants related to the Work.
 2. Prevent toxic concentrations of chemicals and vapors.
 3. Prevent harmful dispersal of pollutants into atmosphere.
- E. Solid Waste:
 1. Provide systems for controlling and managing solid waste related to the Work.
 2. Prevent solid waste from becoming airborne, and from discharging to surface waters and drainage routes.
 3. Properly handle and dispose of solid waste.

3.6 EROSION AND SEDIMENT CONTROL

A. Installation and Maintenance of Erosion and Sediment Controls – General:

1. General:
 - a. Provide erosion and sediment controls as shown and indicated on the Drawings and elsewhere in the Contract Documents. Provide erosion and sediment controls as the Work progresses into previously undisturbed areas.
 - b. Installation of erosion and sediment controls shall be in accordance with the applicable regulatory requirements indicated in Article 1.2 of this Section, unless otherwise shown or indicated in the Contract Documents.
 - c. Use necessary methods to successfully control erosion and sedimentation, including ecology-oriented construction practices, vegetative measures, and mechanical controls. Use best management practices (BMP) in accordance with Laws and Regulations, and regulatory requirements indicated in Article 1.2 of this Section, to control erosion and sedimentation during the Project.
 - d. Plan and execute construction, disturbances of soils and soil cover, and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation. Provide temporary measures for controlling erosion and sedimentation, as indicated in the Contract Documents and as required for the Project.
 - e. Where areas must be cleared for storage of materials or equipment, or for temporary facilities, provisions shall be made for regulating drainage and controlling erosion and sedimentation, subject to the ENGINEER'S approval.
 - f. Provide erosion and sediment controls, including stabilization of soils, at the end of each workday.
2. Coordination:
 - a. Coordinate erosion and sediment controls with this Section's requirements on water control and with Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - b. Coordinate temporary erosion and sediment controls with construction of permanent drainage facilities and other Work to the extent necessary for economical, effective, and continuous erosion and sediment control.
3. Before commencing activities that will disturb soil or soil cover at the Site, provide all erosion and sediment control measures required by the Contract Documents for the areas where soil or soil cover will be disturbed.
4. In general, implement construction procedures associated with, or that may affect, erosion and sediment control to ensure minimum damage to the environment during construction. CONTRACTOR shall implement any and all additional measures required to comply with Laws and Regulations, and Section 01 41 26, Stormwater Pollution Prevention Plan and Permit.
5. Vegetation Removal: Remove only those shrubs, grasses, and other vegetation that must be removed for construction. Protect remaining vegetation.

6. Access Roads and Parking Areas: When possible, access roads and temporary roads shall be located and constructed to avoid adverse effects on the environment. Provisions shall be made to regulate drainage, avoid erosion and sedimentation, and minimize damage to vegetation.
7. Earthwork and Temporary Controls:
 - a. Perform excavation, fill, and related operations in accordance with Section XI-31 23 05, Excavation and Fill.
 - b. Control erosion to minimize transport of silt from the Site into existing waterways and surface waters. Such measures shall include, but are not limited to, using berms, silt fencing, baled straw silt barriers, gravel or crushed stone, mulching and soil stabilization, slope drains, and other methods. Apply such temporary measures to erodible materials exposed by activities associated with the construction of the Project.
 - c. Hold to a minimum the areas of bare soil exposed at one time.
 - d. Construct fills and waste areas by selectively placing fill and waste materials to eliminate surface silts and clays that will erode.
 - e. In performing earthwork, eliminate depressions that could serve as mosquito pools.
 - f. CONTRACTOR shall provide special care in areas with steep slopes, where disturbance of vegetation shall be minimized to maintain soil stability.
8. Inspection and Maintenance:
 - a. Periodically inspect areas of earthwork and areas where soil or soil cover are disturbed to detect evidence of the start of erosion and sedimentation; apply corrective measures as required to control erosion and sedimentation. Continue inspections and corrective measures until soils are permanently stabilized and permanent vegetation has been established.
 - b. Inspect not less often than the frequency specified in Section XI-01 41 26, Stormwater Pollution Prevention Plan and Permit.
 - c. Repair or replace damaged erosion and sediment controls within 24 hours of CONTRACTOR becoming aware of such damage.
 - d. Periodically remove silt and sediment that has accumulated in or behind sediment and erosion controls. Properly dispose of silt and sediment.
9. Duration of Erosion and Sediment Controls:
 - a. Maintain erosion and sediment controls in effective working condition until the associated drainage area has been permanently stabilized.
 - b. Maintain erosion and sediment controls until the Site is restored and site improvements including landscaping, if any, are complete with underlying soils permanently stabilized.
10. Work Stoppage: If the Work is temporarily stopped or suspended for any reason, CONTRACTOR shall provide additional temporary controls necessary to prevent environmental damage to the Site and adjacent areas while the Work is stopped or suspended.
11. Failure to Provide Adequate Controls: In the event CONTRACTOR repeatedly fails to satisfactorily control erosion and siltation, OWNER reserves the right to employ outside assistance or to use OWNER's own forces for erosion and

sediment control. Cost of such work, plus engineering and inspection costs, will be deducted from monies due CONTRACTOR.

B. Erosion and Sediment Control Permit:

1. Refer to Section XI-01 41 26, Stormwater Pollution Prevention Plan and Permit.

C. Silt Fencing:

1. Install and maintain silt fencing in a vertical plane, at the location(s) shown or indicated on the Drawings.
2. Locations of Silt Fencing:
 - a. Where possible, install silt fencing along contour lines so that each given run fencing is at the same elevation.
 - b. On slopes install silt fencing at intervals that do not exceed the maximum intervals indicated in the following table:

Slope (percent)	Maximum Length of Slope Above Each Silt Fence (feet)
2 and less	150
2.1 to 5	100
5.1 to 10	50
10.1 to 20	25
20.1 to 25	20
25.1 to 40	15
40.1 to 50	10

- c. Provide silt fencing around perimeter of each stockpile of topsoil, general fill material, and excavated material. Install silt fencing before expected precipitation and maintain until stockpile is removed.
 - d. Do not install silt fencing at the following types of locations:
 - 1) Area of concentrated storm water flows such as ditches, swales, or channels.
 - 2) Where rock or rocky soils prevent full and uniform anchoring of silt fencing.
 - 3) Across upstream or discharge ends of storm water piping or culverts.
 3. Installation:
 - a. Securely fasten wire mesh to posts, and securely fasten filter cloth to wire mesh.
 - b. When two sections of filter cloth about each other, fold over edges and overlap by minimum of six inches and securely fasten to wire mesh.
 - c. Embed posts in the ground to the depth necessary for proper controls; embed posts to at least 16 inches below ground.
 - d. Filter cloth and wire mesh shall extend a minimum of eight inches below ground and a minimum of 16 inches above ground.

- e. Remove sediment accumulated at silt fencing as required. Repair and reinstall silt fencing as required.
- 4. Maintenance:
 - a. Do not allow formation of concentrated storm water flows on slopes above silt fencing unless so shown or indicated in the Contract Documents. If unauthorized concentrated storm water flows occur, stabilize the slope via earthmoving and other stabilization measures as required to prevent flow of concentrated storm water flows toward silt fencing.
- D. Straw Bale Dike:
 - 1. Install straw bale dikes where shown or indicated, including in swales, along contours, and along toe of slopes.
 - 2. Install bales in shallow excavation as wide as the bale and approximately four to six inches below surrounding grade.
 - 3. Ends of bale shall tightly abut ends of adjacent bales.
 - 4. Securely install straw bales using two support posts per bale, driven into the ground a minimum of 1.5 to two feet below bottom of bale. Top of post shall be flush with top of bale. Angle first post for each bale toward the previously-installed bale.
 - 5. Frequently inspect bales and repair or replace as required. Remove accumulated silt and debris from behind straw bales.
- E. Mulching and Soil Stabilization:
 - 1. Use mulching to temporarily stabilize exposed soil and fill material:
 - a. Immediately following final grading, provide mulch and stabilize with mats or netting, or sprayed soil stabilization emulsion with fiber additive.
 - b. Application of mulching for soil stabilization shall be as follows:
 - 1) Unrotted Straw or Salt Hay: 1.5 to two tons per acre.
 - 2) Soil stabilization emulsions, when used, shall be applied in accordance with manufacturer's instructions, and shall be applied with mulch or stabilization fibers.
 - 3) Wood-fiber or Paper-fiber Application: 1,500 lbs. per acre, installed by hydroseeding.
 - c. Where mats or netting are used:
 - 1) Cover entire area to be stabilized with mats or netting.
 - 2) Provide anchoring trenches at the top and bottom of slopes to receive mats or netting. Bury at least the top and bottom ends of mat or netting, four inches or more wide, at top and bottom of slope. Tamp trench full of soil. Four inches from trench, secure mat or netting with appropriate staples spaced at intervals of 10 inches.
 - 3) Overlap adjacent strips of mat or netting by at least four inches.
- F. Protection of Storm Water Drainage Inlets and Catch Basins:
 - 1. Protect each drainage inlet and catch basin that has the potential to receive storm water runoff from exposed soils, and does not discharge into a storm water settlement basin.

2. Install inlet filter bags inside of drainage inlet or catch basin in accordance with manufacturer's instructions. Secure inlet filter bag with the structure's grate or by other acceptable means.
 3. Inlet filter bags shall not pose any obstruction above the elevation of the drainage inlet or catch basin grate requiring barricades or flashers.
 4. When removing silt and sediment from inlet filter bag, do not dump filter bag's contents into the drainage inlet or catch basin.
 5. Remove silt and sediment from inlet filter bag, or replace inlet filter bag, when inlet filter bag is not more than half full.
- G. Filter Bag on Dewatering Pump Discharge:
1. Provide dewatering of excavations in compliance with Division 31 Sections on earthmoving, excavation, and fill.
 2. Locate filter bags and temporary pump discharge lines to avoid interfering with the public, use of private property, and OWNER's operations. Relocate filter bags and appurtenances when required.
 3. Filter bag discharge shall be directed to appropriate storm water drainage route. Do not discharge into roadways, driveways, access roads, and overland. When temporary settlement basin is used, locate filter bags to discharge to temporary settlement basin when practicable.
 4. Provide filter bag on discharge of each dewatering pump drawing from an excavation.
 5. Securely attach filter bag to pump discharge pipe or hose.
 6. Maintain, clean out, and replace filter bags as required.
- H. Temporary Stone Construction Entrance:
1. Where shown on the Drawings, and where construction vehicles will regularly transit to paved surfaces from un-stabilized surfaces, provide a temporary stone construction entrance. Contractor vehicles shall use temporary construction entrances.
 2. Provide temporary stone construction entrances of the width, length, and thickness shown or indicated on the Drawings. When not shown or indicated on the Drawings, temporary stone construction entrance shall be not less than 50 feet long, by 20 feet wide, by eight inches deep.
 3. Installation:
 - a. Ensure that subgrade under temporary stone construction entrance is suitably dense for the intended purpose. Suitably prepare subgrade as required for temporary construction entrance.
 - b. Provide on subgrade a layer of geotextile fabric, installed in accordance with geotextile manufacturer's recommendations for separation.
 - c. Provide stone on installed geotextile. Grade stone for passage of vehicles.
 4. Maintenance:
 - a. Maintain temporary stone construction entrance at not less than the minimum required thickness. Add stone as required to maintain thickness.

- b. When upper layer of temporary stone construction entrance becomes contaminated with soil, remove the contaminated material and replace with clean stone.
- c. Using water to wash down temporary construction entrance or paved areas onto which soil material has been tracked is not allowed.

3.7 REMOVAL OF TEMPORARY CONTROLS

A. Removals – General:

- 1. Upon completion of the Work, remove temporary controls and restore Site to specified condition; if condition is not specified, restore Site to pre-construction condition.
- 2. After soils are permanently stabilized, remove from the Site temporary erosion and sediment controls.

+ + END OF SECTION + +

SECTION XI-01 57 33

SECURITY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall safely guard all the Work, the Project, products, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion. CONTRACTOR's duty includes safely guarding OWNER's property in vicinity of the Work and Project, and other private property in the vicinity of the Project from injury and loss in connection with performance of the Project.
2. Employ watchmen as required to provide required security and prevent unauthorized entry.
3. Costs for security required under this Section shall be paid by CONTRACTOR.
4. Make no claim against OWNER for damage resulting from trespass.
5. Pay full compensation for, or repair or replace, damage to property of OWNER and others arising from failure to furnish adequate security.
6. Provide temporary fencing in accordance with the Contract Documents.

1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Temporary Fencing: Submit site plan drawings showing proposed locations and extent of breaches in site security fencing and proposed locations and extent of temporary site security fencing.
2. Product Data:
 - a. Temporary Fencing: Manufacturer's literature, specifications, and installation instructions for temporary fencing proposed for site security use.

B. Informational Submittals: Submit the following:

1. Employee Information: Submit to OWNER the following; do not submit to ENGINEER:
 - a. Format of employee background data.
 - b. Background data for employees to whom identification badges will be furnished.
 - c. Updated listing of employees to whom identification badges have been issued. Submit updated listing within 24 hours of a change in the list or change in an employee's Site access status.

1.3 CONTRACTOR'S SITE ACCESS AND SECURITY PROCEDURES

- A. Comply with Section XI-01 55 13, Access Roads and Parking Areas.
- B. Comply with OWNER's security procedures and access restrictions at the Site throughout the Project. Comply with the following:
 - 1. Personnel Identification: All construction personnel and others associated with the Project shall wear at all times at the Site a badge bearing CONTRACTOR's name, employer (if other than CONTRACTOR), employee's name and, as applicable, employee number.
 - 2. Vehicle Identification: While on-Site, all CONTRACTOR vehicles, including employee vehicles, shall display vehicle identification tag in clearly visible location on dashboard. Vehicle tag shall issued by CONTRACTOR. Vehicle tag shall include the following information: Site name, CONTRACTOR name, contract number, vehicle license plate number and state of issue, name and employer of vehicle owner, and vehicle owner contact telephone number.
 - 3. Parking: Do not park outside of designated CONTRACTOR parking area, which is shown on the Drawings. Prepare and maintain parking area as required. Personal vehicles are not allowed outside the contractor parking area.

PART 2 – PRODUCTS

2.1 TEMPORARY FENCING

- A. If security fencing or barriers are breached or temporarily removed for the Project, provide and maintain temporary security fencing, in manner satisfactory to ENGINEER and OWNER.

PART 3 – EXECUTION

3.1 TEMPORARY FENCING

- A. Install temporary fencing used for site security in accordance with the Contract Documents and fence manufacturer's instructions. Provide perimeter temporary fencing at the Limit of Work and around all areas of disturbance, unless otherwise shown, for site security so that integrity of site security is maintained throughout the Project.
- B. Maintain temporary fencing throughout the Project. Repair damage to temporary fencing and replace fencing when required to maintain site security.
- C. Remove temporary fencing when permanent site security fencing is in place and fully functional, or when otherwise directed by OWNER or ENGINEER.

+ + END OF SECTION + +

SECTION XI-01 58 00

PROJECT IDENTIFICATION AND SIGNS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall furnish, install, and maintain temporary signage for Project identification and construction site information.
2. Temporary signs required are indicated in Part 2 of this Section.
3. Do not display any other temporary signs, other than those specified, without prior approved of OWNER.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Sign Painter: Shall be a professional in the type of Work required, regularly engaged in work similar to that required.

1.3 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Layout of each temporary sign, indicating layout, text, font, character size, graphics if any, materials type and grade, including sign board, trim, supports, and bracing.
2. Product Data:
 - a. Specifications and product data for finishes proposed for use, when requested by ENGINEER.
3. Samples: Provide color Samples when requested by ENGINEER.

PART 2 – PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Performance Criteria: Temporary signs, including supports and bracing, shall withstand sustained winds of 75 mile per hour.
- B. Temporary Signage Required: Provide the following temporary signs:
 1. 4' x 8' Project sign.
 2. Site Informational Signage: Provide temporary signage as required for construction site operations and controlling traffic at the construction site.

- C. Materials:
 - 1. Sign Board:
 - a. Signs shall be 3/4-inch thick, exterior-grade plywood, unless otherwise shown or indicated.
 - b. Provide signs with trim, mitered on edges.
 - 2. Supports and Bracing: Provide supports and bracing as required to adequately support and brace temporary signs to comply with the performance criteria indicated in this Section.
- D. Finishing: Paint sign with exterior gloss-finish enamel, suitable for long-term exposure to sunlight without fading for the duration of the Project.

PART 3 – EXECUTION

3.1 INSTALLATION, MAINTENANCE, AND REMOVAL

- A. Location of signs shall be as shown or indicated on the Contract Documents, or as directed by ENGINEER.
- B. Maintenance:
 - 1. Maintain temporary signage so that signs are clean, legible, and upright. Cut grass, weeds, and other plants so that temporary signs are not covered or obscured.
 - 2. Repair and repaint damaged temporary signs. Relocate signs as required by progress of the Project.
- C. Remove temporary signage upon Substantial Completion of the entire Project, or when directed by ENGINEER.

+ + END OF SECTION + +

SECTION XI-01 61 00

COMMON PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope: This Section includes:
 - 1. Common requirements for products.

1.2 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
 - 1. “Products” includes materials, equipment, machinery, components, fixtures, systems, and other goods incorporated in the Work. Products do not include machinery and equipment used for preparing, fabricating, conveying, erecting, or installing the Work. Products include OWNER-furnished goods incorporated in the Work where use of such goods is specifically required in the Contract Documents.

1.3 PRODUCT REQUIREMENTS

- A. Provide products that have not been previously been incorporated into another project or facility unless otherwise indicated in the Contract Documents.
- B. To the extent possible, provide products of the same generic kind from a single source.
- C. Provide products complete with accessories, trim, finish, fasteners, and other items shown, indicated, or required for a complete installation for the indicated use and performance.
- D. Standard Products: When available, and unless custom or nonstandard options are specified or indicated, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- E. Visual Matching: Where required in the Contract Documents, provide products that match referenced existing construction, approved mock-ups, or approved Sample, as determined by ENGINEER.

- F. Where the Contract Documents include the phrase “as selected” for product color, finish pattern, option, or similar phrase, provide products selected by ENGINEER as follows:
1. Standard Range: Where the Contract Documents include the phrase “standard range of colors, patterns, textures” or similar phrase, provide color, pattern, density, or texture selected by ENGINEER from manufacturer’s product line that does not include premium items.
 2. Full Range: Where the Contract Documents include the phrase “full range of colors, patterns, textures” or similar phrase, ENGINEER will select color, pattern, density, or texture from manufacturer’s entire product line, including standard and premium items.

1.4 COMPATIBILITY

- A. Similar products by the same Supplier shall be compatible with each other, unless otherwise indicated in the Contract Documents or approved by ENGINEER.
- B. Provide products compatible with products previously selected or installed on the Project.

1.5 PRODUCT WARRANTIES

- A. Warranties specified for products shall be in addition to, and run concurrent with, CONTRACTOR’s general warranty and guarantee and requirements for the required correction period. Disclaimers and limitations in specific product warranties do not limit CONTRACTOR’s general warranty and guarantee:
1. Product manufacturer’s warranty is preprinted written warranty published by product manufacturer and specifically endorsed by product manufacturer to OWNER.
 2. Special warranty is written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by product manufacturer’s warranty or to provide increased rights to OWNER.
- B. Requirements for Special Warranties: Provide written special warranty document that contains appropriate terms and identification, ready for execution by product manufacturer and OWNER. Submit draft warranty with submittals required for product:
1. Manufacturer’s Standard Form: Modified to include Project-specific information and properly executed by product manufacturer and other parties as appropriate.
 2. Specified Form: When specified forms are included in the Contract Documents, prepare written document, properly executed by product manufacturer and OWNER, using appropriate form.
 3. Refer to Specifications for content and requirements for submitting special warranties.

- C. Submit product manufacturer's warranties and special warranties as submittals in accordance with Schedule of Submittals accepted by ENGINEER.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

+ + END OF SECTION + +

SECTION XI-01 62 00

PRODUCT OPTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR's options for selecting products.
 - 2. Requirements for consideration of "or-equal" products.

1.2 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
 - 1. "Products" includes materials, equipment, machinery, components, fixtures, systems, and other goods incorporated in the Work. Products do not include machinery and equipment used for preparing, fabricating, conveying, erecting, or installing the Work. Products include OWNER-furnished goods incorporated in the Work where use of such goods is specifically required in the Contract Documents.

1.3 PRODUCT OPTIONS

- A. For products specified only by reference standard or description, without reference to Supplier, provide products meeting that standard, by a Supplier or from a source that complies with the Contract Documents.
- B. For products specified by naming one or more products or Suppliers, provide the named products that comply with the Contract Documents, unless an "or-equal" or substitute product is approved by ENGINEER.
- C. For products specified by naming one or more products or Suppliers and the term, "or equal", when CONTRACTOR proposes a product or Supplier as an "or equal", submit to ENGINEER a request for approval of an "or equal" product or Supplier.
- D. For products specified by naming only one product or manufacturer and followed by words indicating that no substitution is allowed, there is no option and no substitution will be allowed.

1.4 “OR EQUAL” PRODUCTS

- A. For proposed products not named in the Contract Documents and considered as an “or equal” as defined in the General Conditions, CONTRACTOR shall request in writing ENGINEER’s approval of the “or equal”. Request for approval of an “or equal” product shall accompany the Shop Drawing or product data submittal for the proposed product and shall include:
1. CONTRACTOR’s request that the proposed product be considered as an “or equal” in accordance with the General Conditions, accompanied by CONTRACTOR’s certifications required in the General Conditions.
 2. Documentation adequate to show that proposed product does not require extensive revisions to the Contract Documents, that proposed product is consistent with the Contract Documents, and that proposed product will produce results and performance required in the Contract Documents, and that proposed product is compatible with other portions of the Work.
 3. Detailed comparison of significant qualities of proposed product with the products and manufacturers named in the Contract Documents. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements shown or indicated.
 4. Evidence that proposed product manufacturer will furnish warranty equal to or better than specified, if any.
 5. List of similar installations for completed projects with project names and addresses, and names and address of design professionals and owners, if requested.
 6. Samples, if requested.
 7. Other information requested by ENGINEER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes the general requirements for preparing for shipping, delivering, and handling materials and equipment.
2. CONTRACTOR shall make all arrangements for transporting, delivering, and handling of materials and equipment required for prosecution and completion of the Work.
3. When required, move stored materials and equipment without additional compensation and without changes to the Contract Times.

1.2 SUBMITTALS

- A. Refer to individual Specification Sections for submittal requirements relative to delivering and handling materials and equipment.

1.3 PREPARING FOR SHIPMENT

- A. When practical, factory-assemble materials and equipment. Match mark or tag separate parts and assemblies to facilitate field assembly. Cover machined and unpainted parts that may be damaged by the elements with strippable, protective coating.
- B. Package materials and equipment to facilitate handling, and protect materials and equipment from damage during shipping, handling, and storage. Mark or tag outside of each package or crate to indicate the associated purchase order number, bill of lading number, contents by name, OWNER's contract name and number, CONTRACTOR name, equipment number, and approximate weight. Include complete packing lists and bills of materials with each shipment.
- C. Protect materials and equipment from exposure to the elements and keep thoroughly dry and dust-free at all times. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Lubricate bearings and other items requiring lubrication in accordance with manufacturer's instructions.
- D. Do not ship materials and equipment until:
1. Related Shop Drawings, Samples, and other submittals have been approved or accepted (as applicable) by ENGINEER, including, but not necessarily

- limited to, all Action Submittals associated with the materials and equipment being delivered.
2. Manufacturer's instructions for handling, storing, and installing the associated materials and equipment have been submitted to and accepted by ENGINEER in accordance with the Specifications.
 3. Results of source quality control testing (factory testing), when required by the Contract Documents for the associated materials or equipment, have been reviewed and accepted by ENGINEER.
 4. Facilities required for handling materials and equipment in accordance with manufacturer's instructions are in place and available.
 5. Required storage facilities have been provided.

1.4 DELIVERY

A. Scheduling and Timing of Deliveries:

1. Arrange deliveries of materials and equipment in accordance with the accepted Progress Schedule and in ample time to facilitate inspection prior to installation.
2. Schedule deliveries to minimize space required for and duration of storage of materials and equipment at the Site or delivery location, as applicable.
3. Coordinate deliveries to avoid conflicting with the Work and conditions at Site, and to accommodate the following:
 - a. Work of other contractors and OWNER.
 - b. Storage space limitations.
 - c. Availability of equipment and personnel for handling materials and equipment.
 - d. OWNER's use of premises.
4. Deliver materials and equipment to the Site during regular working hours.
5. Deliver materials and equipment to avoid delaying the Work and the Project, including work of other contractors, as applicable. Deliver anchor system materials, including anchor bolts to be embedded in concrete or masonry, in ample time to avoid delaying the Work.

B. Deliveries:

1. Shipments shall be delivered with CONTRACTOR's name, Subcontractor's name (if applicable), Site name, Project name, and contract designation (example: "ABC Construction Co., City of Somewhere, Idaho, Wastewater Treatment Plant Primary Clarifier Improvements, Contract 25, General Construction") clearly marked.
2. Site may be listed as the "ship to" or "delivery" address; but OWNER shall not be listed as recipient of shipment unless otherwise directed in writing by ENGINEER.
3. Provide CONTRACTOR's telephone number to shipper; do not provide OWNER's telephone number.
4. Arrange for deliveries while CONTRACTOR's personnel are at the Site. CONTRACTOR shall receive and coordinate shipments upon delivery.

Shipments delivered to the Site when CONTRACTOR is not present will be refused by OWNER, and CONTRACTOR shall be responsible for the associated delays and additional costs, if incurred.

5. Comply with Section XI-01 35 43.13, Environmental Procedures for Hazardous Materials.

C. Containers and Marking:

1. Have materials and equipment delivered in manufacturer's original, unopened, labeled containers.
2. Clearly mark partial deliveries of component parts of materials and equipment to identify materials and equipment, to allow easy accumulation of parts, and to facilitate assembly.

D. Inspection of Deliveries:

1. Immediately upon delivery, inspect shipment to verify that:
 - a. Materials and equipment comply with the Contract Documents and approved or accepted (as applicable) submittals.
 - b. Quantities are correct.
 - c. Materials and equipment are undamaged.
 - d. Containers and packages are intact and labels are legible.
 - e. Materials and equipment are properly protected.
2. Promptly remove damaged materials and equipment from the Site and expedite delivery of new, undamaged materials and equipment, and remedy incomplete or lost materials and equipment to furnish materials and equipment in accordance with the Contract Documents, to avoid delaying progress of the Work.
3. Advise ENGINEER in writing when damaged, incomplete, or defective materials and equipment are delivered, and advise ENGINEER of the associated impact on the Progress Schedule.

1.5 HANDLING OF MATERIALS AND EQUIPMENT

- A. Provide equipment and personnel necessary to handle materials and equipment, including those furnished by OWNER, by methods that prevent soiling or damaging materials and equipment and packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring, and otherwise damaging materials and equipment and surrounding surfaces.
- C. Handle materials and equipment by methods that prevent bending and overstressing.
- D. Lift heavy components only at designated lifting points.

- E. Handle materials and equipment in safe manner and as recommended by the manufacturer to prevent damage. Do not drop, roll, or skid materials and equipment off delivery vehicles or at other times during handling. Hand-carry or use suitable handling equipment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION XI-01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section includes general requirements for storing and protecting materials and equipment.

1.2 STORAGE

- A. Store and protect materials and equipment in accordance with manufacturer's recommendations and the Contract Documents.
- B. CONTRACTOR shall make all arrangements and provisions necessary for, and pay all costs for, storing materials and equipment. Excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be placed to avoid injuring the Work and existing facilities and property, and so that free access is maintained at all times to all parts of the Work and to public utility installations in vicinity of the Work. Store materials and equipment neatly and compactly in locations that cause minimum inconvenience to OWNER, other contractors, public travel, and owners, tenants, and occupants of adjoining property. Arrange storage in manner to provide easy access for inspection.
- C. Areas available at the Site for storing materials and equipment shall be as shown or indicated in the Contract Documents, or as approved by ENGINEER.
- D. Store materials and equipment to become property of OWNER to facilitate their inspection and ensure preservation of quality and fitness of the Work, including proper protection against damage by freezing, moisture, and high temperatures with ambient temperatures as high as 120 degrees F. Store in indoor, climate-controlled storage areas all materials and equipment subject to damage by moisture, humidity, heat, cold, and other elements, unless otherwise acceptable to OWNER. When placing orders to Suppliers for equipment and controls containing computer chips, electronics, and solid-state devices, CONTRACTOR shall request, coordinate, and comply with specific temperature and humidity limitations on materials and equipment, because temperature inside cabinets and components stored in warm temperatures can approach 200 degrees F.
- E. CONTRACTOR shall be fully responsible for loss or damage (including theft) to stored materials and equipment.
- F. Do not open manufacturer's containers until time of installation, unless

recommended by the manufacturer or otherwise specified in the Contract Documents.

- G Do not store materials or equipment in structures being constructed unless approved by ENGINEER in writing.
- H Do not use lawns or other private property for storage without written permission of the owner or other person in possession or control of such premises.

1.3 PROTECTION

- A. Equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipping, handling, and storage, in accordance with Section XI-01 65 00, Product Delivery Requirements.
- B. Store all materials and equipment off the ground or floor on raised supports such as skids or pallets.
- C. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Painted equipment surfaces that are damaged or marred shall be repainted in their entirety in accordance with equipment manufacturer and paint manufacturer requirements, to the satisfaction of ENGINEER.
- D. Protect electrical equipment, controls, and instrumentation against moisture, water damage, heat, cold, and dust. Space heaters provided in equipment shall be connected and operating at all times until equipment is placed in operation and permanently connected.

1.4 UNCOVERED STORAGE

- A. The following types of materials may be stored outdoors without cover on supports so there is no contact with the ground:
 - 1. Reinforcing steel.
 - 2. Structural steel.
 - 3. Piping, except polyvinyl chloride (PVC) or chlorinated PVC (CPVC) pipe.
 - 4. Precast concrete materials.
 - 5. Castings.
 - 6. Handrails and railings.
 - 7. Grating.
 - 8. Checker plate.
 - 9. Metal stairs.
 - 10. Metal access hatches.
 - 11. Fiberglass products.
 - 12. Rigid electrical conduit.

1.5 COVERED STORAGE

- A. The following materials and equipment may be stored outdoors on supports and completely covered with covering impervious to water:
 - 1. Rough lumber.
 - 2. PVC and CPVC pipe.
 - 3. Filter media.
 - 4. Masonry units.
 - 5. Grout and mortar materials.
- B. Tie down covers with rope, and slope covering to prevent accumulation of water.
- C. Store loose granular materials, with covering impervious to water, in well-drained area or on solid surfaces to prevent mixing with foreign matter.

1.6 FULLY PROTECTED STORAGE

- A. Store all material and equipment not named in Articles 1.4 and 1.5 of this Section in on supports in buildings or trailers that have concrete or wooden flooring, roof, and fully closed walls on all sides. Covering with visquine plastic sheeting or similar material in space without floor, roof, and walls is not acceptable. Comply with the following:
 - 1. Provide heated storage for materials and equipment that could be damaged by low temperatures or freezing.
 - 2. Provide air-conditioned storage for materials and equipment that could be damaged by high temperatures.
 - 3. Protect mechanical and electrical equipment from being contaminated by dust, dirt, and moisture.
 - 4. Maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

1.7 HAZARDOUS PRODUCTS

- A. Prevent contamination of personnel, storage area, and the Site. Comply with Laws and Regulations, manufacturer's instructions, and Section XI-01 35 43.13, Environmental Procedures for Hazardous Materials.

1.8 MAINTENANCE OF STORAGE

- A. On scheduled basis, periodically inspect stored materials and equipment to ensure that:
 - 1. State of storage facilities is adequate to provide required conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Materials and equipment exposed to elements are not adversely affected.

1.9 MICROPROCESSORS, PANELS, AND INSTRUMENTATION STORAGE

- A. Store panels, microprocessor-based equipment, electronics, and other devices subject to damage or decreased useful life because of temperatures below 40 degrees F or above 100 degrees F, relative humidity above 90 percent, or exposure to rain or exposure to blowing dust in climate-controlled storage space.

1.10 RECORDS

- A. Keep up-to-date account of materials and equipment in storage to facilitate preparation of Applications for Payment, if the Contract Documents provide for payment for materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION XI-01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall provide field engineering services and professional services of the types indicated for the Project, including:
1. Furnishing civil, structural, and other professional engineering services specified or required to execute CONTRACTOR's construction methods.
 2. Developing and making all detail surveys and measurements required for construction; including slope stakes, batter boards, and all other working lines, elevations, and cut sheets.
 3. Providing materials required for benchmarks, control points, batter boards, grade stakes, structure and pipeline elevation stakes, and other items.
 4. Keeping a transit, theodolite, or total station (theodolite with electronic distance measurement device); leveling instrument; and related implements such as survey rods and other measurement devices, at the Site at all times, and having a skilled instrument person available when necessary for laying out the Work.
 5. Being solely responsible for all locations, dimensions and levels. No data other than Change Order, Work Change Directive, or Field Order shall justify departure from dimensions and levels required by the Contract Documents.
 6. Rectifying all Work improperly installed because of not maintaining, not protecting, or removing without authorization established reference points, stakes, marks, and monuments.
 7. Providing such facilities and assistance necessary for ENGINEER to check lines and grade points placed by CONTRACTOR. Do not perform excavation or embankment work until all cross-sectioning necessary for determining payment quantities for Unit Price Work have been completed and accepted by ENGINEER.

1.2 CONTRACTOR'S FIELD ENGINEER

- A. Employ and retain at the Site a field engineer with experience and capability of performing all field engineering tasks required of CONTRACTOR, including:
1. Preparing and maintaining daily reports of activity on the Work. Submit reports to ENGINEER including the following information, at minimum:
 - a. Number of employees at the Site.
 - b. Number employees at the Site for each Subcontractor.
 - c. Breakdown of employees by trades.
 - d. Major equipment and materials installed as part of the Work.
 - e. Major construction equipment utilized.
 - f. Location of areas in which construction was performed.

- g. Materials and equipment received.
 - h. Work performed, including field quality control measures and testing.
 - i. Weather conditions.
 - j. Safety.
 - k. Delays encountered, amount of delay incurred, and the reasons for the delay.
 - l. Instructions received from ENGINEER or OWNER.
2. Submit two copies of CONTRACTOR's daily reports at ENGINEER'S field office by 9:00 a.m. the next working day after the day covered in the associated report. Daily report shall be signed by responsible member of CONTRACTOR's staff, such as CONTRACTOR's project manager or superintendent, or foreman designated by CONTRACTOR as having authority to sign daily reports.
 3. Check all formwork, reinforcing, inserts, structural steel, bolts, sleeves, piping, other materials and equipment for compliance with the Contract Documents.
 4. Maintain field office files and drawings, record documents, and coordinate field engineering services with Subcontractors and Suppliers as appropriate. Prepare layout and coordination drawings for construction operations.
 5. Check and coordinate the Work for conflicts and interferences, and immediately advise ENGINEER and Resident Project Representative, if any, of all discrepancies of which CONTRACTOR is aware.
 6. Cooperate as required with ENGINEER and Resident Project Representative, if any, in observing the Work and performing field inspections.
 7. Review and coordinate the Work with Shop Drawings and CONTRACTOR's other submittals.
- B. CONTRACTOR's engineer shall be a registered, professional engineer of discipline required for specific service on the Project, licensed in the same state as the Site.

1.3 CONTRACTOR'S SURVEYOR

- A. Employ or retain the services, as needed, at the Site a surveyor with experience and capability of performing surveying and layout tasks required in the Contract Documents and as required for the Work. Surveyor shall be a professional land surveyor registered and licensed in the jurisdiction where the Project is located, or a professional engineer registered and licensed as a professional engineer in the jurisdiction where the Project is located and authorized under Laws and Regulations to practice surveying. Surveyor's tasks include, but are not necessarily limited to, the following:
1. Providing required surveying equipment, including transit or theodolite, level, stakes, and surveying accessories.
 2. Establishing required lines and grades for constructing all facilities, structures, pipelines, and site improvements.
 3. Preparing and maintaining professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the Work.

4. Prior to backfilling operations, survey, locate, and record on a copy of the Contract Documents accurate representation of buried Work and Underground Facilities encountered.
5. Complying with requirements of the Contract Documents relative to surveying and related work.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Field Engineering:
 - a. Submit daily reports as indicated in this Section.
 - b. When requested by ENGINEER, submit documentation verifying accuracy of field engineering.
 2. Surveying:
 - a. Complete plan for conducting survey work, submitted ten days prior to beginning survey Work.
 - b. Example of proposed survey field books to be maintained by CONTRACTOR's surveyor. Example shall have sufficient information and detail, including example calculations and notes, to demonstrate that field books will be organized and maintained in a professional manner, complying with the Contract Documents.
 - c. Submit original field books within two days after completing survey Work.
 - d. Submit certified survey in accordance with this Section.
 3. Certificates: When requested by ENGINEER, submit certificate signed by professional engineer or professional surveyor, as applicable, certifying that elevations and locations of THE Work comply with the Contract Documents. Explain all deviations, if any.
 4. Qualifications Statements:
 - a. Field Engineer: Name and address. When requested by ENGINEER, submit qualifications.
 - b. Surveyor: Name and address of firm, and resumes of each professional land surveyor and crew chief conducting the survey Work. Submit at least ten days prior to beginning survey Work. During the Project, submit resume for each new registered land surveyor and crew chief employed by or retained by CONTRACTOR at least ten days prior to starting on the survey Work.

1.5 RECORDS

- A. Maintain at the Site a complete and accurate log of control and survey Work as it progresses:
1. Survey data shall be in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the locality where the Site is located. Original field notes, computations, and other surveying data shall be recorded by CONTRACTOR's surveyor in CONTRACTOR-furnished hard-bound field books, and shall be signed and

sealed by CONTRACTOR's surveyor. Completeness and accuracy of survey Work, and completeness and accuracy of survey records, including field books, shall be responsibility of CONTRACTOR. Failure to organize and maintain survey records in an appropriate manner that allows reasonable and independent verification of calculations, and to allow identification of elevations, dimensions, and grades of the Work, shall be cause for rejecting the survey records, including field books.

2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by ENGINEER.
- B. Upon completion of Work, prepare an ALTA/ACSM certified survey, signed and sealed by professional surveyor, showing dimensions, locations, angles and elevations of construction and locations and elevations of all components of the Work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 SURVEYING

- A. Reference Points:
1. Refer the General Conditions, as may be modified by the Supplementary Conditions, regarding reference points.
 2. OWNER's established reference points damaged or destroyed by CONTRACTOR will be re-established by OWNER at CONTRACTOR's expense.
 3. From OWNER-established reference points, establish lines, grades, and elevations necessary to control the Work. Obtain measurements required for executing the Work to tolerances specified in the Contract Documents. Establish three permanent survey control monuments as benchmarks for horizontal and vertical control within the Limit of Work.
 4. Establish, place, and replace as required, such additional stakes, markers, and other reference points necessary for control, intermediate checks, and guidance of construction operations.
- B. Surveys to Determine Quantities for Payment:
1. For each application for progress payment, perform such surveys and computations necessary to determine quantities of Work performed or placed. Perform surveys necessary for ENGINEER to determine final quantities of Work in place.

2. Notify ENGINEER at least 24 hours before performing survey services for determining quantities. Unless waived in writing by ENGINEER, perform quantity surveys in presence of ENGINEER.
- C. Construction Surveying: Comply with the following:
1. Alignment Staking: Provide alignment stakes at 50-foot intervals on tangent, and at 25-foot intervals on curves.
 2. Slope Staking: Provide slope staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Re-stake at every ten-foot difference in elevation.
 3. Structure: Stake out structures, including elevations, and check prior to and during construction.
 4. Pipelines: Stake out pipelines including elevations, and check prior to and during construction.
 5. Road: Stake out roadway elevations at 50-foot intervals on tangent, and at 25-foot intervals on curves.
 6. Cross-sections: Provide original, intermediate, and final staking as required, for site work other locations as necessary for quantity surveys.
 7. Easement Staking: Provide easement staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Also provide wooden laths with flagging at 100-foot maximum intervals.
 8. Record Staking: Provide permanent stake at each blind flange and each utility cap is provided for future connections. Stakes for record staking shall be material acceptable to ENGINEER.
- D. Accuracy:
1. Establish CONTRACTOR's temporary survey references points for CONTRACTOR's use to at least second-order accuracy (e.g., 1:10000). Construction staking used as a guide for the Work shall be set at least third-order accuracy (e.g., 1:5000). Basis on which such orders are established shall provide the absolute margin for error specified below.
 2. Horizontal accuracy of easement staking shall be plus or minus 0.1 feet. Accuracy of other staking shall be plus or minus 0.04 feet horizontally and plus or minus 0.02 feet vertically.
 3. Survey calculations shall include an error analysis sufficient to demonstrate required accuracy.

+ + END OF SECTION + +

SECTION XI-01 71 33

PROTECTION OF THE WORK AND PROPERTY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall be responsible for taking all precautions, providing all programs, and taking all actions necessary to protect the Work and all public and private property and facilities from damage, as specified in the General Conditions, Supplementary Conditions, and this Section.
2. To prevent damage, injury, or loss, CONTRACTOR's actions shall include the following:
 - a. Storing apparatus, materials, supplies, and equipment in an orderly, safe manner that does not unduly interfere with progress of the Work or work of other contractors or utility companies.
 - b. Providing suitable storage facilities for materials and equipment subject to damage or degradation by exposure to weather, theft, breakage, or other cause.
 - c. Placing upon the Work or any part thereof only loads consistent with the safety and integrity of that portion of the Work and existing construction.
 - d. Frequently removing and disposing of refuse, rubbish, scrap materials, and debris caused by CONTRACTOR's operations so that, at all times, the Site is safe, orderly, and workmanlike in appearance.
 - e. Providing temporary barricades and guard rails around the following: openings, scaffolding, temporary stairs and ramps, around excavations, for elevated walkways, and other hazardous areas.
3. Do not, except after written consent from proper parties, enter or occupy privately-owned land with personnel, tools, materials or equipment, except on lands and easements provided by OWNER.
4. CONTRACTOR has full responsibility for preserving public and private property and facilities on and adjacent to the Site. Direct or indirect damage done by, or on account of, any act, omission, neglect, or misconduct by CONTRACTOR in executing the Work, shall be restored by CONTRACTOR, at his expense to condition equal to that existing before damage was done.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 BARRICADES AND WARNING SIGNALS

A. Barricades and Warning Signals – General:

1. Where the Work is performed on or adjacent to roadway, access road, right-of-way, or public place:
 - a. Provide barricades, fences, lights, warning signs, danger signals, watchmen, and take other precautionary measures for protecting persons, property, and the Work.
 - b. Paint barricades to be visible at night.
 - c. From sunset to sunrise, furnish and maintain at least one light at each barricade.
 - d. Erect sufficient barricades to keep vehicles from being driven on or into Work under construction.
 - e. Furnish watchmen in sufficient numbers to protect the Work.
2. Provide temporary barricades to protect personnel and property for Work not in or adjacent to vehicular travel areas, including indoor work, in accordance with Laws and Regulations.
3. CONTRACTOR's responsibility for maintaining temporary barricades, signs, lights, and for providing watchmen shall continue until the Work is accepted in accordance with the Contract Documents.

B. Temporary Fencing: Refer to Section XI-01 57 33, Security.

3.2 TREE AND PLANT PROTECTION

A. Tree and Plant Protection – General:

1. Protect existing trees, shrubs, and plants on or adjacent to the Site, shown or designated to remain in place, against unnecessary cutting, breaking, or skinning of trunk, branches, bark, and roots.
2. Do not store materials or equipment or park construction equipment and vehicles within the foliage drip line.
3. In areas subject to traffic, provide temporary fencing or barricades to protect trees and plants.
4. Fires are not allowed.
5. Within the limits of the Work, water trees and plants that are to remain to maintain their health during construction operations.
6. Cover exposed roots with burlap, which shall be kept continuously wet. Cover exposed roots with earth as soon as possible. Protect root systems from mechanical damage and damage by erosion, flooding, runoff, and noxious materials in solution.
7. If branches or trunks are damaged, prune branches immediately and protect cut or damaged areas with emulsified asphalt compounded specifically for horticultural use, in manner acceptable to ENGINEER.
8. When directed by ENGINEER, remove and dispose of at location away from the Site damaged trees and plants that die or suffer permanent injury, and replace damaged tree or plant with specimen of equal or better quality.
9. Coordinate Work in this Article with Section XI-31 11 00, Clearing.

3.3 PROTECTION OF EXISTING STRUCTURES

A. Underground Facilities:

1. Underground Facilities known to OWNER and ENGINEER, except water, gas, sewer, electric, and communications services to individual buildings and properties, are shown. Information shown for Underground Facilities is the best available to OWNER and ENGINEER but, in accordance with the General Conditions, is not guaranteed to be correct or complete.
2. CONTRACTOR shall explore ahead of trenching and excavation Work and shall uncover obstructing Underground Facilities sufficiently to determine their location, to prevent damage to Underground Facilities, and to prevent service interruption to building or parcels served by Underground Facilities. If CONTRACTOR damages an Underground Facility, CONTRACTOR shall restore it to original condition, in accordance with requirements of the owner of the damaged facility and the General Conditions.
3. Necessary changes in the location of the Work may be directed by ENGINEER to avoid Underground Facilities not shown or indicated on the Contract Documents.
4. If permanent relocation of an existing Underground Facilities is required and is not otherwise shown or indicated in the Contract Documents, CONTRACTOR will be directed in writing to perform the Work. When the relocation Work results in a change in the Contract Price, Contract Time, contract modification procedures and payment for such Work shall be in accordance with the Contract Documents.

B. Surface Structures:

1. Surface structures are existing buildings, structures, and other facilities at or above ground surface, including their foundations or any extension below ground surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, exposed piping and utilities, poles, exposed wires, posts, signs, markers, curbs, walks, fencing, and other facilities visible at or above ground surface.
2. Existing surface facilities, including but not limited to guard rails, posts, guard cables, signs, poles, markers, curbs, and fencing, that are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at CONTRACTOR's expense.

C. Protection of Underground Facilities and Surface Structures:

1. CONTRACTOR shall sustain in their places and protect from direct or indirect injury all Underground Facilities and surface structures located within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure or facility. Before proceeding with the Work of sustaining and supporting such structure or facility, CONTRACTOR shall satisfy ENGINEER that methods and procedures to be used have been approved by party owning same.

2. CONTRACTOR shall bear all risks attending the presence or proximity of all Underground Facilities and surface structures within or adjacent to limits of the Work, in accordance with the Contract Documents. CONTRACTOR shall be responsible for damage and expense for direct or indirect injury caused by his Work to structures and facilities. CONTRACTOR shall repair immediately damage caused by his Work, to the satisfaction of owner of damaged structure or facility.

3.4 PROTECTION OF INSTALLED MATERIALS AND LANDSCAPING

- A. Protect installed materials to prevent damage from subsequent operations. Remove protection facilities when no longer needed prior to completion of the Work.
- B. Control traffic to prevent damage to materials and surfaces.
- C. Coverings:
 1. Provide coverings to protect materials from damage.
 2. Cover projections, wall corners and jambs, sills, and soffits of openings, in areas used for traffic and for passage of materials and equipment in subsequent work.

+ + END OF SECTION + +

SECTION XI-01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall perform cutting and coring, and rough and finish patching of holes and openings in existing construction.
- B. Cutting, coring, rough patching, and finish patching shall be by CONTRACTOR.
- C. Provide cutting, coring, fitting and patching, including attendant excavation and backfill, required to complete the Work, and to:
 - 1. remove and replace defective Work;
 - 2. remove samples of installed Work as specified or required for testing;
 - 3. remove construction required to provide for specified alterations or addition to existing work;
 - 4. uncover Work to for ENGINEER's observation of covered Work or observation by authorities having jurisdiction;
 - 5. connect to completed Work not performed in proper sequence;
 - 6. remove or relocate existing utilities and pipes that obstruct the Work in locations where connections must be made;
 - 7. make connections or alterations to existing or new facilities.
- D. Structural Elements: Do not cut or patch structural elements in manner that would change structural element's load-carrying capacity as load deflection ratio.
- E. Operating Elements: Do not cut or patch operating elements in manner that would reduce their capacity to perform as intended. Do not cut or patch operating elements or related components in manner that would increase maintenance requirements or decrease operational life or safety.

1.2 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Cutting and Patching Request:
 - a. Submit written request to ENGINEER well in advance of executing cutting or alteration affecting:
 - 1) Design function or intent of Project.
 - 2) Work of OWNER or other contractors.
 - 3) Structural value or integrity of an element of the Project.

- 4) Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 5) Efficiency, operational life, maintenance, or safety of operational elements.
 - 6) Visual qualities of sight-exposed elements.
 - b. Request shall include:
 - 1) Identification of Project and contract name and number.
 - 2) Description of affected Work of CONTRACTOR and work of others.
 - 3) Necessity for cutting.
 - 4) Effect on work of OWNER or other contractors, or on structural or weatherproof integrity of Project.
 - 5) Description of proposed Work, describing: scope of cutting and patching; trades who will be executing the Work; products proposed to be used; extent of refinishing; schedule of operations; alternatives to cutting and patching, if any.
 - 6) Designation of party responsible for cost of cutting and patching, when applicable.
 - 7) Written permission of other contractors whose work will be affected.
 - 2. Should conditions of Work, or schedule, indicate a change of materials or methods, submit written recommendation to ENGINEER including:
 - a. Conditions indicating change.
 - b. Recommendations for alternative materials or methods.
 - c. Submittals as required for substitutions.
- B. Informational Submittals: Submit the following:
- 1. Submit written notice designating time Work will be uncovered, to provide for observation. Do not begin cutting or patching operations until accepted by ENGINEER.
- C. Conform to submittal requirements in Specifications for application and installation of materials used for patching.

1.4 WARRANTY

- A. Replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials in manner that does not void required or existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Materials:
 - 1. Use materials in conformance with the Contract Documents.

2. If not shown or indicated in the Contract Documents, use materials and products that are identical to existing materials and products affected by cutting and patching Work.
3. For exposed surfaces, use materials that visually match existing adjacent surfaces to fullest extent possible. If identical materials are unavailable or cannot be used, use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 GENERAL

- A. Perform cutting and coring in such manner that limits extent of patching.
- B. Core drill holes to be cut through concrete and masonry walls, slabs, or arches, unless otherwise accepted by ENGINEER in writing.

3.2 INSPECTION

- A. Examine surfaces to be cut or patched and conditions under which cutting or patching are to be performed before starting cutting or patching Work.
- B. Report unsatisfactory or questionable conditions to ENGINEER in writing. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.3 PREPARATION

- A. Provide temporary support as required to maintain structural integrity of Project, to protect adjacent Work from damage during cutting, and to support the Work to be cut.
- B. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that will be exposed during cutting and patching operations:
 1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
 2. Do not cut existing pipe, conduit, ductwork, or other utilities serving facilities scheduled to be removed or relocated until provisions have been made to bypass them.

3.4 CORING

- A. Perform coring with non-impact rotary tool using diamond core drills. Size holes for pipe, conduit, sleeves, equipment or mechanical seals, as required.

- B. Protect existing equipment, utilities and adjacent areas from water and other damage covered by drilling operations.
- C. Vacuum or otherwise remove slurry or tailings from the Work area following drilling.
- D. Do not core-drill through electrical conduit or other utility lines embedded in walls or floors without approval of ENGINEER. To extent possible, avoid cutting reinforcing steel in floors and walls. After core-drilling, coat exposed concrete and steel with Sika 62 or equal before installing the utility or equipment through the penetration.

3.5 CUTTING

- A. Cut existing construction using methods least likely to damage elements retained or adjoining construction, and that will provide proper surfaces to receive installation or repair:
 - 1. In general, use hand or small power tools designed for sawing or grinding, not hammering and chopping.
 - 2. Cut through concrete and masonry using concrete wall saw with diamond saw blades:
 - a. Provide for control, on both sides of walls, of slurry generated by sawing.
- B. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Provide temporary covering over openings where not in use.
- C. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed side.
- D. Provide adequate bracing of area to be cut prior to start of cutting.
- E. Provide equipment of adequate size to remove cut panel.

3.6 PATCHING

- A. Patch construction by filling, repairing, refinishing, closing-up and similar operations following performance of other Work. Patch with durable seams that are as inconspicuous as possible. Provide materials and comply with installation requirements specified, in the Specifications.
- B. Where feasible, test patched areas to demonstrate integrity of installation.
- C. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

- D. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in manner that eliminates evidence of patching and refinishing:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.
- E. Patch, repair or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 CLEANING

- A. Clean areas and spaces where cutting, coring and patching are performed. Clean piping, conduit, or similar constructions before applying paint or other finishing materials. Restore damaged coverings of pipe and other utilities to original condition.

+ + END OF SECTION + +

SECTION XI-01 74 05

CLEANING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall execute cleaning during the Project, at completion of the Work, and as required by the General Conditions and this Section.
2. Maintain in a clean manner the Site, the Work, and areas adjacent to or affected by the Work.
3. CONTRACTOR shall clean and dispose of sediment and debris from the existing culvert under McKinley Street.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. NFPA 241, Safeguarding Construction, Alteration, and Demolition Operations.

1.3 PROGRESS CLEANING

A. General: Clean the Site, work areas, and other areas occupied by CONTRACTOR at least weekly. Dispose of materials in accordance with the General Conditions and the following:

1. Comply with NFPA 241 for removing combustible waste materials and debris.
2. Do not hold non-combustible materials at the Site more than three days if the temperature is expected to rise above 80 degrees F. When temperature is less than 80 degrees F, dispose of non-combustible materials within seven days of their generation.
3. Provide suitable containers for storage of waste materials and debris.
4. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately.

B. Site:

1. Keep outdoor, dust-generating areas wetted down or otherwise control dust emissions.
2. At least weekly, brush-sweep roadways and paved areas at the Site that are used by construction vehicles or otherwise affected by construction activities.

C. Work Areas:

1. Clean areas where the Work is in progress to level of cleanliness necessary for proper execution of the Work.

2. Remove liquid spills promptly and immediately report spills to OWNER, ENGINEER, and authorities having jurisdiction.
 3. Where dust would impair proper execution of the Work, broom-clean or vacuum entire work area, as appropriate.
 4. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- D. Installed Work: Keep installed Work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of material or equipment installed, using only cleaning agents and methods specifically recommended by material or equipment manufacturer. If manufacturer does not recommend specific cleaning agents or methods, use cleaning agents and methods that are not hazardous to health and property and that will not damage exposed surfaces.
- E. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration until Substantial Completion.
- F. Cutting and Patching:
1. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
 2. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- G. Waste Disposal:
1. Properly dispose of waste materials, surplus materials, debris, and rubbish off the Site.
 2. Do not burn or bury rubbish and waste materials at the Site.
 3. Do not discharge volatile or hazardous substances, such as mineral spirits, oil, or paint thinner, into storm sewers or sanitary sewers.
 4. Do not discharge wastes into surface waters or drainage routes.
 5. CONTRACTOR shall be solely responsible for complying with Laws and Regulations regarding storing, transporting, and disposing of waste.
- H. During handling and installation of materials and equipment, clean and protect construction in progress and adjoining materials and equipment already in place. Apply protective covering where required for protection from damage or deterioration, until Substantial Completion.
- I. Clean completed construction as frequently as necessary throughout the construction period.

1.4 CLOSEOUT CLEANING

- A. Complete the following prior to requesting inspection for Substantial Completion:
1. Clean and remove from the Site rubbish, waste material, debris, and other foreign substances.

2. Sweep paved areas broom-clean. Remove petrochemical spills, stains, and other foreign deposits.
3. Hose-clean sidewalks and loading areas.
4. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
5. Leave surface waterways, drainage routes, storm sewers, and gutters open and clean.
6. Repair pavement, roads, sod, and other areas affected by construction operations and restore to specified condition; if condition is not specified, restore to pre-construction condition.
7. Clean exposed exterior and interior hard-surfaced finishes to dirt-free condition, free of spatter, grease, stains, fingerprints, films, and similar foreign substances.
8. Clean, wax, and polish wood, vinyl, and painted floors.
9. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.
10. In unoccupied spaces, sweep concrete floors broom-clean.
11. Clean transparent materials, including mirrors and glazing in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
12. Remove non-permanent tags and labels.
13. Touch up and otherwise repair and restore chipped, scratched, dented or otherwise marred surfaces to specified finish and match adjacent surfaces:
 - a. Do not paint over "UL" or similar labels, including mechanical and electrical nameplates.
14. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint, and mortar droppings, and other foreign substances.
15. Clean plumbing fixtures to sanitary condition, free of stains, including stains resulting from water exposure.
16. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
17. Clean lighting fixtures, lamps, globes, and reflectors to function with full efficiency. Replace temporary lamps provided in permanent fixtures. Replace existing lighting fixture components that are burned out or noticeably dimmed from use during construction. Replace defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
18. Leave the Site clean, and in neat, orderly condition, satisfactory to OWNER and ENGINEER.

1.5 CULVERT CLEANING

- A. Complete the following using jets, pigs or other high pressure pipe cleaning mechanisms:

1. Clean and remove debris, organic material, sediment and other foreign substances from the 16" diameter culvert under McKinley Street.
 2. CONTRACTOR shall note that the downstream end of the culvert to be cleaned is buried and is not accessible.
- B. Dispose of materials removed from the culvert pipe in accordance with Laws and Regulations and the provisions of the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION XI-01 77 19

CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL

- A. Scope:
 - 1. Section Includes:
 - a. Substantial Completion.
 - b. Final inspection.
 - c. Request for final payment.

1.2 SUBSTANTIAL COMPLETION

- A. Procedures for requesting and documenting Substantial Completion are in the General Conditions, as may be modified by the Supplementary Conditions.

1.3 FINAL INSPECTION

- A. Procedures for requesting and documenting the final inspection are in the General Conditions, as may be modified by the Supplementary Conditions.

1.4 REQUEST FOR FINAL PAYMENT

- A. Procedure:
 - 1. Submit request for final payment in accordance with the Agreement and General Conditions, as may be modified by the Supplementary Conditions, using procedure specified in Section XI-01 29 76, Progress Payment Procedures.
- B. Request for final payment shall include:
 - 1. Documents required for progress payments in Section XI-01 29 76, Progress Payment Procedures.
 - 2. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.
 - 3. Releases or Waivers of Lien Rights:
 - a. When submitting releases or waivers of Lien rights, provide release or waiver by CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR with labor, material, or equipment totaling \$1,000 or more.
 - b. Provide list of Subcontractors and Suppliers for which release or waiver of Lien is required.

- c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver to CONTRACTOR, and shall include Subcontractor's or Supplier's corporate seal, when applicable.
 - d. Release or waiver of Lien may be conditional upon receipt of final payment.
- 4. In addition to documents required in the General Conditions and Supplementary Conditions regarding final payment, submit the following.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The forms listed below, following the “End of Section” designation, are part of this Specification Section:
 - 1. None.

+ + END OF SECTION + +

SECTION XI-01 78 39

PROJECT RECORD DOCUMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall maintain and submit to ENGINEER with record documents in accordance with the Specifications, General Conditions, and Supplementary Conditions.
- B. Maintenance of Record Documents:
 - 1. Maintain in CONTRACTOR's field office, in clean, dry, legible condition, complete sets of the following record documents: Drawings, Specifications, and Addenda; Shop Drawings, Samples, and other CONTRACTOR submittals, including records of test results, approved or accepted as applicable, by ENGINEER; Change Orders, Work Change Directives, Field Orders, photographic documentation, survey data, and all other documents pertinent to the Work.
 - 2. Provide files and racks for proper storage and easy access to record documents. File record documents in accordance with the edition of the Construction Specification Institute's "MasterFormat" used for organizing the Project Manual, unless otherwise accepted by ENGINEER.
 - 3. Make record documents available for inspection upon request of ENGINEER or OWNER.
 - 4. Do not use record documents for purpose other than serving as Project record. Do not remove record documents from CONTRACTOR's field office without ENGINEER's approval.
- C. Submittal of Record Documents:
 - 1. Submit to ENGINEER the following record documents:
 - a. Drawings.
 - b. Project Manual including Specifications and Addenda (bound).
 - 2. Prior to readiness for final payment, submit to ENGINEER one copy of final record documents. Submit complete record documents; do not make partial submittals.
 - 3. Submit record documents with transmittal letter on CONTRACTOR letterhead complying with letter of transmittal requirements in Section XI-01 33 00, Submittal Procedures.
 - 4. Record documents submittal shall include certification, with original signature of official authorized to execute legal agreements on behalf of CONTRACTOR, reading as follows:
 "[Insert Contractor's corporate name] has maintained and submitted record documentation in accordance with the General Conditions and Supplementary

Conditions, Section XI-01 78 39, Project Record Documents, and other elements of Contract Documents, for the Three State Anodizing Site Remediation Project, Wappingers Falls, New York. We certify that each record document submitted is complete, accurate, and legible relative to the Work performed under our Contract, and that the record documents comply with the requirements of the Contract Documents.

[Provide signature, print name, print signing party's corporate title, and date]"

1.2 RECORDING CHANGES

A. General:

1. At the start of the Project, label each record document to be submitted as, "PROJECT RECORD" using legible, printed letters. Letters on record copy of the Drawings shall be two inches high.
2. Keep record documents current. Make entries on record documents within two working days of receipt of information required to record the change.
3. Do not permanently conceal the Work until required information has been recorded.
4. Accuracy of record documents shall be such that future searches for items shown on the record documents may rely reasonably on information obtained from ENGINEER-accepted record documents.
5. Marking of Entries:
 - a. Use erasable, colored pencils (not ink or indelible pencil) for marking changes, revisions, additions, and deletions to record documents.
 - b. Clearly describe the change by graphic line and make notations as required. Use straight-edge to mark straight lines. Writing shall be legible and sufficiently dark to allow scanning of record documents into legible electronic files.
 - c. Date all entries on record documents.
 - d. Call attention to changes by drawing a "cloud" around the change(s) indicated.
 - e. Mark initial revisions in red. In the event of overlapping changes, use different colors for subsequent changes.

B. Drawings:

1. Record changes on copy of the Drawings. Submittal of CONTRACTOR-originated or -produced drawings as a substitute for recording changes on the Drawings is unacceptable.
2. Record changes on plans, sections, schematics, and details as required for clarity, making reference dimensions and elevations (to Project datum) for complete record documentation.
3. Record actual construction including:
 - a. Depths of various elements of foundation relative to Project datum.
 - b. Horizontal and vertical location of Underground Facilities referenced to permanent surface improvements. For each Underground Facility,

- including pipe fittings, provide dimensions to at least two permanent, visible surface improvements.
 - c. Location of exposed utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
 - d. Changes in structural and architectural elements of the Work, including changes in reinforcing.
 - e. Field changes of dimensions, arrangements, and details.
 - f. Changes made in accordance with Change Orders, Work Change Directives, and Field Orders.
 - g. Changes in details on the Drawings. Submit additional details prepared by CONTRACTOR when required to document changes.
4. Recording Changes for Schematic Layouts:
- a. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray physical layout. For such cases, the final physical arrangement shall be determined by CONTRACTOR subject to acceptance by ENGINEER.
 - b. Record on record documents all revisions to schematics on Drawings, including: piping schematics, ducting schematics, process and instrumentation diagrams, control and circuitry diagrams, electrical one-line diagrams, motor control center layouts, and other schematics when included in the Contract. Record actual locations of equipment, lighting fixtures, in-place grounding system, and other pertinent data.
 - c. When dimensioned plans and dimensioned sections on the Drawings show the Work schematically, indicate on the record documents, by dimensions accurate to within one inch in the field, centerline location of items of Work such as conduit, piping, ducts, and similar items:
 - 1) Clearly identify the Work item by accurate notations such as “cast iron drain”, “rigid electrical conduit”, “copper waterline”, and similar descriptions.
 - 2) Show by symbol or note the vertical location of Work item; for example, “embedded in slab”, “under slab”, “in ceiling plenum”, “exposed”, and similar designations. For piping not embedded, also provide elevation dimension relative to Project datum.
 - 3) Descriptions shall be sufficiently detailed to be related to Specifications.
 - d. ENGINEER may furnish written waiver of requirements relative to schematic layouts shown on plans and sections when, in ENGINEER’s judgment, dimensioned layouts of Work shown schematically will serve no useful purpose. Do not rely on waiver(s) being issued.
5. Supplemental Drawings:
- a. In some cases, drawings produced during construction by ENGINEER or CONTRACTOR supplement the Drawings and shall be included with record documents submitted by CONTRACTOR. Supplemental record drawings shall include drawings provided with Change Orders, Work Change Directives, and Field Orders and that cannot be incorporated into the Drawings due to space limitations.

- b. Supplemental drawings provided with record drawings shall be integrated with the Drawings and include necessary cross-references between drawings. Supplemental record drawings shall be on sheets the same size as the Drawings.
- c. When supplemental drawings developed by CONTRACTOR using computer-aided drafting/design (CADD) software are to be included in record drawings, submit electronic files for such drawings in AutoCAD 2007 format as part of record drawing submittal. Submit electronic files on compact disc labeled, "Supplemental Record Drawings", together with CONTRACTOR name, Project name, and Contract name and number.

C. Specifications and Addenda:

- 1. Mark each Section to record:
 - a. Manufacturer, trade name, catalog number, and Supplier of each product and item of equipment actually provided.
 - b. Changes made by Addendum, Change Orders, Work Change Directives, and Field Orders.

1.3 ELECTRONIC FILES FURNISHED BY ENGINEER

A. CADD files will be furnished by ENGINEER upon the following conditions:

- 1. CONTRACTOR shall submit to ENGINEER a letter on CONTRACTOR letterhead requesting CADD files and providing specific definition(s) or description(s) of how files will be used, and specific description of benefits to OWNER (including credit proposal, if applicable) if the request is granted.
- 2. CONTRACTOR shall execute ENGINEER's standard agreement for release of electronic files and shall abide by all provisions of the agreement for release of electronic files.
- 3. Layering system incorporated in CADD files shall be maintained as transmitted by ENGINEER. CADD files transmitted by ENGINEER containing cross-referenced files shall not be bound by CONTRACTOR. Drawing cross-references and paths shall be maintained. If CONTRACTOR alters layers or cross-reference files, CONTRACTOR shall restore all layers and cross-references prior to submitting record documents to ENGINEER.
- 4. CONTRACTOR shall submit record drawings to ENGINEER in same CADD format that files were furnished to CONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION XI-02 41 00

DEMOLITION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified and required for demolition, removal, and disposal Work.
2. The Work under this Section includes, but is not necessarily limited to:
 - a. Demolition and removal of existing materials and equipment as shown or indicated in the Contract Documents. The Work includes demolition of structural concrete, foundations, walls, structural steel, aboveground storage tanks, metals, masonry, attachments, appurtenances, piping, electrical and mechanical systems and equipment, paving, sidewalks, fencing and similar existing facilities in the Vat Area, adjacent to the former Three Star facility complex near the Lower Raceway, in and around the former Gas Holder foundations in the MGP Area, and adjacent to the Axton Cross Building.
 - b. Demolition and removal of all Underground Facilities underneath, and above-grade piping and utilities in the structures shown or indicated for demolition, unless the Underground Facilities or above-grade facilities are shown or indicated as to remain.
 - c. Demolition and removal of all Underground Facilities and above-grade piping and utilities in the areas of soil indicated for excavation, unless the Underground Facilities or above-grade facilities are shown or indicated to remain.
 - d. Remove from slabs, foundations, walls, and footings that are to be demolished all utilities and appurtenances embedded in such construction.
3. Demolitions and removals specified under other Sections shall comply with requirements of this Section.
4. Perform demolition Work within areas shown or indicated.
5. Pay all costs associated with transporting and, as applicable, disposing of materials and equipment resulting from demolition.

B. Coordination:

1. Comply with Section XI-01 14 16, Coordination with Owner's Operations.
2. Review procedures under this and other Sections and coordinate the Work that will be performed with or before demolition and removals.

C. Related Sections:

1. Section XI-01 11 15, Special Construction Conditions.

2. Section XI-02 82 13, Asbestos Abatement.
3. Section XI-31 11 00, Clearing.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Electrical Removals: Entity and personnel performing electrical removals shall be electrician legally qualified to perform electrical construction and electrical work in the jurisdiction where the Site is located.
2. Plumbing Removals: Entity and personnel performing plumbing removals shall be plumber legally qualified to perform plumbing construction and plumbing work in the jurisdiction where the Site is located.
3. Asbestos Removals: Entity and personnel performing asbestos removals shall be licensed in New York State in the abatement of Asbestos.

B. Regulatory Requirements:

1. Demolition, removal, and disposal Work shall be in accordance with 29 CFR 1926.850 through 29 CFR 1926.860 (Subpart T - Demolition), and all other Laws and Regulations.
2. Comply with requirements of authorities having jurisdiction.

1.3 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Procedure Submittals:
 - a. Demolition and Removal Plan: Not less than ten days prior to starting demolition Work, submit acceptable plan for demolition and removal Work, including:
 - 1) Plan for coordinating shut-offs, capping, temporary services, and continuing utility services.
 - 2) Other proposed procedures as applicable.
 - 3) Equipment proposed for use in demolition operations.
 - 4) Recycling/disposal facility(ies) proposed, including facility owner, facility name, location, and processes. Include copy of appropriate permits and licenses, and compliance status.
 - 5) Planned demolition operating sequences.
 - 6) Detailed schedule of demolition Work in accordance with the accepted Progress Schedule.
2. Notification of Intended Demolition Start: Submit in accordance with Paragraph 3.1.A of this Section.
3. Qualifications Statements:
 - a. Name and qualifications of entity performing electrical removals, including copy of licenses required by authorities having jurisdiction.
 - b. Name and qualifications of entity performing plumbing removals, including copy of licenses required by authorities having jurisdiction.
 - c. Name and qualifications of entity performing asbestos removals, including copy of licenses required by authorities having jurisdiction.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

A. Notification:

1. At least 48 hours prior to commencing demolition or removal, notify ENGINEER in writing of planned start of demolition Work. Do not start removals without permission of ENGINEER.

B. Protection of Surrounding Areas and Facilities:

1. Perform demolition and removal Work in manner that prevents damage and injury to property, structures, occupants, the public, and facilities. Do not interfere with use of, and free and safe access to and from, structures and properties.
2. Perform demolition and removal Work in manner that protects the Work zones and prevents damage and injury to workers and equipment.
3. Stabilize and secure adjacent structures, including building foundations, walls and roofs to prevent damage, collapse or impairment of structural stability during the Work. At a minimum, specific Work requiring support and stabilization of adjacent structures includes soil removal and backfill activities adjacent to the Axton Cross Building, vat removal and backfill adjacent to the former Three Star facility complex, and sediment excavation and backfill in the Three Star Lagoon adjacent to stone retaining walls and the Axton Cross Building.
4. Closing or obstructing of roads, drives, sidewalks, and passageways adjacent to the Work is not allowed unless indicated otherwise in the Contract Documents. Conduct the Work with minimum interference to vehicular and pedestrian traffic.
5. Provide temporary barriers, lighting, sidewalk sheds, and other necessary protection.
6. Repair damage and restore structural stability to facilities and structures that are to remain at the conclusion of the Work.

C. Existing Utilities: In addition to requirements of the General Conditions, Supplementary Conditions, and Division 01 Specifications, do the following:

1. Should uncharted or incorrectly charted Underground Facilities be encountered, CONTRACTOR responsibilities shall be in accordance with the General Conditions as may be modified by the Supplementary Conditions. Cooperate with utility owners in keeping adjacent services and facilities in operation.
2. Dry Well(s), Septic Tank(s) and Leach Field(s): Maintain operation of any dry well, septic tank and leach field encountered that is in service. Provide alternative temporary sanitary facilities to replace any sanitary services which

are disrupted by the Work. Replace any existing sanitary facilities which are demolished to restore them to a minimum of the preconstruction level-of-service and condition at the conclusion of the Work.

3. Storm Water: Existing storm water conveyance systems shall remain in place and undisturbed or shall be temporarily replaced with facilities providing similar functionality during the Work. At the conclusion of the Work all facilities shall be restored to pre-construction condition unless otherwise shown or specified in the Contract Documents.
4. Water Piping: Before proceeding with any demolition, locate and protect from damage all potable and non-potable waterlines and service laterals in the area. In the Axton Cross, Lower Raceway and Vat Areas, test pit in advance to identify the complete extent of the existing water supply network and protect all existing system components in the areas of Work.
5. Other Utilities: Before proceeding with any demolition, locate and protect, as required, all other utilities, such as fuel and gas; heating, ventilating, and air conditioning; electric; and communications.
6. All Utilities Connected to Structures to be Demolished: Before proceeding with any demolition, disconnect and remove from service all active utilities. Cap disconnected sections to remain and survey the vertical and horizontal location of the capped ends.
7. Utility Shutdown, including, but not limited to, contacting utility owners for preconstruction locating and field markout of utility services, shall be conducted and coordinated by CONTRACTOR.

D. Remediation:

1. Perform demolition work involving asbestos and dispose of demolition materials in accordance with Section XI-02 82 33, Removal and Disposal of Asbestos Containing Materials.

3.2 DEMOLITION – GENERAL

- A. Locate construction equipment used for demolition Work and remove demolished materials and equipment to avoid imposing excessive loading on supporting and adjacent walls, floors, framing, facilities, and Underground Facilities.

B. Pollution Controls:

1. Use water sprinkling, temporary enclosures, and other suitable methods to limit emissions of dust and dirt to lowest practical level. Comply with Section XI-01 57 05, Temporary Controls, and Laws and Regulations.
2. Do not use water when water may create hazardous or objectionable conditions such as icing, flooding, pollution, or pollution migration.
3. Clean adjacent structures, facilities, properties, and improvements of dust, dirt, and debris caused by demolition Work, in accordance with the General Conditions and Section XI-01 74 05, Cleaning.

C. Explosives:

1. Use of explosives is not allowed.

- D. Comply with Section XI-01 73 29, Cutting and Patching.
- E. Building or Structure Demolition:
 - 1. Unless otherwise approved by ENGINEER, proceed with demolition from top of structure to the ground.
 - 2. Demolish concrete and masonry in small sections.
 - 3. Break up and remove foundations and slabs-on-grade unless otherwise shown or indicated as remaining in place.
- F. Demolition of Site Improvements:
 - 1. Pavement, Sidewalks, Curbs, and Gutters: Demolition of asphalt or concrete pavement, sidewalks, curbs, and gutters, as applicable, shall terminate at cut edges. Edges shall be linear and have a vertical cut face.
 - 2. Fencing: Remove to the limits shown or indicated on the Drawings. Completely remove below-grade posts and concrete.
 - 3. Vats and Gas Holder Foundations: Remove to the limits shown or indicated on the Drawings.
 - 4. Underground Facilities Other than Vats and Gas Holder Foundations: Remove to the extent shown or indicated on the Drawings. Unless otherwise shown or indicated, cap ends of piping to remain in place in accordance with the "Mechanical Removals" Article in this Section.
 - 5. Landscaping: Comply with Section XI-31 11 00, Clearing.
- G. Salvage and Ownership:
 - 1. Refer to Section XI-01 11 13, Summary of Work, for requirements on salvage, ownership, and handling of equipment and materials removed during demolition and removal Work.
 - 2. Not Used.
- H. Finishing of Surfaces Exposed by Removals: Not Used.

3.3 STRUCTURAL REMOVALS

- A. Remove structures to lines and grades shown or indicated, unless otherwise directed by ENGINEER. Removals beyond limits shown or indicated shall be at CONTRACTOR's expense and such excess removals shall be reconstructed to satisfaction of ENGINEER without additional cost to OWNER.
- B. Recycling and Reuse of Demolition Materials:
 - 1. All concrete, brick, tile, masonry, roofing materials, reinforcing steel, structural metals, miscellaneous metals, plaster, wire mesh, and other items contained in or upon structures to be demolished shall be removed, transported, and disposed of off the Site, unless otherwise approved by ENGINEER. Materials removed from the foundations of the Gas Holders shall be assumed to be contaminated with PAHs and BTEX, and debris in the Vat Area, including the

Vat walls, shall be assumed to contain asbestos-containing materials, as shown in the referenced documents identified in Section IV, Article 5.

2. Do not use demolished materials as fill or backfill adjacent to structures, in pipeline trenches, or as subbase under structures or pavement.
- C. After removing concrete and masonry walls or portions thereof, slabs, and similar construction that ties in to the Work or to existing construction, neatly repair the junction point to leave exposed only finished edges and finished surfaces.
- D. Where parts of existing structures are to remain in service following demolition, remove the portions shown or indicated for removal, repair damage, and leave the structure in proper condition for the intended use.

3.4 MECHANICAL REMOVALS

- A. Mechanical demolition and removal Work includes dismantling and removing existing piping, pumps, equipment, tanks, and appurtenances as shown, indicated, and required for completion of the Work. Mechanical removals include cutting and capping as required.
- B. Demolition and Removals of Piping, Tanks and Similar Items:
 1. Purge piping and tanks (as applicable) of water, sludge, debris, chemicals or fuel (as applicable) and make safe for removal and capping. Remove to the extent shown.
 2. Caps, Closures, Blind Flanges, and Plugs:
 - a. Provide closure pieces, such as blind flanges and caps, where shown or required to complete the Work.
 - b. Where used in this Section, the term “cap” means the appropriate type closure for the piping or ductwork being closed, including caps, blind flanges, and other closures.
 - c. Caps shall be compatible with the piping or ductwork to which the cap is attached, fluid-tight and gastight, and appropriate for the fluid or gas conveyed in the pipe or duct.
 - d. Unless otherwise shown or indicated, caps shall be mechanically fastened, fused, or welded to pipe. Plug piping with means other than specified in this Section only when so shown or indicated in the Contractor Documents or when allowed by ENGINEER.
 3. When Underground Facilities are altered or removed, properly cut and cap piping left in place, unless otherwise shown or indicated.
 4. Modifications to potable water piping and other plumbing and heating system work shall comply with Laws and Regulations. All portions of potable water system that have been modified or opened shall be hydrostatically tested and disinfected in accordance with the Contract Documents, and Laws and Regulations.

C. Equipment Demolition and Removals:

1. To the extent shown or indicated, remove existing pumps; storage tanks; and other equipment.
2. Where required, disassemble equipment to avoid imposing excessive loading on supporting walls, floors, framing, facilities, and Underground Facilities. Disassemble equipment as required for access and egress. Disassembly shall comply with Laws and Regulations. Provide required means to remove equipment.
3. Remove control panels, operator stations, and instruments associated with equipment being removed, unless shown or indicated otherwise.
4. Remove appurtenances as applicable. Dispose of tank contents in accordance with Laws and Regulations.
5. Remove equipment supports as applicable, anchorages, base, grout, and piping. Remove anchorage systems in accordance with the "Structural Removals" Article in this Section.
6. Remove access platforms, ladders, and stairs unless otherwise shown or indicated.
7. Remove and dispose of aboveground storage tanks and their contents in accordance with 6 NYCRR Parts 612-614 and all other Laws and Regulations.

3.5 ELECTRICAL REMOVALS

- A. Electrical demolition Work includes removing existing transformers, distribution switchboards, control panels, motors, starters, conduit and raceways, cabling, poles and overhead cabling, panelboards, lighting fixtures, switches, and miscellaneous electrical equipment, as shown, specified, or required.

3.6 DISPOSAL OF DEMOLITION DEBRIS

- A. Remove from the Site all debris, waste, rubbish, and material resulting from demolition operations and equipment used in demolition Work. Comply with the General Conditions, Supplementary Conditions, Section XI-01 74 05, Cleaning, Section XI-02 51 41 Off-Site Transportation and Disposal, and Section XI-028213 Asbestos Abatement..
- B. Transportation and Disposal:
1. Non-hazardous Material: Properly transport and dispose of non-hazardous demolition debris at appropriate landfill or other suitable location, in accordance with Laws and Regulations. Non-hazardous material does not contain Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, or other material designated as hazardous in Laws and Regulations.
 2. Hazardous Material: When handling and disposal of hazardous materials is included in the Work, properly transport and dispose of hazardous materials in accordance with the Contract Documents and Laws and Regulations.
- C. Submit to ENGINEER information required in this Section on proposed facility(ies) where demolition material will be recycled or disposed. Upon request, ENGINEER

or OWNER, shall be allowed to visit recycling and disposal facility(ies) to verify adequacy and compliance status. During such visits, facility operator shall cooperate and assist ENGINEER and OWNER.

+ + END OF SECTION + +

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OFF-SITE TRANSPORTATION AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes procedures to transport and dispose all items specified for off-site disposal.
- B. Contractor generated hazardous waste shall be confined to contamination reduction or exclusion zones until transported off-site for proper disposal.
- C. Contractor shall track quantities of materials transported off-site for disposal using a certified on-site portable truck scale.
- D. Remedial work which generates hazardous waste from inactive hazardous waste disposal sites (defined at 27-1301 of the Environmental Conservation Law) are not subject to the special assessment "tax" because of the exemption found at 27-0923 (3) (c) of the Environmental Conservation Law. The contractor remains responsible for paying any local and county taxes which might be applicable to the disposal of wastes from the remedial work.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only:
 - 1. Code of Federal Regulations (CFR).
 - a. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 - b. 49 CFR 172 Tables, Hazardous Material Communication Requirements, and Emergency Response Information Requirements.
 - 2. Codes, Rules, and Regulations of the State of New York (NYCRR):
 - a. 6 NYCRR Part 364 Waste Transportation Permits.
 - b. 6 NYCRR Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities.

1.3 SUBMITTALS

- A. Transportation Plan:
 - 1. Submit six copies of a detailed Transportation Plan to the ENGINEER.
 - 2. The Transportation Plan must be approved before materials are transported off site.
- B. Records:
 - 1. Written acceptance of waste profile from TSDF.
 - 2. Hazardous Waste Manifests.

3. Decontamination Certificates.
4. Submit written confirmation from TSDF of acceptance of waste.
5. Profile sampling results.
6. Manifests after permanent disposal.
7. Certificates of disposal for non-hazardous waste.
8. Signed bills of lading for salvaged or recycled materials.

1.4 PERMITS AND REGULATIONS

- A. Comply with all municipal, county, state, and federal regulations regarding transportation of hazardous and non-hazardous materials. These include:
 1. Trucks used for transportation of material for disposal off site shall be permitted pursuant to 6 NYCRR Part 364.
 2. Vehicle operator possession of a commercial driver's license with hazardous materials endorsement (if applicable).
 3. Registration of vehicle as a hazardous waste carrier (if applicable).
 4. Utilization of shipping papers or hazardous waste manifest (40 CFR 262 and 6 NYCRR Part 372).
 5. Proper marking and placarding of vehicles in accordance with 49 CFR.
 6. Placement of emergency response procedures and emergency telephone numbers in vehicle, and operator familiarity with emergency response procedures.
 7. Compliance with load, height, and weight regulations.

1.5 DISPOSAL FACILITIES

- A. Facilities must have valid Federal/state permits appropriate for the waste being disposed of. Permits must be valid during the entire project period.
- B. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.
- C. The disposal facility must comply with policies adopted by the DEPARTMENT with respect to off-site disposal of waste.
- D. Prior to shipment of hazardous wastes off the site, the CONTRACTOR shall confirm by written communication from the designated TSDF that it is authorized, has the capacity, and will provide or assure that the ultimate disposal method is followed for the particular hazardous waste on the manifest.
- E. RCRA or other Hazardous Wastes:
 1. The facility must have an RCRA Permit or RCRA Interim Status for RCRA wastes.
 2. The facility must not have any significant RCRA violations or other environmental conditions that could affect its satisfactory operation:
 - a. Significant violations include Class 1 RCRA violations as defined in EPA's RCRA Enforcement Response Policy dated December 1984, including but not limited to groundwater, closure, post closure, and

- financial violations.
 - b. Other environmental conditions include those conditions affecting the satisfactory operation of the facility and violations of state and/or federal laws other than RCRA.
 - c. Under limited circumstances, EPA Administrator may allow disposal of hazardous substances at a RCRA facility having significant RCRA violations or other environmental conditions affecting satisfactory operation, providing that the facility owner or operator has entered into a consent order or decree to correct the problems, and disposal only occurs within the facility at a new or existing unit that is in compliance with RCRA requirements.
 - 3. Landfill disposal must be in a unit meeting applicable RCRA minimum technical requirements:
 - a. Current RCRA minimum technical requirements for land disposal include the use of a double liner system.
 - b. Under limited circumstances (low waste toxicity, mobility, and persistence), EPA may approve the use of a single-lined land disposal unit for RCRA wastes where use of such a unit adequately protects public health and the environment.
- F. TSCA Wastes:
- 1. The facility must have a current TSCA permit.
 - 2. The facility must not have any significant violations, corrective actions, or other environmental conditions that could affect its satisfactory operation.
- G. Non-hazardous and ACM Wastes:
- 1. The facility must have a state permit, if applicable.
 - 2. The facility must be permitted in good standing with applicable agency regulatory requirements.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Equipment supplied shall be in good repair and good working condition.
- B. Haul trucks that have visible oil or hydraulic fluid leaks will not be allowed on site.
- C. Clean up oil or hydraulic fluid spills.

2.2 TRANSPORTATION

- A. Submit a Transportation Plan which includes:
 - 1. Type, condition, and average daily number of vehicles to be used.
 - 2. Travel routes and time restrictions.
 - 3. Decontamination methods for vehicles, equipment, and containers.
 - 4. Emergency response plan.
 - 5. A list of all shippers and their federal and state transporter ID numbers.

6. A list of proposed disposal facilities including name, address, telephone number, contact name, and Federal/state permit numbers.

PART 3 - EXECUTION

3.1 VEHICLE LOADING AND DECONTAMINATION

A. General:

1. The CONTRACTOR shall provide all equipment, personnel, and facilities necessary to load waste materials in accordance with the regulatory requirements listed herein, and in accordance with the regulations of those states through which the CONTRACTOR plans to transport materials.
2. Vehicle operators shall be trained in conformance with federal and state regulations for waste haulers (hazardous, special, and non-hazardous).
3. All vehicles hauling waste materials from the exclusion zone shall be decontaminated in the contamination reduction zone prior to leaving the site.
4. A written decontamination certification shall be provided to the ENGINEER for each shipment stating that:
 - a. No soil from the exclusion zone or the contamination reduction zone adheres to the vehicle (including tires and undercarriage).
 - b. The vehicles are not leaking materials or dripping liquids in any amount.
 - c. Any waste materials, debris, and contaminated materials are covered with a tarpaulin, or are otherwise completely enclosed so as not to cause or permit discharge from the vehicle during transport.

3.2 MEASUREMENT

- A. Upon entering and leaving the site, the transport vehicle shall be weighed on a certified scale under the ENGINEER'S supervision to determine the amount of material being removed from the site.
- B. A printed ticket with the time, date, and net weight of material being transported for disposal shall be obtained. A copy of this ticket shall be given directly to the ENGINEER as it is produced.
- C. Measured gross weight of the vehicle or calculated net weight of material outside the certified capacity of the scale will not be accepted by the ENGINEER and the CONTRACTOR shall not be reimbursed for the associated costs of material disposal above the certified capacity of scale.
- D. The CONTRACTOR shall off-load materials above the certified capacity of scale on site at no additional cost to the DEPARTMENT.

3.3 MANIFESTING

- A. Complete all required manifest forms and bill of lading forms for the DEPARTMENT for proper transportation and disposal of all materials. The DEPARTMENT will provide a generator identification number if required.

- B. Comply with 40 CFR 262 in completion and submittal of the Hazardous Waste Manifests. The Hazardous Waste Manifests for the transportation and disposal of waste removed from the site shall include all information in accordance with 49 CFR 172.101.
- C. Notify the ENGINEER in writing a minimum of two weeks prior to the date(s) the manifests are ready to be signed.
- D. The ENGINEER will sign the special waste or hazardous waste manifest for the DEPARTMENT, which is the generator.
- E. Place on the manifest all information and data required by both the waste generator and transporter. The CONTRACTOR'S hazardous waste specialist shall accompany each prepared manifest with written certification that the manifest has been filled out in compliance with accordance with all EPA, DOT, and state regulations.
- F. Provide the ENGINEER with two fully executed copies of each shipment manifested prior to shipping wastes off site.
- G. The CONTRACTOR is responsible for proper distribution of manifests and bills of lading.

3.4 TRANSPORTATION

- A. Prior to shipment of hazardous wastes off the project area, the CONTRACTOR shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated TSDF or SWMF.
- B. The CONTRACTOR shall be responsible for obtaining permits and authorizations necessary to use the selected shipping routes. Comply with restrictions imposed by local governmental agencies regarding use of the routes.
- C. Materials shall be transported only at the times and by the routes indicated in the approved Transportation Plan, unless written permission is received from the ENGINEER to do otherwise.

3.5 SAMPLING

- A. Perform all sampling and analyses required by the disposal facility at no additional cost to the DEPARTMENT.
- B. Provide copies of the results to the ENGINEER.

3.6 REPORTING

- A. Manifests:

1. After the waste has been permanently disposed of, the Hazardous Waste Manifests shall be completed in accordance with 6 NYCRR Part 372 and submitted by the CONTRACTOR to the ENGINEER with a copy to be forwarded to the DEPARTMENT.
 2. In accordance with 40 CFR 262.42, generator shall contact the transporter and TSD facility to determine the status of the HTW if the manifest is not returned to the generator within 35 days of the date waste was accepted by the initial transporter.
 3. The generator shall file an exception report with EPA and NYSDEC if he has not received a completed copy of the manifest from the designated TSD facility with 45 days of the date the waste was accepted by the original transporter.
 4. The CONTRACTOR shall be responsible for providing the generator with the information needed to complete the exception report.
- B. Certificates of Disposal:
1. Provide Certificates of Disposal for all wastes shipped off site.
 2. The Certificates of Disposal shall be submitted to the ENGINEER within 180 days of the shipment of wastes off site.
- C. Bill of Lading:
1. Items and materials that have been recycled or salvaged shall only require a signed bill of lading or receipt of materials and quantity received.

+ + END OF SECTION + +

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ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies the procedures for removal and disposal of existing asbestos-containing materials. The results of the testing for ACM are presented in the LSSI and other referenced documents in Section IV Article 5:
 - 1. Some of the debris in the Vat Area and some materials attached to the Vat walls were determined to be ACM during previous investigations. Debris from this Area shall be classified as ACM, unless CONTRACTOR conducts a sampling and analysis program and either separates the ACM from materials determined to be non-ACM, or abates all of the ACM from all media in the Area. Asbestos data reports were compiled by an ELAP certified laboratory.
 - 2. In order to determine asbestos content, samples were analyzed by polarized light microscopy (PLM) and/or transmission electron microscopy (TEM).
 - 3. The reports were intended for design and estimate purposes only, and are included to provide bidders with the same information available to the State.
 - 4. The Bulk Samples are representative of like materials in the Work area. All ACM may not have been sampled.

1.2 RELATED SECTIONS

- A. Section XI-01 11 13, Summary of Work.
- B. Section XI-01 45 29 13, Testing Laboratory Services Furnished by Contractor.
- C. Section XI-01 57 05, Temporary Controls.
- D. Section XI-01 73 29, Cutting, and Patching.

1.3 REFERENCES

- A. New York State Department of Environmental Conservation (DEC) 6NYCRR:
 - 1. Part 360 Solid Waste Management Facilities.
 - 2. Part 364 Waste Transporter Permits.
 - 3. Part 370 Hazardous Waste Management System-General.
 - 4. Part 371 Identification and Listing of Hazardous Wastes.
 - 5. Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
 - 6. Part 373 Hazardous Waste Management Facilities.

- B. Occupational Safety and Health Administration (OSHA): Asbestos Regulations (29 CFR Part 1926.1101).
- C. U.S. Environmental Protection Agency (USEPA):
 - 1. National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule.
 - 2. Asbestos Emergency Response Act (AHERA) (40 CFR Part 763, Subpart E).
- D. New York State Department of Labor (DOL): Industrial Code Rule 56.

1.4 DEFINITIONS

- A. Authorized Personnel: Facility or the ENGINEER, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
- B. Clearance Criteria: Shall be determined and established by a Certified Asbestos Project Monitor with an independent testing lab employed by the ENGINEER, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references, and issue the certification of cleaning.
- C. Site Specific Variance: Relief in accordance with section 30 of the Labor Law from specific sections of Industrial Code Rule 56 for a specific project.
- D. Phase I & II: Asbestos Project phases as defined and subcategorized in ICR 56-2.

1.5 ABBREVIATIONS

- A. ASTM: American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103
- B. CFR: Code of Federal Regulations
Government Printing Office
Washington, DC 20402
- C. DOL: New York State Department of Labor
Harriman State Office Building Campus
Albany, NY 12240
- D. NIOSH: National Institute for Occupational Safety and Health
Building J.N.E. Room 3007
Atlanta, GA 30333
- E. OSHA: Occupational Safety and Health Administration

200 Constitution Avenue
Washington, DC 20210

F. USEPA: United States Environmental Protection Agency
401 M Street SW
Washington, DC 20460

1.6 ASBESTOS SITE SPECIFIC VARIANCE

- A. If a site specific variance is sought, application must be made within 14 days after the contract agreement is approved by the Comptroller. Forward the required forms to the Department of Labor for their action. Forward a copy of the request of site specific variance to the project Asbestos Designer at the time of submittal to DOL. All requests shall be made by a DOL certified Asbestos Project Designer.

1.7 SUBMITTALS

- A. Asbestos Site Specific Variance Submittals; if a site specific variance is sought submit the following:
1. One copy of the completed DOSH-751 and DOSH-465 forms.
 2. One copy of the New York State Department of Labor site specific variance decision.
- B. Quality Control Submittals:
1. Notification Compliance Data: Within 2 days after notification is sent to the regulatory agencies submit one copy of each notice sent to each regulatory agency (USEPA and DOL).
 2. Asbestos Removal Company Data: Name and address of proposed asbestos removal company and abatement contractor license issued by DOL.
 3. Asbestos Worker Certification Data: Name and address of proposed asbestos abatement workers and licenses issued by DOL.
 4. Work Plan: For information only, submit one copy of the work plan required under Quality Assurance Article.
 5. Waste Transporter Permit: One copy of transporter's current waste transporter permit from NYS DEC (NYS Part 364 Permit).
 6. Landfill: Landfill to be used for ACM disposal shall be licensed to receive asbestos waste by NYS DEC (NYS Part 360 Permit) and by USEPA. Out of state landfills shall provide licenses from local agencies having jurisdiction.
 7. Negative Air Pressure Equipment: Copy of manufacturer's and performance data of all units and HEPA filters used.
- C. Asbestos Work Closeout Submittals:
1. Waste Shipment Records and Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing that the ACM has been properly disposed.
 - a. Waste shipment record and disposal site receipt must be received within 35 days of the ACM waste leaving the Site. If receipts are not

received within the specified time period, the ENGINEER will notify USEPA in writing within 45 days of the ACM waste leaving the Site.

D. Contract Closeout Submittals:

1. Daily Log: Submit copy of Project Monitor's daily air sample log and a copy of Asbestos Abatement Contractor's Daily project log.
2. Air Monitoring Data: Submit copy of air test results and chain of custody.

1.8 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with the referenced standards.

B. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the ENGINEER at the Site for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.

1. The conference shall be attended by the CONTRACTOR, the asbestos removal subcontractor, and the testing laboratory employed by the OWNER.

C. Work Plan: At the conclusion of the pre-work conference, before the physical abatement Work begins, prepare a detailed work plan.

1. The work plan shall include, but not be limited to, work procedures, types of equipment, details of equipment used, decontamination unit locations, crew size, and emergency procedures for fire and medical emergencies and for failure of containment barriers.
2. If a site specific variance is sought, do not finalize the work plan until the Department of Labor decision is received.

1.9 PROJECT CONDITIONS

A. In addition to the postings required by law, post at the entrance to the abatement areas the following documents:

1. Copy of the printed Work plan.
2. Copy of Industrial Code Rule 56.

B. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shut-down of the air handling system serving the work area.

1. The air handling system will not be restarted until approval of the air monitoring tests following the last cleaning.
2. If total shut down of the system is not acceptable, follow all regulations for local isolation and provision for temporary HVAC as per DOL regulations.

C. Maintain electric services to those portions of the building and remaining facility not a part of the asbestos abatement work area at all times. Follow all regulations for electric power shut down exemptions as per DOL regulations.

- D. Do not obstruct any aisle or passageway so as to reduce its required width as an exit.

1.10 HEALTH AND SAFETY

- A. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential ACM exposure.
 - 1. Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

1.11 FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY

- A. Establish emergency and fire exits from the work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
- B. Provide a logbook throughout the entire term of the project. All persons who enter the regulated abatement work area or enclosure shall sign the logbook. Document any intrusion or incident in the log book.

1.12 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

- A. Workers must wear personal protective equipment for all projects as per OSHA and DOL regulations. Provide respiratory protection in accordance with OSHA regulation 1910.134 and ANSI Z88.2.
- B. Workers must be trained as per OSHA and DOL requirements, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.
 - 1. A personal air sampling program shall be in place as required by OSHA.
 - 2. The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

PART 2 - PRODUCTS

2.1 DISPOSAL BAGS

- A. Type: Minimum 6 mil thick, clear, and preprinted with a Caution Label.

2.2 EQUIPMENT

- A. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed.

- B. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.

2.3 GLOVE BAGS

- A. Type: Minimum 6 mil thick, clear, fire retardant polyethylene. Select glove bag sizes appropriate for the size and location of the project.

2.4 NEGATIVE AIR PRESSURE UNITS

- A. Type: Local exhaust system, capable of maintaining negative air pressure within the containment, and provides for HEPA filtration of efficiency not less than 99.97 percent with 0.3 micron particles. Equip the unit with filter alarms lights and operation time meter.

2.5 PLASTIC SHEETS

- A. Type: Minimum 6 mil thick, clear, fire retardant polyethylene.

2.6 RESPIRATORS

- A. Type: As approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

2.7 VACUUM CLEANERS

- A. Type: Vacuums equipped with HEPA filters.

PART 3 - EXECUTION

3.1 ASBESTOS-CONTAINING MATERIAL HANDLING AND REMOVAL PROCEDURES

- A. Comply with the standards referenced in Part 1 of this Section.

3.2 CLEAN UP PROCEDURES

- A. Comply with the standards referenced in Part 1 of this Section.

3.3 PROJECT AIR SAMPLING, MONITORING AND ANALYSIS

- A. Air Sampling and Analysis: The OWNER will employ the services of an independent testing laboratory to perform air sample monitoring. The laboratory shall use the methods described in standards referenced in Part 1 of this Section.
 - 1. The equipment, duration, flow rate, calibration of equipment, number and location of samples are as per ICR 56-4.

2. Air sampling technician shall be on site to observe and maintain air sampling equipment for the duration of the air sampling collection.
 3. Period of time permitted between completion of air sample collection and receipt of results on the project site shall be equal or less than 48 hours.
- B. If air samples collected outside the regulated work area indicate airborne fiber concentrations at or above 0.01 fibers per cubic centimeter, or the established background level, whichever is greater, work shall stop immediately for inspection of barriers and negative air ventilation systems. Clean up surfaces outside the regulated work area using HEPA filter equipped vacuums and wet cleaning methods. Work methods shall be altered to reduce fiber concentrations to acceptable levels.
- C. Elevated air sample results, if any, along with background and all other air sample results collected shall be submitted to the Commissioner of appropriate Asbestos Control Bureau within the same business day of receipt of results.

3.4 FINAL CLEANING AND CLEARANCE PROCEDURES

- A. Negative Pressure Ventilation: Negative air pressure machines if used, shall remain in continuous operation during the entire length of the project.
- B. Cleaning and Visual Inspection: After first, second, third cleaning and required waiting/settling and drying periods, perform a final visual inspection.
1. Final clearance air sampling shall commence after the waiting/settling and drying time as per ICR 56 has elapsed.
- C. Project Monitor Visual Inspection: The OWNER will employ the services of a DOL certified asbestos project monitor employed by an independent testing laboratory to perform visual inspection as required by ICR 56.
- D. Final Clearance Air Sampling: The OWNER will employ the services of an independent testing laboratory to perform final air sampling.
1. The laboratory shall use the methods described in standards referenced in Part 1 of this Section.
 2. The equipment, duration, flow rate, calibration of equipment, number and location of samples are as per ICR 56-4.
 3. If initial Post-Abatement (Clearance Air) Monitoring results do not comply with the standards referenced in Part 1 of this Section the CONTRACTOR shall either re-clean or order a full set of TEM analysis.
 - a. Results of the TEM analysis will be conclusive, and if the results do not comply with the standards referenced in Part 1 of this Section, the CONTRACTOR shall re-clean and additional full set of air samples will be collected and analyzed until the standards are met.
 - b. All satisfactory PCM clearance air sample results along with background air sample results, if they are greater than or equal to 0.01 fibers per cubic centimeter, shall be submitted to the Commissioner of

- appropriate Asbestos Control Bureau within two business days of receipt of satisfactory clearance air results.
- c. All satisfactory TEM results of previously unsatisfactory PCM clearance air sample results, along with the unsatisfactory PCM results shall be submitted to the Commissioner of appropriate Asbestos Control Bureau within two business days of receipt of satisfactory clearance air results.
 4. Prior to removal of isolation barriers the ENGINEER at the site will receive an affidavit from the air monitoring laboratory certifying the final air samples comply with the standards referenced in Part 1 of this Section.
- E. Dismantling of Regulated Abatement Work Area:
1. Remove all tools and equipment after proper decontamination as per Part 1 of this Section.
 2. Dismantle and remove each tent enclosure and air lock and any barriers only after final clearance air monitoring has been performed and satisfactory results obtained.
 3. All remaining polyethylene, duct tape, expandable foam and other barrier materials shall be bagged, wrapped, containerized and labeled as asbestos waste.
 4. Remove all temporary hard walled barriers from site.
 5. Dismantle any remote decontamination units and plastic sheeting shall be disposed as asbestos waste.
 6. Remove all waste generated to the holding area, lockable trailer or dumpster.
 7. CONTRACTOR's Supervisor shall certify in writing to the OWNER that abatement work is complete and no debris/residue remains.

3.5 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL AND RELATED DEBRIS

- A. Remove all waste generated as part of the asbestos project from the project site within ten calendar days from the site after completion of the project.
- B. Transport and dispose of all the asbestos-containing waste, related debris, and waste water to the approved disposal site.
- C. All generated waste removed from the site must be documented, accounted for and disposed of in compliance with the requirements of USEPA NESHAP.
- D. Comply also with the standards referenced in Part 1 of this Section.

3.6 RESTORATION

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.

+ + END OF SECTION + +

SECTION XI-31 05 19

GEOSYNTHETICS FOR EARTHWORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide all labor, materials, equipment, and services required to provide and place geosynthetic materials as shown and specified.
- B. Related Sections:
 - 1. Section XI-31 23 05, Excavation and Fill.

1.2 REFERENCES

- A. Standards referenced in this Section are listed below:
 - 1. American Society for Testing and Materials, (ASTM)

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Manufacturer shall be a specialist in the manufacture of geosynthetic materials, and have produced and successfully installed a minimum of five million square feet.

1.4 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Product Data:
 - a. Submit manufacturer's data, specifications, installation instructions and dimensions.
- B. Informational Submittals: Submit the following:
 - 1. Certificates:
 - a. Submit an affidavit certifying that the geosynthetic material furnished complies with all requirements specified herein.
 - b. No geosynthetic material shall be shipped until the affidavit is submitted to the ENGINEER.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Each roll of geosynthetic material delivered to the Site shall be labeled by the manufacturer identifying the manufacturer's name, product identification, lot number, roll number and roll dimensions.

- B. All rolls and packages shall be inspected by CONTRACTOR upon delivery to the Site. CONTRACTOR shall notify ENGINEER if any loss or damage exists to geosynthetic material. Replace loss and repair damage to new condition, in accordance with manufacturer's instructions.
- C. Geosynthetic material shall be protected from ultraviolet light exposure, precipitation or other inundation, mud, dirt, dust, puncture, cutting or any other damaging or deleterious conditions. Rolls shall be shipped and stored in relatively opaque and watertight wrappings.

PART 2 - PRODUCTS

2.1 STABILIZATION FABRIC

- A. Stabilization fabric shall be a woven pervious sheet composed of polymeric yarn or fiber. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Fabric shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	<u>Minimum Value</u>
Grab Tensile Strength	lb	ASTM D 4632	315
Grab Strength Elongation	%	ASTM D 4632	12
Trapezoid Tear Strength	lb	ASTM D 4533	120
CBR Puncture	lb	ASTM D 6241	900
Apparent Opening Size	sieve	ASTM D 4751	#40

- B. Product and Manufacturer: Provide one of the following:
1. Geotex 315 ST as manufactured by Propex Geosynthetics.
 2. SKAP W315.
 3. Or equal.

2.2 SEPARATION FABRIC

- A. Separation fabric shall be a needle punched, nonwoven polypropylene type. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Fabric shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	<u>Minimum Value</u>
Grab Tensile Strength	lb	ASTM D 4632	170
Grab Strength Elongation	%	ASTM D 4632	50
Trapezoid Tear Strength	lb	ASTM D 4533	70
CBR Puncture	lb	ASTM D 6241	435
Apparent Opening Size	sieve	ASTM D 4751	#70

- B. Product and Manufacturer: Provide one of the following:
1. Geotex 651 as manufactured by Propex Geosynthetics.
 2. GSE NW6.
 3. Or equal.

2.3 GEOCUSHION FABRIC

- A. Geocushion fabric shall be a needle punched, nonwoven, staple fiber, polypropylene type. The fabric shall be inert to biological degradation and naturally encountered chemicals, alkalizes, and acids. Fabric shall conform to the following:

<u>Fabric Property</u>	<u>Unit</u>	<u>Test Method</u>	<u>Minimum Value</u>
Weight	oz/sy	ASTM D5261	16.0
Thickness	mils	ASTM D5199	165
Grab Tensile Strength	lb	ASTM D 4632	390
Grab Strength Elongation	%	ASTM D 4632	50
Trapezoid Tear Strength	lb	ASTM D 4533	155
CBR Puncture	lb	ASTM D 6241	1125
Apparent Opening Size	sieve	ASTM D 4751	#100

- B. Product and Manufacturer: Provide one of the following:
1. Geotex 1701 as manufactured by Propex Geosynthetics.
 2. GSE NW16.
 3. Or equal.
- C. Prior to placement of the geocushion fabric, a static column test shall be performed in accordance with the manufacturer's recommendations to verify that the geocushion will adequately protect the 60- mil HDPE geomembrane.

2.4 GEOMEMBRANE LINER

- A. Geomembrane Liner shall be 60 mil thick HDPE liner as manufactured by GSE or equal.
- B. Geomembrane installation and seaming requirements shall be in accordance with the 6 NYCRR Part 360.

PART 3 - EXECUTION

3.1 INSPECTION

- A. CONTRACTOR shall examine the conditions under which the Work is to be installed and notify the ENGINEER, in writing, of conditions detrimental to the

proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION - GENERAL

- A. All geosynthetic materials shall be weighted with sandbags or the equivalent when required. Such sandbags shall be installed during placement and shall remain until replaced with cover material.
- B. CONTRACTOR shall take any necessary precautions to prevent damage to underlying layers during placement.
- C. During placement, care shall be taken not to entrap stone, excessive dust, or moisture that could damage the geosynthetic material, generate clogging, or hamper subsequent seaming.
- D. Geosynthetic materials shall not be exposed to precipitation prior to being installed, and shall not be exposed to direct sunlight for more than 15 days.
- E. Geosynthetic materials shall be overlapped 12-inches or sewn.

3.3 REPAIR

- A. Any holes or tears in the material shall be repaired in accordance with the manufacturer's instructions.

3.4 PLACEMENT OF COVER MATERIALS

- A. CONTRACTOR shall place all cover materials in such a manner to ensure the geosynthetic material is not damaged; minimal slippage occurs on underlying layers; and no excess tensile stresses are induced in the material.

+ + END OF SECTION + +

SECTION XI-31 11 00

CLEARING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform clearing and grubbing as shown and specified in the Contract Documents.
2. The Work includes removing from the Site and disposing of trees, brush, shrubs, vegetation, logs, rubbish, and other objectionable material.
3. Pay all costs associated with transporting and disposing of debris resulting from clearing and grubbing.
4. Limits of Clearing: Clear and grub the areas of work shown or indicated on the Drawings. Do not clear or grub the embankments of Wappingers Creek.

B. Related Sections:

1. Section XI-01 11 15, Special Construction Conditions.
2. Section XI-01 57 05, Temporary Controls.
3. Section XI-02 41 00, Demolition.

1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Plan for removing trees and other large vegetation not explicitly shown or indicated for removal in the Contract Documents.
 - b. Plan showing proposed limits of clearing, if different from clearing limits shown or indicated in the Contract Documents.

1.3 WARRANTY

- ###### A.
- CONTRACTOR shall warrant that Work performed under this Section will not permanently damage trees, shrubs, turf, and plants designated to remain, or other adjacent work, facilities, or property. If damage resulting from CONTRACTOR's operations becomes evident during the correction period, CONTRACTOR shall replace damaged items and property at no additional cost to OWNER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

A. Protection:

1. Throughout the Project, protect existing site improvements, including streets, drives, and Underground Facilities to remain (if any), and adjacent property and structures. Repair damage caused by CONTRACTOR to original condition or replace in kind, to satisfaction of ENGINEER, at no additional cost to OWNER.
2. Protect trees, shrubs, vegetation, and grassed areas to remain by providing temporary fencing, barricades, wrapping, or other methods shown, specified, or accepted by ENGINEER. Correct at CONTRACTOR's expense damage caused by CONTRACTOR outside the limits of clearing Work.
3. Do not remove trees without approval of ENGINEER, unless shown or indicated for removal.
4. Do not locate construction equipment, stored materials, or stockpiles within drip line of trees and vegetation to remain.

B. Site Preparation:

1. Obtain, pay costs associated with, and comply with applicable permits required for clearing Work.
2. Delineation of Clearing Limits:
 - a. Locate and clearly flag trees and vegetation to remain, and other materials to remain in the clearing and grubbing limits. Locate and clearly flag salvable vegetation to be relocated.
 - b. Provide flagging to delineate limits of areas to be cleared or grubbed. Review at Site with ENGINEER before commencing removal of trees, vegetation, and other materials to be removed.
 - c. Replace flagging that is lost, removed, or destroyed, until clearing Work is complete and ENGINEER allows removal of flagging.
3. Erosion and Sediment Controls:
 - a. Provide applicable erosion and sediment controls before commencing clearing Work.
 - b. Comply with Section XI-01 41 26, Stormwater Pollution Prevention Plan and Permit
 - c. Comply with erosion and sediment control requirements of Section XI-01 57 05, Temporary Controls.
 - d. Continue providing erosion and sediment controls as clearing and grubbing Work progresses to previously un-cleared areas of the Site.

3.2 CLEARING

- #### A.
- Remove and dispose of all trees, shrubs, brush, logs, rubbish, and debris within Limits of Work shown or indicated in the Contract Documents, unless otherwise shown or indicated.

- B. Trees and Shrubs Improperly Destroyed or Damaged:
 - 1. For each tree or shrub to remain that is destroyed or damaged beyond repair by CONTRACTOR, provide two replacements of the same species at locations to be designated by ENGINEER.
- C. Trees and shrubs to remain that have been damaged or require trimming shall be treated and repaired under the direction of a qualified arborist, or other professional with qualifications acceptable to ENGINEER. Trees and shrubs intended to remain, that are damaged beyond repair or that are removed, shall be replaced by CONTRACTOR at no additional cost to OWNER.
- D. Salvable Vegetation:
 - 1. Not Used.
- E. Disposal of Cleared and Grubbed Materials:
 - 1. Dispose at appropriate off-Site location trees, stumps, rubbish, debris, and other cleared material. Do not use cleared material as fill, backfill, or in embankments.
 - 2. Dispose of cleared material in accordance with Laws and Regulations.
 - 3. Do not burn clearing debris at the Site.

+ + END OF SECTION + +

SECTION XI-31 23 05

EXCAVATION AND FILL

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals required to perform all excavating, filling, and grading, and disposing of contaminated and uncontaminated earth materials as shown, specified, and required for remedial activities, backfill, soil covers, roads, and other facilities required to complete the Work.
2. Preparation of subgrade is included under this Section.
3. No classification of excavated materials will be made. Excavation includes all materials regardless of type, character, composition, moisture, or condition thereof.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ACI 522R, Pervious Concrete.
2. ANSI/AISC 360, Specification for Structural Steel for Buildings.
3. ASTM C29/C29M, Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate.
4. ASTM C33/C33M, Specification for Concrete Aggregates.
5. ASTM C94/C94M, Specification for Ready-Mixed Concrete.
6. ASTM C138/C138M, Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
7. ASTM C172, Practice for Sampling Freshly Mixed Concrete.
8. ASTM C150/C150M, Specification for Portland Cement.
9. ASTM C595/C595M, Specification for Blended Hydraulic Cements.
10. ASTM C618, Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
11. ASTM C989, Specification for Slag Cement for Use in Concrete and Mortars.
12. ASTM D422, Test Method for Particle-Size Analysis of Soils.
13. ASTM D448, Classification for Sizes of Aggregate for Road and Bridge Construction.
14. ASTM D698, Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600 kN-m/m³)).
15. ASTM D1556, Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
16. ASTM D1557, Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).

17. ASTM D2216, Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.
18. ASTM D4253, Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
19. ASTM D4254, Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
20. ASTM D4318, Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
21. ASTM D4832, Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders.
22. ASTM D6023, Test Method for Density (Unit Weight), Yield, Cement Content, and Air Content (Gravimetric) of Controlled Low-Strength Material (CLSM).
23. ASTM D6103, Test Method for Flow Consistency of Controlled Low Strength Material (CLSM).
24. ASTM D6938, Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
25. ASTM E329, Specification for Agencies Engaged in Construction Inspection and/or Testing.
26. NYSDOT Specifications.

1.3 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
1. "Subgrade" is the uppermost surface of native soil material unmoved from cuts; the bottom of excavation.

1.4 QUALITY ASSURANCE

- A. Qualifications:
1. Professional Engineer:
 - a. Engage a registered professional engineer legally qualified to practice in the same jurisdiction as the Site and experienced in providing engineering services of the kind indicated.
 - b. Responsibilities include but are not necessarily limited to:
 - 1) Reviewing system performance and requirements shown or indicated in the Contract Documents.
 - 2) Preparing written requests for clarifications or interpretations of performance and requirements for submittal to ENGINEER by CONTRACTOR.
 - 3) Preparing or supervising the preparation of design calculations and related submittals verifying compliance of the system with the requirements of the Contract Documents.
 - 4) Signing and sealing all calculations, drawings, and submittals prepared by professional engineer.
 - 5) Certifying that:
 - a) it has performed the design of the system in accordance with

the performance requirements stated in the Contract Documents, and

- b) the said design conforms to Laws and Regulations, and to the prevailing standards of practice.

2. CONTRACTOR's Testing Laboratory:

- a. Retain the services of independent testing laboratory to perform testing and determine compliance with the Contract Documents of the materials specified in this Section.
- b. Do not employ the same laboratory hired by OWNER for field quality control testing under the field quality control Article of this Section.
- c. Testing laboratory shall comply with ASTM E329 and requirements of Section XI-01 45 29.13, Testing Laboratory Services Furnished by Contractor.
- d. Testing laboratory shall be experienced in the types of testing required.
- e. Selection of testing laboratory is subject to ENGINEER's acceptance.

B. Quality Assurance Testing:

- 1. Quality assurance testing is in addition to field quality control testing required under Part 3 of this Section.
- 2. Materials used in the Work may require testing and retesting, as directed by ENGINEER, during the Project. Allow free access to material stockpiles and facilities at all times. Tests not specifically indicated to be performed at OWNER's expense, including retesting of rejected materials and installed Work, shall be performed at CONTRACTOR's expense.
- 3. CONTRACTOR's Testing Laboratory Scope:
 - a. Collect samples and perform testing of proposed fill materials in the laboratory and in the field to demonstrate compliance of the Work with the Contract Documents.
 - b. Testing laboratory shall perform testing required to obtain data for selecting moisture content for placing and compacting fill materials and to document contaminant constituents in remaining (unexcavated or dredged) soil.
 - c. Submit to ENGINEER and CONTRACTOR written report results of each test.
- 4. Required Quality Assurance Material Testing by CONTRACTOR's Testing Laboratory:
 - a. Gradation in accordance with ASTM D422. Perform one test for every 1,000 cubic yards of each of the following types of material incorporated into the Work: select fill, general fill, subbase material, gravel filter, and rip rap.
 - b. Atterberg limits in accordance with ASTM D4318. Perform one test for every 1,000 cubic yards of the following types of materials incorporated into the Work: general fill and subbase material.
 - c. Moisture/density relations in accordance with ASTM D698, ASTM D1557, ASTM D4253, or ASTM D4254, as applicable. Perform one test for every 5,000 cubic yards of the following types of materials incorporated into the Work: select fill, general fill, subbase material, gravel filter, and rip rap.

- d. Moisture content of stockpiled or borrow material in accordance with ASTM D2216. Perform one test for every 1,000 cubic yards of the following types of material incorporated into the Work: select fill, general fill, subbase material and drainage fill.
- 5. Required Environmental Testing by CONTRACTOR's NYS-certified ELAP Testing Laboratory:
 - a. Source testing of all materials to be imported, except rip rap, for VOCs using SW-846 8260B, SVOCs using SW-846 8270C, TAL metals using SW-846 6010B/7470A/7471A, pesticides using SW-846 608/8081A and PCBs using SW-846 8082 in accordance with the requirements of 6 NYCRR Part 375-6.7 (d). Frequency of 1 test for each 500 cubic yards of material imported; minimum of one test for each material.
 - b. Post-dredging documentation testing for the Lagoon bottom for VOCs using SW-846 8260B, SVOCs using SW-846 8270C, TAL metals using SW-846 6010B/7470A/7471A, pesticides using SW-846 608/8081A and PCBs using SW-846 8082. Frequency of 1 test for each 625 square feet of Lagoon bottom.
 - c. Disposal characterization testing as required by the off-site receiving facility.
- C. Regulatory Requirements:
 - 1. Perform excavation work in compliance with requirements of authorities having jurisdiction and Laws and Regulations, including:
 - a. OSHA, 29 CFR Part 1926, Section .650 (Subpart P – Excavations).
 - 2. Obtain required permits and approvals for excavation and fill Work, including work permits from right-of-way owners and permits from environmental authorities having jurisdiction over discharge of water from excavations.

1.5 SUBMITTALS

- A. Action Submittals: Submit the following:
 - 1. Shop Drawings:
 - a. Modifications to the Work proposed due to design of sheeting, shoring, bracing, cofferdams, and similar excavation supports.
 - 2. Samples:
 - a. Submit Sample of each aggregate and soil material required under this Section. Deliver Samples to Resident Project Representative. Samples shall be of sufficient size to demonstrate the array of gradation and material types expected in the Work.
- B. Informational Submittals: Submit the following:
 - 1. Procedure Submittals:
 - a. Excavation Plan: Prior to starting excavation operations, submit written plan to demonstrate compliance with OSHA 29 CFR Part 1926.650. As a minimum, excavation plan shall include:
 - 1) Name of CONTRACTOR's "competent person" in responsible charge of excavation and fill Work.

- 2) Excavation method(s) and additional items to be included in the Work.
 - 3) Copies of “manufacturer's data” or other tabulated data if protective system(s) are designed on the basis of such data.
 - 4) Copies of required permits and approvals, from authorities having jurisdiction and affected utility owners, for excavation methods proposed.
- b. Proposed compaction procedure and compaction equipment proposed for use. Where different procedures or equipment will be used for compacting different types of material or at different locations at the Site, indicate where each procedure and equipment item will be used.
2. Excavation Support Plan and Related Information Prepared by CONTRACTOR's Professional Engineer for the Axton Cross Building Area, Lagoon Area, Vat Area, and, as necessary, the MGP Area:
 - a. CONTRACTOR and CONTRACTOR's professional engineer shall prepare the following for submittal:
 - 1) Sheeting and bracing, or other protective system(s) required, including those for stabilizing the Axton Cross Building, former Three Star facility building complex, Lagoon retaining walls and other structures and embankments during the excavation and backfill Work.
 - 2) Dewatering system.
 - 3) Cofferdams.
 - 4) Underpinning.
 - b. Drawings and calculations shall be prepared by professional engineer qualified in the specialty involved. ENGINEER's review and acceptance of submittal does not imply approval by ENGINEER of the associated Work. CONTRACTOR shall be solely responsible for designing, installing, operating and maintaining the system(s) required to satisfactorily perform all necessary sheeting, bracing, protection, underpinning, and dewatering.
3. Delivery Tickets:
 - a. Copy of delivery ticket for each load of aggregate and borrow material delivered to the Site. Each delivery ticket shall indicate project and contract by name and number, date, material type, department of transportation item number when applicable, and quantity delivered.
4. Quality Assurance Test Results Submittals:
 - a. Submit results of quality assurance testing performed by in accordance with Paragraph 1.4.B of this Section, unless included as part of another submittal under this Section. Submit results for the following quality assurance testing:
 - 1) Tests on borrow fill material.
 - 2) Optimum moisture – maximum dry density curve for each type of fill material, if applicable.
5. Field Quality Control Submittals:
 - a. Submit results of testing and inspection performed in accordance with the field quality control Article in Part 3 of this Section, including:
 - 1) Field density testing.

6. Qualifications Statements:
 - a. Professional engineer.
 - b. Quality Assurance Testing laboratory. Submit name and qualifications of testing laboratory to be employed, and qualifications of testing laboratory's personnel that will perform quality assurance testing required in this Section.
7. Environmental Testing Results.

1.6 SITE CONDITIONS

- A. Subsurface Information: The reference documents in Section IV Article 5 indicate information available relative to subsurface conditions at the Site. Such information and data is not intended as a representation or warranty of continuity of conditions between soil borings or test pits, nor of groundwater levels at dates and times other than date and time when measured, nor that purpose of obtaining the information and data were appropriate for use by CONTRACTOR. OWNER will not be responsible for interpretations or conclusions drawn therefrom by CONTRACTOR.
- B. Soil borings and other exploratory operations may be made by CONTRACTOR, at no additional cost to OWNER. Coordinate CONTRACTOR-performed test borings and other exploratory operations with OWNER and utility owners as appropriate. Perform such explorations without disrupting or otherwise adversely affecting operations of OWNER or utility owners. Comply with Laws and Regulations relative to required notifications.
- C. Existing Structures:
 1. The Contract Documents show or indicate certain structures and Underground Facilities adjacent to the Work. Such information was obtained from existing records and is not guaranteed to be correct or complete. CONTRACTOR shall explore ahead of the excavation to determine the exact location of all existing structures and Underground Facilities. Existing structures and Underground Facilities shall be supported and protected from damage by CONTRACTOR. Immediately repair and restore existing structures and Underground Facilities damaged by CONTRACTOR without additional cost to OWNER.
 2. Movement or operation of construction equipment over Underground Facilities shall be at CONTRACTOR's sole risk and only after CONTRACTOR has prepared and submitted to ENGINEER and utility owners (as applicable), and received acceptance therefrom, a plan describing CONTRACTOR's analysis of the loads to be imparted and CONTRACTOR's proposed measures to protect structures and Underground Facilities during the Project.
 3. Coordinate with utility owners for shut-off of services in active piping and conduits. When required by utility owner, OWNER will assist CONTRACTOR with utility owner notifications. Completely remove buried piping and conduits indicated for removal and not otherwise indicated as being abandoned or to remain in place.

4. In general, service lines and laterals to individual houses and businesses are not shown; however, CONTRACTOR shall assume that a service exists for each utility owner to each house, business, and property.
5. Do not interrupt existing utilities serving facilities occupied and used by OWNER or others, except when such interruption is indicated in the Contract Documents or when allowed in writing by ENGINEER after acceptable temporary utility services are provided by CONTRACTOR for the affected structure or property.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Select Fill – NYSDOT Type 4:

1. Material shall be well-graded, crushed aggregate, free of organic material, complying with the following:

Sieve Sizes (Square Openings)	Percentage by Weight Passing Sieve
4.0-inch	100
3.0-inch	90 to 100
1/4-inch	30 to 65
No. 40	5 to 40
No. 200	Less than 10

B. General Fill:

1. Material shall be free of: rock and gravel larger than three inches in any dimension, debris, waste, frozen materials, organic material, and other deleterious matter.
2. Fill shall have a liquid limit not greater than 45, and plasticity index not greater than 25.
3. Previously-excavated uncontaminated materials complying with the Contract Documents requirements for general fill may be used for general fill following receipt of analytical results of testing done by the CONTRACTOR to confirm material is not contaminated in excess of the 6 NYCRR Part 375 restricted use commercial soil cleanup objectives.
4. When on-site materials are found unsuitable for use as general fill, provide select fill or approved off-site general fill materials. Prior to using off-site material as general fill, furnish submittal for and obtain ENGINEER's approval of the material proposed for use.

C. Subbase Material:

1. Material shall be naturally- or artificially-graded mixture of natural or crushed gravel, crushed stone, or natural or crushed sand, complying with the particle size distribution requirements below. Crushed slag is unacceptable.

Sieve Sizes (Square Openings)	Percentage by Weight Passing Sieve
2-inch	100
1-inch	70 to 100
3/4-inch	50 to 90
No. 4	30 to 60
No. 30	9 to 33
No. 200	0 to 15

D. Gravel Filter:

1. Material shall be washed, uniformly-graded mixture of crushed stone, or crushed or uncrushed gravel, with 100 percent passing 1.5-inch sieve and not more than five percent passing a No. 4 sieve.

E. Rip Rap:

1. Material shall be rock with the particle size distribution of NYSDOT Stone Filling, Light, and shall be free of debris, waste, frozen materials, organic material and other deleterious matter.

2.2 SOURCE QUALITY CONTROL

- A. Perform quality assurance and environmental testing, and submit results to ENGINEER, in accordance with the "Quality Assurance" Article in Part 1 of this Section.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Provide ENGINEER with sufficient notice and with means to examine areas and conditions under which excavating, filling, and grading will be performed. ENGINEER will advise CONTRACTOR in writing when ENGINEER is aware of conditions that may be detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.2 TEST PITS

A. General:

1. In advance of the construction, excavate, make observations and measurements, and fill test pits to determine conditions or location of the existing Underground Facilities and structures. Perform all work required in connection with excavating, stockpiling, maintaining, sheeting, shoring, filling, and replacing pavement for test pits. CONTRACTOR shall be responsible for the definite location of each existing Underground Facility involved within the area of excavation for the Work. Exercise care during such location work to avoid damaging and disrupting the affected Underground Facility or structure. CONTRACTOR shall be responsible for

repairing, at his expense, damage to Underground Facility or structure caused during the Work.

B. Payment for Test Pits:

1. All payment for test pits shown or indicated in the Contract Documents will be part of the Contract Price.
2. Payment for test pits required by ENGINEER and not shown or indicated in the Contract Documents will be paid as extra Work.
3. Separate payment will not be made for test pits made by CONTRACTOR for CONTRACTOR's own use.

3.3 PREPARATION

A. Use of Explosives:

1. Use of explosives is not allowed.

B. Maintenance and Protection of Traffic:

1. Keep all streets and traffic ways open for passage of traffic and pedestrians during the Project, unless otherwise approved by owner of the street, traffic way, or right-of-way, as applicable. Construction traffic shall access the Site only via entrance(s) indicated in Contract Drawings.
2. When required to cross, obstruct, or temporarily close a street or traffic way, provide and maintain suitable bridges, detours, and other acceptable temporary expedients to accommodate traffic. Closings of street or traffic way shall be for shortest time practical, and passage shall be restored immediately after completion of fill and temporary paving or bridging.
3. Give required advance notice to fire department, police department, and other emergency services as applicable of proposed construction operations.
4. Give reasonable notice to owners or tenants of private property who may be affected by construction operations. Give such notice not less than five days prior to construction that will affect the property.
5. Hydrants, valves, fire alarm boxes, postal boxes and delivery service boxes, and other facilities that may require access during construction shall be kept accessible for use.
6. Provide temporary signage, signals, barricades, flares, lights and other equipment, service, and personnel required to regulate and protect traffic and warn of hazards. Such Work shall comply with requirements of owner of right-of-way and authorities having jurisdiction at the Site. Remove temporary equipment and facilities when no longer required, and restore grounds to original or to specified conditions, as applicable.

3.4 DEWATERING

A. Dewatering – General:

1. Provide and maintain adequate drainage and dewatering equipment to remove and dispose of all surface water and ground water entering excavations, or other parts of the Work and work areas. Keep each excavation dry during excavation, subgrade preparation, and continually

thereafter until the Work therein is acceptable to ENGINEER and backfilling operations are completed and acceptable to ENGINEER.

2. Keep all working areas at the Site free of surface water at all times. Provide temporary drainage ditches and temporary dikes, and provide required temporary pumping and other work necessary for diverting or removing precipitation and all other accumulations of surface water from excavations and fill areas. Perform diversion and removal of surface water in manner that prevents accumulation of water behind permanent or temporary structures and at any other locations in the construction area where such accumulations may be detrimental.
3. Water used for working or processing, resulting from dewatering operations, or containing oils or sediments that will reduce the quality of the surface water or groundwater downstream of the point of discharge, shall not be directly discharged. Treat or containerize and characterize all such waters prior to discharge or disposal.
4. CONTRACTOR shall be responsible for condition of piping, conduits, and channels used for drainage and such piping, conduits, and channels shall be clean and free of sediment.
5. Remove water from excavations as fast as water collects.

B. Temporary Dewatering System:

1. CONTRACTOR shall design, provide, and operate dewatering system to include sufficient trenches, sumps, pumps, hose, piping, well points, deep wells, and similar facilities, necessary to depress and maintain groundwater level two feet below the base of each excavation during all stages of construction operations except dredging.
2. Design and operate dewatering system to avoid settlement and damage to existing structures and Underground Facilities.
3. Groundwater table shall be lowered in advance of excavation for a sufficient period of time to allow dewatering of fine grain soils.
4. Maintain groundwater level at excavations two feet below lowest subgrade excavation until the structure has sufficient strength and weight to withstand horizontal and vertical soil and water pressures from natural groundwater.
5. Operate dewatering system continuously, 24 hours per day, seven days per week. Provide standby pumping facilities and personnel to maintain the continued effectiveness of the system. Do not discontinue dewatering operations without first obtaining ENGINEER's acceptance for such discontinuation.
6. If, in ENGINEER's opinion, the water levels are not being lowered or maintained as required, provide additional or alternate temporary dewatering devices as necessary, at no additional cost to OWNER.
7. Locate elements of temporary dewatering system to allow continuous dewatering operation without interfering with the Work to the extent practicable.
8. Where portions of dewatering system are located in the area of permanent construction, submit to and obtain ENGINEER's acceptance of details of proposed methods of constructing the Work at such location. Control of ground water shall continue until the permanent construction provides

sufficient dead load to withstand hydrostatic uplift of the normal groundwater, until concrete has attained sufficient strength to withstand earth and hydrostatic loads, and until waterproofing Work is completed.

9. Perform pumping of water from excavations in a manner that prevents carrying away of contaminated materials, and that avoids damaging the subgrade.
10. Before discontinuing dewatering operations or permanently allowing rise of groundwater level, prepare computations to demonstrate that structures affected by the water level rise are protected by fill or other means to sustain uplift. Use a safety factor of 1.25 when preparing such calculations.

C. Disposal of Water Removed by Dewatering System:

1. CONTRACTOR's dewatering system shall discharge to the water treatment system, storage containers, or a suitable location acceptable to OWNER, in accordance with Laws and Regulations.
2. Convey water from excavations in closed conduits. Do not use trench excavations as temporary drainage ditches.
3. Dispose of water removed from excavations in a manner that does not endanger health and safety, property, the Work, and other portions of the Project.
4. Dispose of water in manner that causes no inconvenience to OWNER, others involved in the Project, and adjacent and downstream properties.

3.5 EXCAVATION

- A. Perform all excavation required to complete the Work as shown, specified, and required. Excavations shall include removing and handling of earth, sand, clay, gravel, hardpan, soft, weathered or decomposed rock, pavements, rubbish, and other materials within the excavation limits.

B. Excavation Protection:

1. Provide excavation protection system(s) in accordance with Laws and Regulations to prevent injury to persons and property, including Underground Facilities.
2. Excavation Less Than Five Feet Deep: Excavations in stable rock or in soil conditions where there is no potential for a cave-in may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded, or shored and braced.
3. Excavations Greater Than Five Feet Deep: Excavations in stable rock may be made with vertical sides. Under all other conditions, excavations shall be sloped and benched, shielded, or shored and braced.
4. Provide and maintain excavation protection system(s) in accordance with submittals accepted by ENGINEER and required under Paragraph 1.5.B of this Section.

- C. Maintain excavations in dry condition in accordance with "Dewatering" Article in Part 3 of this Section.

- D. Elevation of bottom of excavations shown is approximate. ENGINEER may direct such minor changes in dimensions and elevations as may be required.
- E. When excavations are made below required grades without written order of ENGINEER, fill such excavations with compacted select fill material, as directed by ENGINEER, at CONTRACTOR's expense.
- F. Extend excavations sufficiently on each side of structures, footings, and similar construction to allow setting of forms, installation of shoring and bracing, and the safe sloping of banks, as necessary.
- G. Subgrades – General:
 - 1. Subgrades shall be firm, dense, and thoroughly compacted and consolidated; shall be free from mud, muck, and other soft or unsuitable materials; and shall remain firm and intact under all construction operations. Subgrades that are otherwise solid but become soft or mucky on top due to construction operations shall be reinforced with select fill. Finished elevation of stabilized subgrades shall not be above subgrade elevations shown.
 - 2. If, in ENGINEER's opinion, subgrade becomes softened or mucky because of construction delays, failure to dewater properly, or other cause within CONTRACTOR's control, subgrade shall be excavated to firm material, trimmed, and backfilled with select fill material at CONTRACTOR's expense.
- H. Proofrolling Subgrades:
 - 1. Prior to placing fill or constructing pavements or slabs, proofroll the subgrade surface with sufficient proofrolling apparatus. Before starting proofrolling, submit to and obtain acceptance from ENGINEER of proofrolling apparatus and procedure to be used.
 - 2. Proofrolling operations shall be made in the presence of ENGINEER. Notify ENGINEER at least 24 hours in advance of start of proofrolling operations.
 - 3. Subgrades displaying pronounced elasticity or deformation, deflection, cracking, or rutting shall be stabilized as directed by ENGINEER. Unsuitable materials shall be undercut to the depth directed by ENGINEER and replaced with select fill material. Other suitable stabilization methods may be directed by ENGINEER.
- I. Pipe Trench Preparation:
 - 1. Not Used.
- J. Excavated Materials to be used as Fill:
 - 1. Stockpile excavated materials that are acceptable for use as fill.
 - 2. As excavation proceeds, keep stockpiles of excavated materials suitable for use as fill separate from unsuitable materials and waste materials.
 - 3. Place, grade, and shape stockpiles for proper drainage.
 - 4. Locate and retain soil materials away from edge of excavations.

5. Dispose of excess soil material and waste materials as specified in this Section.
6. Stockpiled excavated soils for use as select fill or general fill shall be tested and classified by laboratory as on-site select fill or on-site general fill. Perform required quality assurance testing for material verification on stockpiled materials as soon as possible to demonstrate compliance of excavated materials with the Contract Documents.

3.6 UNAUTHORIZED EXCAVATION

- A. All excavations outside lines and grades shown or indicated and that are not approved by ENGINEER, together with removing and disposing of the associated material, shall be at CONTRACTOR's expense. Fill unauthorized excavations with properly-compacted select fill material at CONTRACTOR's expense.

3.7 EROSION AND SEDIMENT CONTROLS

- A. Provide temporary erosion and sediment controls in accordance with Section XI-01 57 05, Temporary Controls. When applicable, also comply with requirements of the erosion and sediment control plan approved by authorities having jurisdiction.

3.8 SHEETING, SHORING, AND BRACING

- A. General:
 1. Design and provide sheeting, shoring, bracing, cofferdams, and similar excavation supports as shown, specified, and required for the Work.
 2. Clearances and types of temporary sheeting, shoring, bracing, and similar excavation supports, insofar as they may affect the finished character of the Work and the design of sheeting to be left in place, will be subject to the ENGINEER's approval; but CONTRACTOR is responsible for adequacy of all sheeting, shoring, bracing, cofferdams, and similar excavation supports.
 3. Materials:
 - a. Previously-used materials shall be in good condition, and shall not be damaged or excessively pitted. All steel or wood sheeting designated to remain in place shall be new. New or used sheeting may be used for temporary sheeting, shoring, and bracing.
 - b. All steel work for sheeting, shoring, bracing, cofferdams and other excavation supports, shall be in accordance with ANSI/AISC 360, except that field welding will be allowed.
 - c. Provide permanent steel sheet piling or pressure-creosoted timber sheet piling where subsequent removal of sheet piling might allow lateral movement of soil under adjacent structures.
 4. As excavation progresses, carry down shoring, bracing, cofferdams, and similar excavation supports to required elevation at bottom of excavation.
 5. Comply with Laws and Regulations regarding sheeting, shoring, bracing, cofferdams, and similar excavation supports.

6. Maintain sheeting, shoring, bracing, bracing, and other excavation supports in excavations regardless of time period excavations will be open.
7. Unless otherwise shown, specified, or directed, remove materials used for temporary construction when the Work is completed. Perform such removal in manner not injurious to the structures and Underground Facility, their appearance, and adjacent construction.

B. Sheeting Left in Place:

1. Materials: Steel sheeting shown or indicated to be left in place shall consist of rolled sections of continuous interlocking type. Steel sheeting material designated to be left in place shall be new. Type and design of the sheeting and bracing shall comply with the above requirements for steel work for all sheeting and bracing.
2. Installation:
 - a. Steel sheeting to be left in place shall be driven straight to lines and grades as shown, indicated, or directed. Piles shall penetrate into firm materials with secure interlocking throughout pile's entire length. Damaged piling having faulty alignment shall be pulled and replaced by new piling.
 - b. Type of guide structure used and method of driving steel sheeting to be left in place shall be determined by CONTRACTOR's professional engineer. Jetting is not allowed.
3. Cut off at elevations shown, indicated, or directed by ENGINEER sheeting left in place and remove cut off pilings from the Site.
4. Clean wales, braces, and all other items to be embedded in the permanent structure, and ensure that concrete surrounding the embedded element is sound and free of air pockets and harmful inclusions. Provisions shall include the cutting of holes in the webs and flanges of wale and bracing members, and welding of steel diaphragm water stops perpendicular to the centerline of brace ends that are to be embedded.
5. Subsequent to removing the inside face forms, and when removal of bracing is allowed, cut back steel at least two inches inside the wall face and patch opening with concrete repair mortar in accordance with Section 03 30 00, Cast-in-Place Concrete. Concrete shall be thoroughly worked beneath wales and braces, around stiffeners, and at other place where voids may be formed.
6. Portions of sheeting or soldier piles and breast boards that are in contact with structure foundation concrete shall be left in place, together with wales and bracing members that are cast into foundation or superstructure concrete.

C. Removal of Sheeting and Bracing:

1. Remove sheeting and bracing from excavations, unless otherwise directed by ENGINEER in writing. Perform removal to avoid damaging the Work and adjacent construction. Removal shall be equal on both sides of excavation to ensure no unequal loads on structures and Underground Facilities.

2. Defer removal of sheeting and bracing, where removal may cause soil to come into contact with concrete, until the following conditions are satisfied:
 - a. Concrete has cured for not less than seven days.
 - b. Wall and floor framing, up to and including grade level floors, is in place.

3.9 TRENCH SHIELDS

- A. Excavation of earth material below bottom of trench shield shall not exceed the limits established in Laws and Regulations.
- B. When using a shield for installing piping:
 1. Portions of trench shield extending below the mid-diameter of an installed, rigid pipe, such as pre-stressed concrete pipe and other types of rigid pipe, shall be raised above the pipe's mid-diameter elevation prior to moving the shield along the trench for further construction.
 2. Bottom of shield shall not at any time extend below mid-diameter of installed pipe that is flexible or has flexing capability, such as steel, ductile iron, PVC, CPVC, polyethylene, and other pipe that has flexing capability.
- C. When using a shield for installing structures, bottom of the shield shall not extend below the top of the bedding for the structures.
- D. When removing the shield or moving the shield ahead, exercise extreme care to prevent moving piping, structures, and other Underground Facilities, and prevent disturbance of bedding material for piping, structures, and other Underground Facilities. When piping, structures, or Underground Facilities are disturbed, remove and reinstall the disturbed items in accordance with the Contract Documents.

3.10 FILL AND COMPACTION – GENERAL PROVISIONS

- A. Provide and compact all fill required for the finished grades as shown and as specified in this Section.
- B. Place fill in excavations as promptly as progress of the Work allows, but not until completing the following:
 1. ENGINEER's authorization after observation of construction below finish grade, including dampproofing, waterproofing, perimeter insulation, and similar Work.
 2. Inspection, testing, approval, and recording of locations of Underground Facilities.
 3. Removal of concrete formwork.
 4. Removal of shoring and bracing, and filling of voids with satisfactory materials.
 5. Removal of trash and debris.
 6. Permanent or temporary horizontal bracing is in place on horizontally-supported walls.

7. Field testing of tanks, Underground Facilities including piping and conduits, and water-retaining structures.
 8. Placing of settlement plates.
- C. Fill that includes organic materials or other unacceptable material shall be removed and replaced with approved fill material in accordance with the Contract Documents.
- D. Placement – General:
1. Place fill to the grades shown or indicated. Bring up evenly on all sides fill around structures and Underground Facilities.
 2. Fill areas shall be undercut and proof-rolled as directed by ENGINEER.
 3. Place fill materials at moisture content and density as specified in Table 31 23 05-A of this Section and this Article's requirements on compaction density. Furnish and use equipment capable of adding measured amounts of water to the fill materials to bring fill materials to a condition within required moisture content range. Furnish and use equipment capable of discing, aerating, and mixing the fill materials to ensure reasonable uniformity of moisture content throughout the fill materials, and to reduce moisture content of borrow materials by air drying, when necessary. When subgrade or lift of fill materials requires moisture-conditioning before compaction, fill material shall be sufficiently mixed or worked on the subgrade to ensure uniform moisture content throughout the lift of material to be compacted. Materials at moisture content in excess of specified limit shall be dried by aeration or stockpiled for drying.
 4. Perform compaction with equipment suitable for the type of fill material placed. Select and use equipment capable of providing the minimum density required in the Contract Documents. Use light compaction equipment, with equipment gross weight not exceeding 7,000 pounds within horizontal distance of ten feet from the wall of completed, below-grade structures. Furnish and use equipment capable of compacting in restricted areas next to structures and around piping and Underground Facilities. Effectiveness of the equipment selected by CONTRACTOR shall be tested at start of compacted fill Work by constructing a small section of fill within the area where fill will be placed. If tests on the test section of fill indicate that required compaction is not obtained, do one or more of the following: increase the amount of coverages, decrease the lift thicknesses, or use different compactor equipment.
 5. Place fill materials in horizontal, loose lifts, not exceeding specified uncompacted thickness. Place fill in a manner ensuring uniform lift thickness after placing. Mechanically compact each lift, by not less than two complete coverages of the compactor. One coverage is defined as the conditions reached when all portions of the fill lift have been subjected to the direct contact of compactor's compacting surface. Compaction of fill materials by inundation with water is unacceptable.
 6. Do not place fill materials when standing water is present on surface of the area where fill will be placed. Do not compact fill when standing water is present on the fill to be compacted. Do not place or compact fill in a frozen

condition or on top of frozen material. Fill containing organic materials or other unacceptable material previously described shall be removed and replaced prior to compaction.

7. If required densities are not obtained because of improper control of placement or compaction procedures, or because of inadequate or improperly-functioning compaction equipment, CONTRACTOR shall perform all work required to provide the required densities. Such work shall include, at no additional cost to OWNER, complete removal of unacceptable fill areas and replacement and re-compaction until acceptable fill is provided.
8. Repair, at CONTRACTOR's expense, observed or measured settlement. Make repairs and replacements as required within 30 days after being so advised by ENGINEER.

E. Fill Against Concrete:

1. Placing fill against concrete below finished grade is not allowed until the concrete has attained its specified strength, as determined by duration of concrete curing and testing of field-cured concrete cylinders. Requirements for strength and curing time are in Section X 00002 Concrete.
2. Elevation of fill placed against concrete walls shall not differ by more than two feet on each side of walls, unless walls are adequately braced or all floor framing is in place up to and including grade level slabs.
3. Backfill structural foundation units as soon as practicable, in accordance with this Section, after concrete has gained sufficient strength to avoid damage, to avoid ponding of surface water and accumulation of debris.
4. Where fill is placed against waterproofed surface, exercise care that waterproofing material is not damaged.

F. Fill in Electrical Ductbank Trenches:

1. Provide general fill for full depth of electrical ductbank trench, below and above electrical ductbank. Where one ductbank passes beneath another pipe or ductbank, provide select fill to the elevation of the bottom of upper ductbank or pipe, as applicable.
2. Placing and compacting fill in electrical ductbank trenches shall comply with requirements of Paragraph "G. Fill in Pipe Trenches", of this Article.

G. Fill in Pipe Trenches:

1. Place pipe bedding material in pipe trenches in horizontal layers, and thoroughly compact each layer before the next layer is placed.
2. Piping Installed in Fills Above Pre-construction Grade:
 - a. Prior to installing piping, place the fill in accordance with the Contract Documents until the fill reaches a minimum elevation two feet higher than the top of piping to be installed. Excavate the trench; install the piping, and backfill. Subsequently provide the remainder of the fill required for the Work.
3. Piping trenches may be backfilled prior to testing of piping, unless nature of the test requires observation of pipe during testing. Do not construct

building or structure over piping until piping has been successfully tested and passed.

4. Pipe Bedding: Pipe bedding material shall be as follows:
 - a. Install PVC, CPVC, HDPE, and FRP piping on a layer of sand. Sand shall extend to 12 inches above top of pipe and to the trench walls on each side of the pipe.
 - b. Unless otherwise shown, install other types of piping on not less than six-inch layer of aggregate pipe bedding material. Aggregate pipe bedding material shall extend 12 inches above top of the pipe.
5. Placing and Compacting Pipe Trench Fill: Unless otherwise shown, placement and compaction of pipe trench fill materials shall comply with the following:
 - a. Pipe bedding material shall be spread and the surface graded to provide a uniform and continuous support beneath piping at all points between bell holes or pipe joints. Slight disturbance of installed pipe bedding material surface during withdrawal of pipe slings or other lifting tackle is acceptable.
 - b. After each pipe's bedding material has been graded, and the piping has been aligned, joined in accordance with the Contract Documents, and placed in final position on bedding material, provide and compact sufficient pipe trench fill material under and around each side of the pipe and back of the bell or end thereof to hold piping in proper position and maintain alignment during subsequent pipe jointing and embedment operations. Deposit and compact pipe trench fill material uniformly and simultaneously on each side of piping to prevent lateral displacement of piping. Place and compact pipe trench fill material to an elevation 12 inches above top of pipe, unless otherwise shown or specified.
 - c. Each layer of pipe trench fill material shall be compacted by at least two complete coverages of all portions of surface of each lift using appropriate compaction equipment.
 - d. Method of compaction and compaction equipment used shall be appropriate for material to be compacted and shall not transmit damaging shocks to the piping.

H. Temporary Pavement:

1. Place 1.5 inches of temporary asphalt concrete pavement immediately after filling excavations in paved roadways and other paved areas that will remain for permanent use.
2. Maintain surface of paved area over the fill in good and safe condition during progress of the Work, and promptly fill depressions over and adjacent to the fill area caused by settlement of fill.
3. Permanent replacement pavement shall be equal to that of the existing roadways, unless otherwise shown or specified.

I. Subbase Placement:

1. Provide subbase material where shown to the limits shown or indicated.

2. Place subbase material in compacted lifts not exceeding depth of six inches each.
- J. Gravel Filter Placement:
1. Provide gravel filter material where shown to the limits shown or indicated.
 2. Place gravel filter material in compacted layers of uniform thickness not exceeding depth of six inches each. Compact lifts of drainage fill using suitable compaction equipment.
- K. Compaction Density Requirements:
1. Compaction required for all types of fills shall be in accordance with Table 31 23 05-A of this Section. Moisten material or aerate the material as necessary to provide the moisture content that will facilitate obtaining the required compaction.

**TABLE 31 23 05-A
REQUIRED MINIMUM DENSITY**

Material	Percent Compaction (ASTM D698)	Uncompacted Lift (inches)
General Fill		
More than five feet below final grade	100	8
Less than five feet below final grade	95	8
Select Fill – NYSDOT Type 4		
Below concrete slabs or mats	100	8
Below pavement and sidewalks	100	12
Behind concrete walls	95	8
Subbase Material		
Below pavement and sidewalks	100	12
All other locations	100	6
Rip Rap		
All locations	NA	NA
Gravel Filter	NA	6

2. Fill shall be wetted and thoroughly mixed to achieve optimum moisture content plus-or-minus three percent, with the following exceptions:
 - a. On-site clayey soils: Optimum to plus three percent.
3. Replace natural, undisturbed soils or compacted soil subsequently disturbed or removed by construction operations with materials compacted as indicated in Table 31 23 05-A of this Section.
4. Field quality control testing for density; to verify that specified density was obtained, will be performed during each day of compaction Work. Responsibility for field quality control testing is specified in the “Field Quality Control” Article in Part 3 of this Section.
5. When field quality control testing indicates unsatisfactory compaction, provide additional compaction necessary to obtain the specified compaction. Perform additional compaction Work at no additional cost to OWNER until

specified compaction is obtained. Such work includes complete removal of unacceptable (as determined by ENGINEER) fill areas and replacement and re-compaction until acceptable fill is provided in accordance with the Contract Documents.

- L. Replacement of Unacceptable Excavated Materials: In cases where over-excavation to replace unacceptable soil materials is required, backfill the excavation to required subgrade with select fill material and thoroughly compact in accordance with Table 31 23 05-A and the associated "Compaction Density Requirements" in this Article. Slope the sides of excavation in accordance with the maximum inclinations specified for each structure location.

3.11 GRADING

- A. General:
 - 1. Uniformly grade areas within limits of grading under this Section, including adjacent transition areas.
 - 2. Smooth subgrade surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.
- B. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free of irregular surface changes, and shall comply with the following:
 - 1. Grassed Areas or Areas Covered with Gravel, Stone, Wood Chips, or Other Special Cover: Finish areas to receive topsoil or special cover to within not more than one inch above or below the required subgrade elevations.
 - 2. Sidewalks: Shape surface of areas under sidewalks to line, grade, and cross section, with finish surface not more than one inch above or below the required subgrade elevation.
 - 3. Pavements: Shape surface of areas under pavement to line, grade, and cross section, with finish surface not more than 1/2-inch above or below the required subgrade elevation.
- C. Grading Surface of Fill Under Asphalt Pavement: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/2-inch when tested with a ten foot straight edge.
- D. Compaction:
 - 1. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

3.12 PAVEMENT SUBBASE COURSE

- A. General:
 - 1. Place subbase material, in layers of specified thickness, over ground surface to support pavement base course.

2. After completing filling and grading, shape and compact pavement subgrade to an even, firm foundation in accordance with this Section. Remove unsuitable subgrade materials, including soft materials, boulders, vegetation, and loose stones, and replace with compacted fill material as directed by ENGINEER.
- B. Grade Control:
1. During construction, maintain lines and grades including crown and cross-slope of subbase course.
- C. Placing of Pavement Subbase Course:
1. Place subbase course material on prepared subgrade in layers of uniform thickness, in accordance with indicated cross-section and thickness. Maintain optimum moisture content for compacting subbase material during placing operations.
 2. Provide geotextile separation fabric over the prepared subgrade in accordance with Section XI-31 05 19, Geosynthetics for Earthwork.

3.15 DISPOSAL OF EXCAVATED MATERIALS

- A. General:
1. CONTRACTOR shall transport and dispose material removed from excavations in accordance with the Contract Documents.
 2. Disposal of materials shall be in compliance with Laws and Regulations, at no additional cost to OWNER.

3.16 TEMPORARY BARRIERS

- A. Provide temporary barrier surrounding excavations and excavation work areas to provide temporary protection to persons and property. Barrier shall have openings only at vehicular, equipment, and worker access points.
- B. Minimum Material Requirements for Temporary Barriers:
1. Temporary barrier shall not be less snow fence-type fencing, four feet high.
 2. Fence shall be constructed of vertical hardwood slats measuring not less than 1.5 inches by 1/4-inch interwoven with strands of horizontal wire, or shall be of equivalent plastic construction.
 3. Posts:
 - a. Posts shall be steel, either “U”-, “Y”-, “T”-shaped, or channel section.
 - b. Posts shall have a nominal weight of not less than 1/3-pound per linear foot, exclusive of the anchor.
 - c. Posts shall have tapered anchors weighing not less than 0.67 pounds, each firmly attached by means of welding, riveting or clamping.
 - d. Posts shall have corrugations, knobs, notches, or studs placed and constructed to engage a substantial number of fence line wire in the proper position.

- e. Provide each post with sufficient quantity of galvanized wire fasteners or clamps, of not less than 0.120-inch diameter, for attaching fence wire to post.

3.17 FIELD QUALITY CONTROL

A. Site Tests: OWNER will employ a testing laboratory to perform field quality control testing:

1. Testing Laboratory Scope:

- a. Perform field moisture content and density tests to ensure that the specified compaction of fill materials has been obtained.
- b. Tests of actual unconfined compressive strength or bearing tests on each stratum.
- c. Report results of each test to ENGINEER and CONTRACTOR.

2. Required Material Tests:

- a. Compaction: Comply with ASTM D1556 and ASTM D6938, as applicable.

3. Authority and Duties of Testing Laboratory:

- a. Technicians representing the testing laboratory shall inspect the materials in the field, perform testing, and report findings to ENGINEER and CONTRACTOR. When materials furnished or the Work performed does not comply with the Contract Documents, technician will direct attention of ENGINEER and CONTRACTOR to such failure.
- b. Technician will not act as foreman or perform other duties for CONTRACTOR. Work will be checked as it progresses, but failure to detect defective Work or non-complying materials shall not in any way prevent later rejection when defect is discovered, nor shall it obligate ENGINEER for Substantial Completion or final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release requirements of the Contract Documents, or to approve or accept any portion of the Work.

4. Responsibilities and Duties of CONTRACTOR:

- a. Use of testing laboratory shall in no way relieve CONTRACTOR of the responsibility to provide materials and Work in full compliance with the Contract Documents.
- b. To facilitate testing laboratory, CONTRACTOR shall advise testing laboratory at least two days in advance of filling operations to allow for completion of field quality control testing and for assignment of personnel.
- c. It shall be CONTRACTOR's responsibility to accomplish the specified compaction for fill and other earthwork. CONTRACTOR shall control construction operations by confirmation tests to verify and confirm that CONTRACTOR has complied, and is complying at all times, with the Contract Documents relative to compaction, control.
- d. CONTRACTOR shall demonstrate adequacy of compaction equipment and procedures before exceeding one or more of the

following quantities of earthwork. Each test location shall include tests for each layer, type, or class of fill to finish grade:

- 1) 200 linear feet of trench fill.
- 2) 10 cubic yards of select fill.
- 3) 100 cubic yards of general fill.
- 4) 50 cubic yards of subbase material.

5. Testing laboratory will inspect and indicate acceptable subgrades and fill layers before construction work is performed thereon. Testing of subgrades and fill layers shall be taken as follows:
 - a. Trenches for Structures, and Underground Facilities (including buried ductbanks):
 - 1) In Open Fields: Two locations every 1,000 linear feet.
 - 2) Along Dirt or Gravel Roads or Off Traveled Right-of-Way: Two locations every 500 linear feet.
 - 3) Crossing Paved Roads: Two locations along each crossing.
 - 4) Under Pavement Cuts or Within Two Feet of Pavement Edges: One location every 400 linear feet.
 - b. Footing Subgrade: For each stratum of soil on which footings will be placed, perform not less than one test to verify required design bearing capacities. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata, when acceptable to ENGINEER.
 - c. For Select Fill: On 30-foot intervals on all sides of the structure for every compacted lift, but not less than one per lift on each side of the structure for structures less than 60 feet long on a side.
 - d. For General Fill: One per 1,000 square feet on every compacted lift.
 - e. Subbase Material: One per 1,000 square feet on every compacted lift.
6. Periodic compliance tests will be made by ENGINEER to verify that compaction is complying with the requirements specified, at no cost to CONTRACTOR. CONTRACTOR shall remove the overburden above the level at which ENGINEER wishes to test and shall fill and re-compact the excavation after testing is complete.
7. If testing laboratory reports or inspections indicate subgrade, fills, or bedding compaction below specified density, CONTRACTOR shall remove unacceptable materials as necessary and replace with specified materials and provide additional compaction at CONTRACTOR's expense until subgrades, bedding, and fill are acceptable. Costs for retesting of subgrade, fills, or bedding materials that did not originally comply with specified density shall be paid by CONTRACTOR.

+ + END OF SECTION + +

SECTION XI-31 25 14

TURBIDITY CURTAIN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall furnish all labor, materials, equipment and incidentals required to design, install and maintain turbidity curtain in accordance with this specification and drawings to control resuspended sediments. Lagoon Bank Turbidity Curtain shall be provided during earthwork on, or at the top of, either bank of the Lagoon to prevent soil disturbed along the bank from migrating into the Lagoon. Perimeter Turbidity Curtain shall be provided during the Lagoon sediment removal activities at location(s) completely surrounding the in-water sediment removal equipment to prevent sediment disturbed during removal from migrating to previously-“dredged” areas or areas not requiring sediment removal. Turbidity Curtain shall also be provided, as necessary, in Wappingers Creek to facilitate compliance with the water quality criteria specified herein.
2. CONTRACTOR is advised that dredging must be suspended whenever the turbidity in Wappinger’s Creek adjacent to the outlet of the Three Star Lagoon is visibly in contrast to the water in the creek or exceeds an hourly average of 1.10 NTU, whichever is less stringent, unless the State deems the water quality acceptable.
3. CONTRACTOR is also advised that dredging operations must cease upon notification from the ENGINEER that the water quality is deemed unacceptable due to dredging activities.
4. ENGINEER will notify CONTRACTOR when dredging may be resumed.
5. Construction of functional turbidity curtains are considered essential to the proper and efficient conduct of the work.
6. Except as specified herein, CONTRACTOR shall be solely responsible for the selection of the turbidity curtain type and design.

B. Related Sections:

1. Division 1, General Requirements.
2. Section XI-35 20 23, Dredging.

1.2 QUALITY ASSURANCE

- ###### A. Comply with conditions and requirements of New York State Department of Environmental Conservation, US Army Corps of Engineers Permit, and all state and local permits.
- ###### B. CONTRACTOR shall keep and maintain records of the following:
1. Design calculations for turbidity curtain.

2. A log of the dates and times of any failures of the turbidity curtain together with a record of any corrective actions taken.

1.3 SUBMITTALS

- A. Submit for review the following:
 1. Shop drawings showing the proposed design of the turbidity curtain(s) including calculations supporting the design.
 2. A brief written description of the proposed installation and removal methods for the turbidity curtain.

1.4 JOB CONDITIONS

- A. CONTRACTOR is cautioned that the velocity of the water flowing past the turbidity curtain is unknown and will vary depending on the flow of water, precipitation and the tidal stage, and that actual conditions are expected to vary over the course of the work.
- B. The lagoon water levels vary with precipitation, flow and tidal stage. There is no effective control of the water level so higher levels can occur during prolonged storm events.
- C. The lagoon bottom may contain rocks, cobbles, debris, and exposed bedrock, and may have an undulating surface.

PART 2 – PRODUCTS

2.1 TURBIDITY CURTAINS

- A. The turbidity curtains shall include the following elements:
 1. Turbidity curtain skirt in separate sections,
 2. Floatation elements,
 3. Upper tension members (tension cables),
 4. Lower tension members (ballast chains),
 5. Section connectors,
 6. Anchoring system, and
 7. Reefing system.
- B. The CONTRACTOR shall determine required curtain depth upon determination of the lagoon floor elevations along the proposed alignment of the turbidity curtains following the CONTRACTOR's bathymetric survey, and based on minimum normal water levels as determined in consultation with the ENGINEER.
- C. Turbidity Curtain Skirt Fabric: The turbidity curtain skirts shall be manufactured using minimum 22 oz. vinyl coated polyester fabric with minimum 500 lb/inch tensile

strength or approved equal, and shall be resistant to marine growth, ultraviolet light, and mildew.

- D. Turbidity Curtain Sections: Turbidity curtain screen sections shall at a minimum be suitable for medium-duty applications suitable for mild wind, wave and water current conditions. Turbidity Curtain shall be Type II Fastwater Screen as manufactured by Elastec / American Marine, Inc., 401 Shearer Blvd., Cocoa, Florida, or approved equal.
- E. Floatation Elements: The turbidity curtain floatation system shall be constructed of a minimum 12-inch diameter marine quality expanded polystyrene floats encased in 22 oz PVC fabric (or approved equal) providing a minimum buoyancy of at least three times the weight of the curtain, ballast chain, and load cables but not less than 60 pounds per cubic foot and as recommended by the turbidity curtain manufacturer.
- F. Upper Tension Member (Tension Cable): Horizontal turbidity curtain loads shall be carried by an upper tension member consisting of a single or multiple, minimum 5/16-inch diameter vinyl-sheathed stainless steel cable or approved equal, seamed in a hem along the floatation system and tied to the turbidity curtain.
- G. Lower Tension Member (Ballast Chain): Each turbidity screen section shall include a lower tension member also acting as curtain skirt ballasting. The lower tension member shall consist of a minimum 1/2-inch diameter galvanized steel chain or approved equal, enclosed in a double layer fabric pocket at the bottom edge of the curtain skirt to provide a minimum bottom ballast weight of not less than 2.7 lb. per linear foot and as recommended by the curtain manufacturer.
- H. Section Connectors: Each ballast/tension member shall be shackled to stainless steel stress plates at each end of the screen section, complete with hook and ring arrangement (or approved equal) allowing the transfer of horizontal tensile loads from one screen section to the next.
- I. Anchoring System: The anchoring system to each turbidity curtain anchor point shall consist of a Danforth-type anchor, anchor line including chain and line or cable, anchor buoy, and mooring line. Anchor points shall be at a minimum interval of 20 feet along the turbidity curtain. The CONTRACTOR shall provide an anchor scope ratio of 8:1 or such other minimum anchor scope as recommended by the turbidity curtain manufacturer.
- J. Reefing System: Reefing lines shall be provided to allow adjustment of the skirt to the desired operational depth from the water surface. Reefing lines shall be spaced no more than 10 feet apart along the length of the curtain.
- K. The turbidity curtains shall be manufactured in the minimum number of sections required that allow convenient installation and shipping to the site. The turbidity curtain sections shall be laced together on-site.

- L. The turbidity curtains shall extend down from the water surface and adjusted by reefing to be within not more than 2 feet and not less than 6 inches from the bottom at normal minimum water level.
- M. The turbidity curtains shall be designed to allow for furling (reefing) the turbidity curtain skirt in place as required, without the need for relocation of the curtain, by operation at the water surface as necessary to allow for variations in water depth.
- N. The CONTRACTOR shall provide shore and bottom anchors as required to maintain the turbidity curtain in place under prevailing year-round weather and water current conditions at the project site.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. The approximate location and alignment of the turbidity curtains is shown on the Contract Drawings. The CONTRACTOR shall be responsible for determining the required alignment of each turbidity curtain, and shall submit the proposed alignment and any subsequent realignment of the turbidity curtain for approval by the ENGINEER. The CONTRACTOR shall provide turbidity curtain at other locations as necessary.
- B. Prior to carrying out any other work, including installation of the turbidity curtains, the CONTRACTOR shall measure background turbidity levels in the lagoon at 20-foot intervals along the proposed turbidity curtain alignment. Measurements at each of these locations shall be carried as determined in consultation with the ENGINEER. Turbidity measurements shall be taken at approximately 2 feet below the top, mid-depth, and 2 feet above the bottom of the lagoon floor within the water column at each measurement interval along the curtain alignment.
- C. CONTRACTOR shall carry out a bathymetric survey at a minimum 20-foot grid along the proposed turbidity curtain alignment, to enable the lagoon floor elevations to be plotted at 20-foot intervals along the proposed turbidity curtain alignment, prior to constructing the turbidity curtains.
- D. Set appropriate anchors around the perimeter of the installations as needed. Attach anchor lines to the floatation device, not to the bottom of the curtain.
- E. Remove the outside bundling ropes for each section. Lay the curtain out near the point of entry into the water. Inspect the load line to ensure that it is not twisted around the float. Lay out the remaining curtains and untie the furling ties nearest the section ends. Connect sections and re-tie furling ties.

- F. Tie one end of the curtain to the shore anchor point and tow the curtain into position slowly. Once the curtain is in position return and tie off the curtain to the intermediate anchor points.
- G. Once the curtain is properly anchored and installation is complete, return along the curtain and loosen all the furling ties to lower the curtain skirt.
- H. Work within the area enclosed by the turbidity curtains shall cease immediately whenever turbidity exhibits a visible contrast or turbidity levels greater than 1.10 NTUs, whichever is less stringent, at the mid-depth of the water column in Wappingers Creek adjacent to the outlet of the Three Star Lagoon and remedial actions shall be taken by the CONTRACTOR to reduce turbidity before resumption of work activities within the contained area.

3.2 MAINTENANCE AND INSPECTIONS

- A. Inspections:
 - 1. Make a visual inspection daily and promptly after every rainstorm. Maintenance shall be performed promptly as needed. Record all findings in a written log in the CONTRACTOR's daily report. Provide a copy of each daily report to the ENGINEER the following business day.
 - 2. A report summarizing all inspections performed including observations and actions taken shall be completed at the end of project and submitted to the ENGINEER. The inspection reports shall include the name of the person performing the inspection along with their qualifications.
- B. Device Maintenance:
 - 1. Turbidity Curtain:
 - a. Move curtain away from the turbidity source just before sediment reaches the lower edge of the skirt.
 - b. Replace worn or broken anchor lines as needed.
 - c. Maintain the integrity of the curtain by repairing leaking connectors and/or tears in the curtain fabric.
 - d. Prior to removal of the curtain, allow soil particles to settle out of the water, until such time as the turbidity level at the mid-depth within the containment area in the vicinity of the turbidity curtain drops to less than 1 NTU's above the maximum turbidity level, unless otherwise directed.
- C. Water Quality Monitoring:
 - 1. Water turbidity levels shall be measured three times daily in Wappingers Creek adjacent to the Three Star Lagoon outlet.
 - 2. Turbidity quality monitoring shall be submitted daily, on the day following the reading date, or otherwise directed by the ENGINEER.
 - 3. Turbidity readings in excess of the allowable limits shall be reported immediately to the ENGINEER.

4. Water quality monitoring shall be carried out from the start of any work, until the completion of all work and the successful achievement of required turbidity levels within the outer turbidity curtain.

3.3 REMOVAL AND DISPOSAL

- A. CONTRACTOR shall exercise extreme care in removing turbidity barriers to avoid increasing turbidity of the lagoon.
- B. CONTRACTOR shall be completely responsible for and shall pay all costs associated with disposal and/or salvage of silt curtains.

+ + END OF SECTION + +

SECTION XI-32 31 00

FENCING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, tools, equipment and incidentals as shown, specified, and required to furnish and install fencing.
2. Extent of fencing is shown or indicated.
3. Types of materials required under this Section include:
 - a. Aluminum-coated, steel chain link fabric.
 - b. Galvanized steel framework.
 - c. Barbed wire.
 - d. Grounding and bonding.
 - e. Auxiliary system components, gates, accessories, fasteners, and fittings.
4. Substitutions: Structural shapes of satisfactory sections and equal strengths may be substituted upon OWNER's approval of CONTRACTOR's substitution request.
5. Fencing materials shall be new or may be used fencing materials if quality of used materials is acceptable to the OWNER.

B. Related Sections:

1. Section X, Spec 00002, Concrete.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM A53, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
2. ASTM A90/A90M, Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
3. ASTM A123, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
4. ASTM A153/A153M, Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
5. ASTM A428/A428M, Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles.
6. ASTM A491, Specification for Aluminum-Coated Steel Chain-Link Fence Fabric.
7. ASTM A780, Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

8. ASTM A817, Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric.
9. ASTM A1011/A1011M, Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
10. ASTM B6, Specification for Zinc.
11. ASTM D412, Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers—Tension.
12. ASTM D746, Test Method for Brittleness Temperature of Plastics and Elastomers by Impact.
13. ASTM D792, Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
14. ASTM D1499, Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics.
15. ASTM D2240, Test Method for Rubber Property—Durometer Hardness.
16. ASTM F552, Terminology Relating to Chain Link Fencing.
17. ASTM F567, Practice for Installation of Chain-Link Fence.
18. ASTM F626, Specification for Fence Fittings.
19. ASTM A653, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
20. ASTM F668, Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain-Link Fence Fabric.
21. ASTM F900, Specification for Industrial and Commercial Swing Gates.
22. ASTM F1043, Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.
23. ASTM F1083, Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
24. ASTM F1184, Specification for Industrial and Commercial Horizontal Slide Gates.
25. ASTM F1664, Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Tension Wire Used with Chain-Link Fence.
26. ASTM F1665, Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Barbed Wire Used With Chain-Link Fence.
27. CLFMI CLF 2445, Product Manual.
28. CLFMI, Step-by-Step Installation Guide.
29. IEEE C2, National Electrical Safety Code.
30. IEEE 81, Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System Part 1: Normal Measurements.
31. UL 467, Grounding and Bonding Equipment.

1.3 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:

1. “Knuckling” describes the type of selvage obtained by interlocking adjacent pairs of wire ends and then bending the wire ends back into a closed loop.
 2. “Fencing” describes an assembly of metal components, including wire chain-link fabric fastened to top, bottom and intermediate horizontal rails and to vertical line posts, corner posts and terminal posts. This assembly includes all auxiliary components, gates, fittings, fasteners, and other accessories, all with specified protective coatings.
- B. Terminology used in this Section and not defined in this Article will be construed in accordance with the terminology used in CLF 2445 and ASTM F552.

1.4 QUALITY ASSURANCE

- A. Qualifications:
1. Erector/Installer:
 - a. Engage a single erector that is skilled and trained, and possesses successful and documented experience installing fencing, and employs only workers with specific skill and successful experience in the type of Work required.
 - b. Erector shall be acceptable to fencing manufacturer,
 - c. Submit name and qualifications of erector with the following information for a minimum of three successful projects:
 - 1) Names and telephone numbers of owner and architect or engineer responsible for project.
 - 2) Approximate fencing contract amount.
 - 3) Quantity of fencing installed.
- B. Component Supply and Compatibility:
1. Provide fencing as complete system with all gates, hardware, appurtenances and other components produced by a single manufacturer, including custom erection accessories, fittings, clamps, and fastenings as required for complete system.
- C. Regulatory Requirements:
1. Comply with Laws and Regulations, including:
 - a. Americans with Disabilities Act of 1990 (Public Law 101-336), Appendix A of 28 CFR 36, Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.5 SUBMITTALS

- A. Action Submittals: Submit the following:
1. Shop Drawings:
 - a. Drawings at scale of 1/4-inch equal to one foot of typical fence assembly, identifying all materials, dimensions, sizes, weights, and finishes of rails, posts, braces, supports and other fencing components. Show fence heights, and locations of gates. Show gate swing, or other

- operation, hardware, and accessories. Include plans, elevations, and sections, with required installation and operating clearances, and details of post anchorage, attachments, and bracing.
 - b. Large-scale details drawn at scale of three inches equal to one foot for all connections and gate details, including motor mounting arrangements.
 - c. List of all hardware, fasteners, and accessories.
 - 2. Product Data:
 - a. Copies of manufacturer's technical product information, and specifications for all fencing components, including auxiliary system components such as gate operators and motors.
 - b. Data substantiating that materials proposed comply with the following:
 - 1) Physical properties of PVC protective coating, in compliance with ASTM D1499.
 - 2) Weight of aluminum coating on wire fabrications, in compliance with ASTM A428.
 - 3).Weight of zinc coating on pipe fabrications, in compliance with ASTM A90.
 - 3. Samples: OWNER's review will be for color and texture only. Compliance with other requirements is CONTRACTOR's responsibility. Submit the following:
 - a. Each fencing component, fastener, post, rail, support, chain-link fabric type, and other auxiliary and miscellaneous items labeled with identification of proposed use and location.
 - b. Sample of each chain-link fabric material, six inches square; and framework members, and typical accessories, each approximately six inches long.
 - c. Full range of manufacturer's standard and custom color Samples.
- B. Informational Submittals: Submit the following:
- 1. Certifications:
 - a. Submit shipping list for materials used, endorsed with manufacturer's voucher, signed by authorized employee of manufacturer, certifying that material used in fencing complies with the Contract Documents and with the approved submittals.
 - 2. Design Data: Submit with the Shop Drawings:
 - a. All structural calculations verifying that all system components comply with requirements of authorities having jurisdiction at the Site.
 - b. When proposing fencing framework or other structural components that varies from the Contract Documents, submit fabricator's structural calculations for design of proposed fencing. Structural analysis shall verify that all system components including supports, gates, fasteners, fittings, and connections comply with the Contract Documents and requirements of authorities having jurisdiction at the Site.
 - 3. Manufacturer's Instructions:
 - a. Manufacturer's installation instructions.
 - 4. Field Quality Control Submittals:

- a. Indicate and interpret test results for compliance of chain link fence and gate grounding and bonding with performance requirements specified in the Contract Documents.
- 5. Qualifications Statements:
 - a. Erector.
- C. Closeout Submittals: Submit the following:
 - 1. Project record documents in accordance with Section XI-01 78 39, Project Record Documents.
- D. Maintenance Material Submittals: Submit the following:
 - 1. Extra Stock Materials:
 - a. Furnish extra stock materials from same manufactured lot as materials installed.
 - b. Provide minimum of five percent excess over required amount of fencing components. Pack in cartons and store at the Site where directed by OWNER.
 - c. Do not provide partial containers or packages of materials. Round-up quantities to furnish only complete, unopened, and undamaged containers and packages.
 - d. Submit quantities of each system component required for the Work, based on actual purchase order to manufacturer for materials to be used for this Project, with calculations substantiating quantity of extra stock materials furnished.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery of Materials:
 - 1. Packaging and Marking: Comply with CLFMI CLF 2445.
 - 2. Deliver materials in manufacturer's original, unopened packaging with all factory-applied tags, labels and other identifying information intact, legible and accurately representing material on approved submittals.
- B. Storage of Materials:
 - 1. Store all materials under weatherproof cover, off the ground and away from other construction activities.
 - 2. Do not store material in a manner that would create a humidity chamber. Provide for free movement of air under protective cover and between components of the fencing.
- C. Handling of Materials:
 - 1. Handle material in manner that is in compliance with manufacturer's recommendations and that avoids damaging coatings.

PART 2 – PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Design Considerations:

1. Verify size of framing members shown or indicated in the Contract Documents. Where structural analysis indicates the need, provide additional members, or increased member size, thickness or weight.
2. Modifications may be made only as necessary to meet Site conditions to ensure proper fitting and support of the Work and only upon submittal of Shop Drawings and receipt of approval by OWNER.

2.2 MATERIALS

A. General:

1. Tube sizes specified are nominal outside dimension.
2. Roll-formed section sizes are nominal outside dimensions.
3. Wire gages shall conform to American Steel and Wire Company gage.
4. Heat-form arcs and chords before applying protective coatings to metal.
5. Sizes specified are given for uncoated metal. Protective coatings are in addition to specified metal dimensions, gages, and sizes.
6. Provide weights of zinc and aluminum coatings on wire and pipe fabrications in accordance with CLFMI CLF 2445.
7. Provide thickness of PVC coating on wire and pipe fabrications in accordance with CLFMI CLF 2445.

B. Chain-Link Fence Fabric:

1. One-piece fabric widths, for fencing 12 feet and less in height, complying with CLFMI CLF 2445.
2. Wire mesh shall be woven throughout in form of approximately-uniform square mesh with parallel sides and horizontal and vertical diagonals of approximately-uniform dimensions, of size and gage specified and in compliance with ASTM A817, Type 1, cold-drawn carbon steel wire with minimum breaking strength of 2,170 pounds and coated with aluminized finish, as specified. Fabric shall be as recommended by CLFMI for heavy industrial usage.
3. Provide fence fabric imprinted with manufacturer's trade name, country of origin, core wire gage, and finished outside diameter gage.
4. Provide fabric knuckled to eliminate exposure of sharp edges.
5. Fabric Gage: Provide the following:
 - a. No. 9-gage wires.
6. Mesh Size: Provide the following:
 - a. Two-inch mesh.

2.3 FRAMEWORK

- A. General: The following table presents actual OD and equivalent nominal NPS size and trade size of round members:

Actual OD (inches)	NPS Size (inches)	Trade Size (inches)
1.315	1.0	1-3/8
1.660	1.25	1-5/8
1.900	1.5	2
2.375	2.0	2.5
2.875	2.5	3
3.500	3.0	3.5
4.000	3.5	4
6.625	6.0	6-5/8
8.625	8.0	8-5/8

- B. Pipe shall be commercial grade, plain-end steel pipe with standard-weight walls. Steel strip used for manufacture of pipe shall comply with ASTM F1083, Schedule 40 pipe with minimum yield strength of 25,000 psi and protected with zinc, as specified.
- C. Fittings: Comply with ASTM F626.
- D. End, Corner, and Pull Posts: Provide end, corner, and pull posts of following minimum sizes:
1. Up to six feet fabric height:
 - a. 2.375 inches OD pipe weighing 3.65 pounds per linear foot.
- E. Line Posts: Provide line posts of following minimum sizes and weights:
1. Up to six feet fabric height:
 - a. 1.90 inches OD pipe weighing 2.72 pounds per linear foot.
- F. Gate Posts: Provide gate posts for supporting single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows:
1. Up to six feet wide:
 - a. 2.875 inches OD pipe weighing 5.79 pounds per linear foot.
 2. Over six feet wide and up to 13 feet wide:
 - a. Four inches OD pipe weighing 9.11 pounds per linear foot.
 3. Over 13 feet wide and up to 18 feet wide:
 - a. 6.625 inches OD pipe weighing 18.97 pounds per linear foot.
 4. Over 18 feet wide:
 - a. 8.625 inches OD pipe weighing 28.55 pounds per linear foot.
- G. Top Rail: Provide top rails, unless otherwise shown or indicated, conforming to the following:
1. 1.900 inch OD pipe weighing 2.72 pounds per linear foot.

2. Provide in manufacturer's longest lengths, with expansion-type coupling 0.051-inch thick rail sleeves, approximately seven inches long, for each joint.
 3. Provide means for attaching top rail securely to each gate, corner, pull, and end post.
- H. Center Rails Between Line Posts: Provide center rails between line posts, where shown, consisting of 1.660-inch OD pipe weighing 2.27 pounds per linear foot.
- I. Roll-Formed Steel: Provide rolled steel shapes produced from structural-quality steel conforming to ASTM A1011, Grade 45, with minimum yield strength of 45,000 pounds psi. Protective coating system shall conform to ASTM F1043, as specified.
- J. Post Brace Assembly: Provide bracing assemblies at end and gate posts, and at both sides of corner and pull posts, with horizontal brace located at mid-height of fabric:
1. Use 1.900-inch OD pipe weighing 2.72 pounds per linear foot for horizontal brace and 3/8-inch diameter rod with turnbuckle for diagonal truss.

2.4 GATES

- A. Swing gates shall comply with ASTM F900.
- B. Sliding gates shall comply with ASTM F1184.
- C. Gate hinges shall be double clamping offset type. To hold gate in the open or closed positions, provide each gate frame with a keeper that automatically engages gate shoe set in concrete. Gates shall have drop latch with provision for padlock:
1. Gate Hinges: Pressed or forged steel or malleable iron to suit gate size, non-lift-off type, 180-degree offset heavy-industrial hinges, 1.5 pair per leaf.
 2. Latch: Forked-type or plunger bar type to permit operation from either side of gate, with padlock eye as integral part of latch.
 3. Keeper: Provide a gate keeper for vehicle gates that automatically engages gate leaf and holds gate leaf in open position until manually released.
- D. Provide gate frames with intermediate horizontal rails. Gate frames shall be welded construction and shall be galvanized after fabrication. Provide single gates six feet or greater in width, and double gates 12 feet or greater in width, with diagonal bracing in one direction, extending from top to bottom rail.
- E. Gate Stops: Provide gate stops for double gates consisting of mushroom-type flush plate with anchors, set in concrete and designed to engage a center drop rod or plunger bar. Include locking device and padlock eyes as integral part of latch, using one padlock for locking both gate leaves.

- F. Fabricate gate perimeter frames of tubular members. Provide additional horizontal and vertical members to ensure proper gate operation and for attachment of fabric, hardware, and accessories. Space so that frame members are not more than eight feet apart. Fabricate as follows:
 - 1. Over six feet high, or leaf width exceeding eight feet:
 - a. 1.900-inch OD pipe weighing 2.72 pounds per linear foot.
- G. Assemble gate frames by welding or with special malleable or pressed steel fittings and rivets for rigid connections. Use same fabric as provided for fence. Install fabric with stretcher bars at vertical edges. Bars may also be used at top and bottom edges. Attach stretchers to gate frame at not more than 15 inches on centers. Attach hardware with rivets or by other means that will provide security against removal and breakage.
- H. Install diagonal cross-bracing on gates consisting of 1/2-inch diameter adjustable length truss rods provided with turnbuckles to ensure frame rigidity without sag or twist.

2.5 AUXILIARY FENCING MATERIALS AND ACCESSORIES

- A. Wire Ties:
 - 1. For tying fabric to line posts, use nine-gage, aluminum alloy 1100-H4, spaced 12 inches on centers.
 - 2. For tying fabric to rails and braces, use nine-gage, aluminum alloy 1100-H4, spaced two feet on centers.
 - 3. For tying fabric to tension wire, use 11-gage, aluminum alloy 1100-H4, spaced two feet on centers.
- B. Tension Wire: Provide tension wire consisting of aluminized, seven-gage, coiled spring steel wire coated with 0.40-ounces of aluminum per square foot of wire surface, minimum, in compliance with ASTM F1664:
 - 1. Locate at bottom of fabric only.
- C. Post Caps: Pressed steel, wrought iron, or cast aluminum alloy, designed as weather-tight closure cap, for tubular posts. Provide one cap for each post unless equal protection is afforded by combination post-top cap and barbed wire supporting arm, where barbed wire is required:
 - 1. Provide caps with openings to allow through-passage of top rail.
 - 2. Provide cone-type caps for terminal posts and loop-type caps for line posts.
- D. Stretcher Bars: One-piece lengths equal to full height of fabric, with minimum cross-section of 3/16-inch by 3/4-inch. Provide one stretcher bar for each gate and end-post, and two for each corner- and pull-post, except where fabric is integrally woven into the post.

- E. Stretcher Bar Bands: Pressed steel, galvanized, 0.078-inch to 0.108-inch thick depending on post diameter, spaced not greater than 15 inches on centers to secure stretcher bars to end-, corner-, pull-, and gate-posts:
 - 1. Bands may also be used with special fittings for securing rails to end-, corner-, pull-, and gate-posts.
- F. Truss Rods: Steel rods, 3/8-inch diameter, merchant quality with turnbuckle.
- G. Concrete: In accordance with Section X, Spec 00002, Concrete.

2.6 FENCE GROUNDING

- A. Conductors: Bare, solid wire for No. 6-gage and smaller, stranded wire for No. 4-gage and larger:
 - 1. Material Above Finished Grade: Copper.
 - 2. Material On or Below Finished Grade: Copper.
 - 3. Bonding Jumpers: Braided copper tape, one inch wide, woven of No. 30-gage bare copper wire, terminated with copper ferrules.
- B. Connectors and Ground Rods: As listed in UL 467:
 - 1. Connectors for Below-Grade Use: Exothermic welded type.
 - 2. Ground Rods: Copper-clad steel:
 - a. Size: 5/8-inch by eight feet.

2.7 FINISHING

- A. Chain-Link Fence Fabric:
 - 1. Aluminized finish with not less than 0.40 ounces aluminum per square foot, complying with ASTM A491, Class II.
- B. Framework and Appurtenances: Provide the following finishes for steel framework, auxiliary system components, and miscellaneous accessories:
 - 1. Galvanizing: Zinc for galvanizing shall be of High Grade or Special High Grade conforming to ASTM B6 with maximum aluminum content of 0.01 percent. Galvanize metal using hot-dip process in accordance with the following:
 - a. Structural Iron and Steel Shapes: ASTM A123.
 - b. Rolled-Form Sheet Steel: ASTM A653.
 - c. Hardware and Accessories: ASTM A153.
 - d. Fittings: ASTM F626.
 - e. Pipe: ASTM A53.
 - 2. Provide minimum weights of zinc as follows:
 - a. Pipe: 1.8-ounces of zinc per square foot. Apply Type A coating both inside and outside according to ASTM F1043, as determined by ASTM A90.
 - b. Rolled-Form Sheet Steel: 4.0-ounces of zinc per square foot of surface area.

- c. Hardware and Accessories: Zinc weights in compliance with Table 1 of ASTM A153.

C. Welded Joints:

- 1. Repair zinc coatings at welded joints by applying zinc-rich paint. per ASTM A780.

2.8 SOURCE QUALITY CONTROL

A. Fabrication Tolerances:

- 1. Fabric, posts, rails, and other supports shall be straight or uniformly curved to provide the profiles shown, to dimensional tolerance of 1/16-inch in 10 feet without warp or rack in the finished Work.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine conditions under which the Work will be erected and notify OWNER in writing of conditions detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.2 ERECTION

- A. Comply with CLFMI Step-by-Step Installation Guide and ASTM F567. Do not begin installation and erection of fencing until final grading is completed.
- B. Excavation: Drill holes of diameters specified, for post footings in firm, undisturbed or compacted soil:
- 1. For posts set in cast-in-place concrete, provide hole diameters dug or drilled a minimum of four times the largest cross section of post:
 - a. Unless otherwise shown or indicated, excavate hole depths approximately three inches lower than bottom of post, with bottom of posts set not less than two feet below the surface of finished grade when in firm, undisturbed soil, plus an additional three inches for each foot increase in the fence height over four feet.
 - b. Excavate holes for sliding cantilever gate-posts to not less than 3.5 feet below grade and minimum diameter of 12 inches.
 - 2. Spread soil from excavations uniformly adjacent to fence line, or on adjacent areas of the Site, as directed by OWNER.
 - 3. When solid rock is encountered at ground surface, drill into rock at least 12 inches for line-posts and at least 1.5 feet for end-, pull-, corner-, and gate-posts. Drill hole at least one inch greater diameter than largest dimension of post to be placed:

- a. If solid rock is below soil overburden, drill to full depth required, except penetration into rock need not exceed the minimum depths specified above for rock encountered at ground surface.
- C. Setting Posts: Remove loose and foreign materials from sides and bottoms of holes, and moisten soil prior to placing concrete:
1. Center and align posts in holes 3-inches above bottom of excavation.
 2. Posts shall be set in concrete footings, except as otherwise shown or specified. Place concrete around posts in continuous pour, and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.
 3. Extend concrete to two inches above ground surface, or to two inches below ground surface if cover of sod, bituminous asphalt paving, or other material is shown or indicated to conceal concrete. Crown to shed water away from posts.
 4. Extend footings for gate posts to underside of bottom hinge. Set keeps, stops, sleeves, and other accessories into concrete as required.
 5. Keep exposed concrete surfaces moist for at least seven days after placement, or cure with membrane curing materials, or other acceptable curing method.
- D. Concrete Strength: Allow concrete to attain at least 75 percent of its minimum 28-day compressive strength, but in no case sooner than seven days after placement, before installing rails, tension wires, barbed wire, or chain-link fabric:
1. Do not stretch and tension fabric and wires, and do not hang gates, until concrete has attained its full design strength.
- E. Posts and Rails:
1. Line Posts: Set posts in cast-in-place concrete footings as specified, spaced not more than ten feet on centers. Provide caps on top of each post to exclude moisture and to receive top rail, unless equal protection is afforded by combination post-top cap and barbed wire supporting arm, where barbed wire is required.
 2. Top Rails: Run rail continuously through post caps or extension arms, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer to form continuous rail between terminal posts.
 3. Brace Assemblies: Install braces so posts are plumb when diagonal rod are under proper tension. Install brace assemblies at end-posts and at both sides of corner- and pull-post panels. Panels adjacent to gates shall have intermediate horizontal rails and diagonal bracing. Diagonal bracing shall run from center of first line-post to bottom of terminal-post.
- F. Chain-Link Fabric:
1. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released. Fasten to terminal

- posts and gate posts with tension bars threaded through mesh and secured with tension bands at maximum intervals of 14 inches.
2. Tie to line-posts, gate frames and top and bottom rails with tie wires spaced at maximum 12 inches on posts and two feet on rails.
 3. Connect tension bars to posts and frames by means of adjustable bolts and bands spaced not more than 14 inches apart.
 4. Leave approximately two inches between finish ground surface and bottom selvage, except where bottom of fabric extends into concrete.
 5. Join roll of chain-link fabric by weaving a single picket into the ends of roll to form continuous mesh.
- G. Tension Wire:
1. Stretch tension wire taut and free of sag, from end to end of each stretch of fence and position at a height that will enable the wire to be fastened to chain-link fabric by securing within the top 12 inches of chain-link fabric.
 2. Fasten bottom tension wire within bottom six inches of chain-link fabric.
 3. Tie tension wire to each post with not less than six-gage galvanized wire.
- H. Stretcher Bars: Thread through or clamp to fabric four inches on centers, and secure to posts with metal bands spaced 15 inches on centers.
- I. Gates: Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage, as shown on approved Shop Drawings. Adjust hardware for smooth operation and lubricate where necessary.
- J. Tie Wires: Use U-shaped wires conforming to diameter of pipe. Clasp pipe and fabric firmly with ends twisted at least two full turns. Bend ends of wire to minimize hazard to persons and clothing.
- K. Fasteners: Install nuts for tension band and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

3.3 GROUNDING AND BONDING

- A. Fence Grounding: Provide at maximum intervals of 1,500 feet, except as follows:
1. Ground fencing within 100 feet of buildings, structures, walkways, and roadways at maximum intervals of 750 feet:
 - a. Gates and Other Fence Openings: Ground fence on each side of opening:
 - 1) Bond metal gates to gate-posts.
 - 2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2-gage wire and bury wire at least 1.5 feet below finished ground surface.

- B. Protection at Crossings of Overhead Electrical Power Lines: Ground fencing at location of crossing and at maximum distance of 150 feet on each side of crossing.
- C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2, unless otherwise shown or indicated.
- D. Grounding Method: At each grounding location, drive ground rod vertically until the top is six inches below finished ground surface. Connect rod to fence with No. 6-gage conductor. Connect conductor to each fence component at grounding location, including the following:
 - 1. Each Barbed Wire Strand: Make grounding connections to barbed wire with wire-to-wire connectors designed for this purpose.
- E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Provide connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible:
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- G. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor.

3.4 FIELD QUALITY CONTROL

- A. Site Tests:
 - 1. Ground-Resistance Testing Agency: Engage a qualified independent testing agency to perform field quality-control testing.
 - 2. Ground-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure ground resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests by two-point method in accordance with IEEE 81.
 - 3. Desired Maximum Grounding Resistance Value: 25 ohms.

4. Excessive Ground Resistance: If resistance to ground exceeds desired value, notify OWNER promptly. Include recommendations to reduce ground resistance and proposal to accomplish the recommendations.
5. Report: Prepare and submit test reports, certified by testing agency, of ground resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.5 ADJUSTMENT AND CLEANING

- A. Repair coatings damaged in the shop or at the Site by recoating with manufacturer's recommended repair compound, applied in accordance with manufacturer's directions. Repair hot-dip galvanized coatings in accordance with ASTM A780.
- B. Gate: Adjust gate to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, and malfunction throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- C. Lubricate operating equipment and clean exposed surfaces.
- D. Repair and replace broken or bent components.

+ + END OF SECTION + +

SECTION XI-32 92 00

LAWNS AND MEADOWS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, tools, equipment and incidentals as shown, specified and required to furnish and install all lawns and meadows.
2. Extent of lawns and meadows is generally the areas of disturbance from conducting the Work of the Contract Documents and any ancillary or collateral disturbances associated therewith. This includes, but is not limited to, re-establishing vegetative covers on the MGP Area, Lower Raceway, adjacent to the Axton Cross Building and on the banks of the Three Star Lagoon.
3. Types of products required include the following:
 - a. Topsoil.
 - b. Lawn grass seed.
 - c. Not Used.
 - d. Not Used.
 - e. Inorganic soil amendments.
 - f. Organic soil amendments.
 - g. Fertilizers.
 - h. Mulches.
 - i. Erosion-control materials.
 - j. Accessories.

B. Coordination:

1. Review installation procedures under other Sections and coordinate the installation of items that must be installed with, or before, lawns and meadows.

C. Related Sections:

1. Section XI-31 11 00, Clearing.

1.2 REFERENCES

A. Standards referenced in this Section are listed below:

1. Association of Official Analytic Chemists, (AOAC):
 - a. Official Methods of Analysis of AOAC International.
2. Association of Official Seed Analysts, (AOSA):
 - a. Journal of Seed Technology; Rules for Testing Seeds.

3. American Society of Agronomy, (ASA):
 - a. Reference No. 1 - Methods of Soils Analysis, Soil Science Society of America, Incorporated.
4. American Society for Testing and Materials, (ASTM):
 - a. ASTM B 221, Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
 - b. ASTM C 602, Specification for Agricultural Liming Materials.
 - c. ASTM D 75, Practice for Sampling Aggregates.
 - d. ASTM D 422, Test Method for Particle Size Analysis of Soil.
 - e. ASTM D 977, Specification for Emulsified Asphalt.
 - f. ASTM D 2487, Practice for Classification of Soils for Engineering Purposes (United Soil Classification System).
 - g. ASTM D 5268, Specification for Topsoil Used for Landscape Purposes.
 - h. ASTM E 329, Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
 - i. ASTM E 548, Guide for General Criteria Used for Evaluating Laboratory Competence.
5. Turfgrass Producers International, (TPI):
 - a. Guideline Specifications to Turfgrass Sodding.

1.3 DEFINITIONS

- A. The term “finish grade” shall be used to describe the finished surface elevation of planting soil.
- B. The term “manufactured topsoil” shall be used to describe soil produced off-Site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil acceptable as a component of loam.
- C. The term “loam” shall be used to describe topsoil that has been mixed with additional organic and inorganic additives, as specified.
- D. The term “percentage pure live seed” shall be defined as the percent (%) purity multiplied by percent (%) germination divided by 100 to equal the percent pure live seed (PLS) and shall be calculated for all seed lots using each seed lots own unique purity and germination test results. A PLS pound shall be defined as the bulk weight of seed required to equal one pound of 100 percent pure, germinated seed.
- E. The term “subgrade” shall be used to describe the surface of subsoil remaining after completing excavation; or the top surface of a fill or backfill immediately beneath topsoil and which has not been tested for acceptable use as topsoil.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications:

1. Engage a single landscape installer skilled, trained and with successful and documented experience in the planting of lawns and meadows and with specific skill and successful experience in the installation of the types of materials required; and who agrees to employ only tradesmen with specific skill and successful experience in this type of Work. Submit names and qualifications to ENGINEER along with the following information on a minimum of three successful projects:
 - a. Names and telephone numbers of owner, architects or engineers responsible for projects.
 - b. Approximate contract cost of the lawns and meadows.
 - c. Amount of area installed.
 2. Installer's Site Supervisor: Require installer to maintain an experienced full-time landscape supervisor on-Site during the time of preparation for, and planting of, lawns and meadows. Supervisor shall have achieved landscape or horticultural certification acceptable to governing authorities having jurisdiction at the Site.
 3. Ratio of laborers to certified landscape supervisors shall not exceed 12 to one. Certified landscape supervisor shall be on-Site throughout the day-to-day performance of the Work of this Section.
 4. Application of herbicides, chemicals and insecticides shall be done by personnel licensed to perform such applications by governing authorities having jurisdiction at the Site and in accordance with each manufacturer's instructions provided on each product label.
- B. Soil-Testing Laboratory Qualifications:
1. An independent laboratory, recognized by governing authorities having jurisdiction at the Site, with the experience and capability to conduct testing indicated and that specializes in types of soil tests to be performed.
 2. To qualify for approval, an independent testing agency shall demonstrate to ENGINEER'S satisfaction, based on evaluation of criteria submitted by testing agency, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work, in accordance with ASTM E 329 and as documented according to ASTM E 548.
- C. References: Comply with the applicable requirements referenced in Section XI-01 42 00, References.
- D. Soil Analysis: Furnish report of soil analysis to ENGINEER, prepared by a qualified soil-testing laboratory, stating percentages of organic matter; mechanical gradation of sand, silt, and clay content in compliance with ASTM D 422; cation exchange capacity; sodium absorption ratio; deleterious materials content; pH; and mineral and plant-nutrient content of soil. Chemical analysis shall include tests for percentages of nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, calcium, iron, manganese, copper, zinc, extractable aluminum, and total soluble salts:
1. Existing On-Site Soil:

- a. Separate soil stockpiled and proposed for use as topsoil for lawns and meadows into 1000 cubic yard piles and label with a numbering system used to reference all soil samples and test results.
 - b. Obtain a one cubic foot representative sample for each 1000 cubic yards of soil stockpiled on-Site proposed for use as topsoil for lawns and meadows, in compliance with ASTM D 75 and Appendixes, for securing samples from stockpiles.
 - c. Place samples taken from each stockpile, into separate clean, new and previously unused, containers and mix thoroughly. Maintain separation and legible labeling of each sample taken from each stockpile, throughout the process of mixing, drying and delivering to soil analysis laboratory. Label samples on outside of container.
 - d. Take one cup of soil from each container and allow to dry at room temperature. Once dry, place each one-cup sample in a separate, accurately labeled, new and previously unused one-cup sized plastic container, seal tightly and deliver to soil testing laboratory.
 - e. Report suitability of soil as a topsoil component for lawn and meadow plant growth. State recommended quantities of nitrogen, phosphorus, secondary and micronutrients, potash and soil amendments to be added to produce satisfactory topsoils. Include calculations, types of fertilizer and recommendations for application rates in either gallons or pounds per cubic foot of soil.
 - f. In addition, all on-Site soil that will be used as topsoil shall be provided with additional compost and peat moss amendments specified, whether or not testing indicates positive need for such amendments, for such material to be used as loam.
2. Manufactured Imported Topsoil:
- a. Test each 1000 cubic yards of manufactured topsoil at the proposed source. In addition, after ENGINEER'S approval of manufactured topsoil based on results and recommendations of soil testing reports, test each 1000 cubic yards of manufactured topsoil that is delivered to the Site for conformance to results and recommended modifications of approved soil test reports. Manufactured topsoil that differs from proposed source material, after modification according to recommendations of soil test reports, shall be rejected for use in the Work.
 - b. Obtain a one cubic foot representative sample for each 1000 cubic yards of manufactured topsoil proposed for lawn and meadow Work, in compliance with ASTM D 75 and Appendixes, for securing samples from stockpiles.
 - c. Place samples taken from each stockpile into separate clean, new and previously unused, containers and mix thoroughly. Maintain separation and legible labeling of each sample, taken from each stockpile, throughout the process of mixing, drying and delivering to soil analysis laboratory. Label samples on outside of container.
 - d. Take one cup of topsoil from each container and allow to dry at room temperature. Once dry, place each one-cup sample in a separate,

- accurately labeled, new and previously unused one-cup sized plastic container, seal tightly and deliver to soil testing laboratory.
- e. Report suitability of manufactured topsoil as a component for lawn and meadow plant growth. State recommended quantities of nitrogen, phosphorus, secondary and micronutrients, potash and soil amendments to be added to produce satisfactory manufactured topsoil. Include calculations, types of fertilizer and recommendations for application rates in either gallons or pounds per cubic foot of manufactured topsoil.
 - f. Organic component of manufactured topsoil shall be obtained from compost and peat moss amendments specified, for such material to be used as loam.

E. Source Quality Control:

- 1. Analysis and Standards: Package all products with manufacturer's certified analysis performed in accordance with methods established by AOAC, wherever applicable, or as specified.
- 2. Provide manufactured imported topsoil from a commercial processing facility specializing in the manufacture of topsoil.
- 3. Seed that has been stored at temperatures, or under conditions not recommended by the seed supplier, or has become wet, moldy, or otherwise damaged, shall not be acceptable. The PLS for each seed lot shall be 75 percent, minimum.
- 4. Certify that all seed has been stored under conditions recommended by the seed supplier and has not been subjected to conditions damaging to PLS percentages.
- 5. Seed may be mixed by an approved method on-Site or at the seed supplier's facilities. If the seed is mixed on-Site, each variety shall be delivered in the original containers and shall bear the supplier's certified analysis. Where seed is mixed by the seed supplier, provide ENGINEER with the seed supplier's certified statement as to the composition of the mixture.

1.5 SUBMITTALS

A. Action Submittals: Submit the following:

- 1. Shop Drawings:
 - a. Schedule for lawn and meadow-planting showing anticipated planting dates for each type of Work.
- 2. Product Data:
 - a. Manufacturer's product data, specifications and installation instructions for all required materials.
 - b. Composition and analysis of commercial fertilizers and all purchase receipts showing the total quantity actually purchased for this Project.
 - c. Proportions of each component contained in hydro seed mixture. Identify number of pounds of each component required for each 100 gallons of water. Include the number of square feet of lawn, grass

- meadow or wildflower meadow mixture that can be installed with each full tank of hydro seed mixture.
 - d. PLS for each type of seed and each seed lot. Include bulk weight of seed required to equal one pound of 100 percent pure, germinated seed.
 - 3. Samples:
 - a. Submit 12-inch by 12-inch sheet of erosion control fabric with manufacturer's selections of standard biodegradable filler papers, and yarns.
- B. Informational Submittals: Submit the following:
 - 1. Certificates:
 - a. Certification of Grass and Wildflower Seed: For each grass-seed monostand and seed mixture, furnish seed supplier's certification stating the botanical and common name, and percentage by weight of each species and variety, and percentage of purity, germination and weed seed. Include the year of production and date of packaging. Certify that seed has been stored in compliance with all recommendations of the seed supplier.
 - b. Certificates of inspection as may be required by governmental authorities to accompany shipments, and manufacturer's certified analysis for soil amendments and fertilizer materials. For standard products submit other data substantiating that materials comply with specified requirements.
 - 2. Test Reports: Submit the following:
 - a. Soil analysis reports for existing soil and imported manufactured topsoil, as specified. Include recommendations for remediating existing soil into acceptable topsoil.
 - 3. Qualifications Data: Submit qualifications data for the following:
 - a. Landscape installer.
 - b. Landscape supervisor.
 - c. Testing agency.
 - 4. Source Quality Control Submittals:
 - a. Written statement providing the location from which manufactured topsoil is to be obtained and the names and addresses of the suppliers.
- C. Closeout Submittals: Submit the following:
 - 1. Operations and Maintenance Data:
 - a. Submit recommended procedures to be established by OWNER for the maintenance of lawns and meadows for one full year. Submit prior to expiration of required maintenance period.
 - 2. Warranty Documentation:
 - a. Submit written warranty, signed by CONTRACTOR and landscape installer, as specified.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery of Materials:

1. Do not deliver seed until Site conditions are ready for installation.
2. Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery.
3. Deliver seed in undamaged, original containers, sealed by the supplier and indicating compliance with approved Shop Drawings.
4. Inspect lawn and meadow materials upon arrival at Site. Immediately and permanently remove unacceptable materials from Site.

B. Storage of Materials:

1. Store and cover materials to prevent deterioration. Remove packaged materials that become wet or show deterioration or water marks from the Site.
2. Seed that becomes wet, moldy or damaged during the time of storage on-Site or that has been damaged during transit is not acceptable.

1.7 PROJECT CONDITIONS

A. Environmental Requirements:

1. Proceed with and complete lawn and meadow planting as rapidly as portions of the Site become available, working within the seasonal limitations for each type of lawn, grass and wildflower planting required.
2. Proceed with planting only when current and forecasted weather conditions are favorable to successful planting and establishment of lawns and meadows:
 - a. Do not spread seed when wind velocity exceeds five miles per hour.
 - b. Do not plant when drought, or excessive moisture, or other unsatisfactory conditions prevail.
3. Herbicides, chemicals and insecticides shall not be used on areas bordering wetlands.

B. Scheduling:

1. Coordinate planting with specified extended service periods to provide required service from date of Substantial Completion. Plant during one of the following periods:
 - a. Spring Planting: March 15 to June 1.
 - b. Fall Planting: September 1 to October 30.
2. Do not begin lawn and meadow planting until water, acceptable for use and adequate in supply, is available on-Site and can be successfully transported to the areas of Work. Coordinate provision of adequate and acceptable water supply with Project Schedule.
3. Do not proceed with installation of loam until all subgrade utility services have been installed, are operating successfully and have been approved by ENGINEER.

C. Pre-installation Conference:

1. Prior to commencement of lawn and meadow planting and associated Work, CONTRACTOR shall schedule and meet at the Site with the landscape

installer, the installers of other Work in and around lawn and meadow areas that follows the lawn and meadow Work, including fencing Work specified in Section XI-32 31 00, Fencing; and ENGINEER and other representatives directly concerned with performance of the Work. Review foreseeable methods and procedures related to the lawn and meadow Work, including the following:

- a. Review Project requirements and the Contract Documents.
 - b. Review required submittals, both completed and yet to be completed.
 - c. Review availability of water and methods of delivery.
 - d. Review status of below-grade work and required access during lawn and meadow planting and establishment.
 - e. Review Project Schedule and availability of materials, tradesmen, equipment and facilities needed to make progress and avoid delays.
 - f. Review environmental conditions, other Project conditions, and procedures for coping with unfavorable conditions.
 - g. Review procedures required for protection of lawns and meadows during the remainder of the construction period.
 - h. Review required inspection, testing, and certifying procedures.
2. Record the discussions of the Pre-installation Conference and the decisions and agreements or disagreements reached, and furnish a copy of the record to each party attending.
 3. Record all revisions or changes agreed upon, reasons therefor, and parties agreeing or disagreeing with them.
 4. Reconvene the meeting at the earliest opportunity if additional information must be developed in order to conclude the subjects under consideration.

1.8 WARRANTY

- A. General Warranty: The special warranties specified in this Article shall not deprive OWNER of other rights or remedies OWNER may otherwise have under the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by CONTRACTOR under the Contract Documents.
- B. Special Warranties: Warranty lawns and meadows through the specified extended service period.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil:
 1. All soil accepted as topsoil, whether obtained from on-Site or off-Site sources, shall comply with specified topsoil analysis.
 2. Provide fertile, friable, natural loam, surface soil, capable of sustaining vigorous plant growth; free of any admixture of subsoil, clods of hard earth, plants or roots, sticks, stones larger than 1-inch in diameter, or other

extraneous material harmful to plant growth, in compliance with ASTM D 5268. Provide topsoil with the following analysis:

- a. 3/4-inch mesh: 100 percent passing.
 - b. No. 4-sieve: 90 to 100 percent passing.
 - c. No. 200-sieve: 0 to 10 percent passing.
 - d. Clay content of material passing No. 200-sieve not greater than 60 percent, as determined by hydrometer tests.
 - e. pH-adjusted with ferrous sulphate or ground limestone to provide pH 5.5 to pH 7.0 at time of installation of lawns, grass and meadow areas, unless particular species of grass or wildflower stand requires a different pH to meet its growing needs.
 - f. Electrical conductivity of a 1:2 soil-water suspension shall not exceed 1.0 milliohm per centimeter and with less than 200 parts per million of extractable aluminum.
 - g. Cation Exchange Capacity: 5, minimum.
 - h. Organic content not less than five percent, as determined by ignition loss of oven-dried samples passing No. 10-sieve (Muffle Furnace Temperature: 110 plus or minus five degrees C for eight hours).
 - i. Free of pests and pest larvae.
3. Topsoil Source: Reuse surface soil stockpiled on-Site, where possible. Verify suitability of stockpiled surface soil to produce topsoil, as specified. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth:
- a. Supplement acceptable on-Site soil with manufactured topsoil from off-Site sources, when quantities available on-Site are insufficient to complete the Work.

B. Lawn Grass Seed:

1. Lawn Grass Seed Mixture: Provide fresh, clean, new-crop seed complying with the tolerance for purity and germination established by AOSA. Provide seed of the grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, specified.
2. Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 80 percent pure seed, and not more than 0.25 percent weed seed by weight:
 - a. Full Sun: Kentucky Bluegrass (*Poa pratensis*), a minimum of three cultivars.
 - b. Sun and Partial Shade: Proportioned by weight as follows:
 - 1) 50 percent Kentucky Bluegrass (*Poa pratensis*).
 - 2) 30 percent Chewings Red Fescue (*Festuca rubra* variety).
 - 3) 10 percent Perennial Ryegrass (*Lolium perenne*).
 - 4) 10 percent Redtop (*Agrostis alba*).
 - c. Shade: Proportioned by weight as follows:
 - 1) 50 percent Chewings Red Fescue (*Festuca rubra* variety).
 - 2) 35 percent Rough Bluegrass (*Poa trivialis*).
 - 3) 15 percent Redtop (*Agrostis alba*).

- C. Meadow Grass Seed:
 - 1. Not Used.
- D. Wildflower Meadow Seed:
 - 1. Not Used.
- E. Inorganic Soil Amendments:
 - 1. Ground Oolitic Limestone: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 - a. Class: Class T, with a minimum 99 percent passing through No. 8-sieve and a minimum 75 percent passing through No. 60-sieve.
 - 2. Iron Sulfate: Commercial-grade acidulant, recommended for use on acid-loving plants. Provide granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
 - 3. Perlite: Agricultural-grade, expanded pumice.
 - 4. Agricultural Gypsum: Commercial-grade and finely ground, containing a minimum of 90 percent calcium sulfate.
 - 5. Grit Aggregate: Commercial-grade filter sand consisting of hard, durable rounded grains of quartz or other rock that do not compact to a solid mass when wet, with a pH in the range required for topsoil. Provide clean, washed, natural or manufactured aggregate, free of toxic materials, salt and other chemical contamination.
 - 6. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Organic Soil Amendments:
 - 1. Compost: Well-composted, stable, weed-free organic matter, produced by the aerobic decomposition of organic residues; pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-inch screen; soluble salt content of 5 to 10 decisiemens/meter; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - a. Organic Matter Content: 50 to 60 percent of dry weight.
 - b. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
 - 2. Peat: Partially decomposed stems and leaves of several species of sphagnum moss; finely divided or granular texture. Supply shredded material, free from lumps, wood, roots, stones, decomposed colloidal residue and other extraneous foreign matter, capable of passing through a 1/2-inch screen, which can easily be incorporated with the soil. Supply material, which has been conditioned in storage piles after excavation for at least six months, including one freezing and thawing period. Supply peat humus with the following analysis:
 - a. Not less than 90 percent organic matter by weight on an oven-dry basis.
 - b. pH range of 3.4 to 4.8.
 - c. Moisture content 35 percent at time of incorporation into soil.
 - d. Water absorbing ability 150 percent to 350 percent by weight.

3. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials:
 - a. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 pounds of ammonium nitrate or 0.25 pounds of ammonium sulfate per cubic foot of loose sawdust or ground bark.
 4. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- J. Fertilizers:
1. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of four percent nitrogen and 20 percent phosphoric acid.
 2. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
 3. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports.
 4. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- K. Mulches:
1. Straw Mulch: Provide air-dry, clean, mildew- and certified seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
 2. Peat Mulch: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
 3. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch screen; soluble salt content of 5 to 10 decisiemens/meter; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - a. Organic Matter Content: 50 to 60 percent of dry weight.
 - b. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
 4. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

5. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.
 6. Asphalt Emulsion: ASTM D 977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.
- L. Erosion-Control Materials:
1. Erosion-Control Blankets: 100 percent biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended 6-inches long steel wire staples.
- M. Water: Acceptable for lawn and meadow application and containing no material harmful to plant growth and establishment.

2.2 LOAM MIXES

- A. Follow recommendations of soil-testing laboratory for modifying on-Site soil and manufactured soil, for use as topsoil.
- B. On-Site soil and manufactured soil that has been provided with all inorganic soil amendments and fertilizers recommended by soil-testing laboratory, and acceptable for use as topsoil, shall be mixed with an additional organic soil amendment mix in a ratio of two parts topsoil to one part organic soil amendment mix, by volume:
1. Prepare soil amendment mix by combining 40 percent compost, 40 percent peat moss, ten percent wood derivatives, five percent well-rotted manure and five percent grit aggregate, by volume.
- C. Loam: Thoroughly blend topsoil with organic soil amendment mix and use as planting media for all lawn and meadow Work.

PART 3 - EXECUTION

3.1 INSPECTION

- A. CONTRACTOR shall examine the areas and conditions under which lawn and meadow Work is to be performed, and notify ENGINEER, in writing, of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to ENGINEER.

3.2 PREPARATION

- A. Thoroughly blend and mix loam before spreading. Incorporate fertilizers, and ground limestone or acidulant, after spreading, as specified, and at rates recommended by soil-testing laboratory.

- B. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations:
 - 1. Protect adjacent and adjoining areas from hydroseeding overspray.
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- D. Perform percolation tests on existing subgrade and placed fills prior to fine grading:
 - 1. Perform percolation testing of subgrades and placed fills to determine whether or not the subgrade will drain properly. Perform percolation tests in accordance with the following procedure:
 - a. Dig a hole in the subgrade that is 4-inches in diameter and 12-inches deep.
 - b. Fill the hole with water and wait for the water to completely drain from the hole.
 - c. Immediately refill the hole with water and measure the rate of fall in the water level.
 - 2. In the event that water drains at a rate less than 1-inch in one hour, excavate soil to a minimum depth of 24-inches, and deeper, as necessary to break the compaction. Backfill, recompact and retest each area so prepared to confirm drainage rates exceed one inch in one hour.
 - 3. Perform minimum of one soil percolation test for every 10,000 square feet of lawn and meadow area.
- E. Excavate or fill subgrade, as required, to bring subgrade to elevations shown. Maintain all angles of repose. Confirm that subgrade is at proper elevations and that no further earthwork is required to bring the subgrade to proper elevations. Provide subgrade elevations that slope parallel to finished grade and towards subsurface drains shown.
- F. Remove all construction debris, trash, rubble and all extraneous materials from subgrade. In the event that fuels, oils, concrete washout or other material harmful to plant growth or germination have been spilled into the subgrade, excavate the subgrade sufficiently to remove all such harmful materials and fill with approved fill, compacted to the required subgrade compaction level.

3.3 FINE GRADING

- A. Immediately prior to dumping and spreading loam, clean subgrade of all stones greater than 2-inches and all other extraneous matter. Remove all such material from Site. Notify ENGINEER that subgrade has been cleaned, and obtain approval prior to spreading loam.

- B. Do not attempt to spread excessively wet, muddy or frozen loam. Do not spread loam more than five days before seeding or planting.
- C. Spread loam to a depth of 6-inches but not less than required to meet finish grades after light rolling and natural settlement:
 - 1. Spread approximately one-half the thickness of required loam depth. After spreading loam, rototill, disk or harrow loam and subgrade to bring top 2-inches of subgrade upward into loam layer, so that there is a transitional layer between loam and subgrade.
 - 2. Spread remainder of loam to required finish grades.
 - 3. Compact each lift sufficiently to reduce settling, but not enough to prevent the movement of water and feeder roots through loam. After compaction spread loam should offer firm, even resistance when a soil sampling tube is inserted.
 - 4. Phase the placement of the final lift so that wheeled vehicles do not have to travel over areas where final lifts are already in-place.
 - 5. Spread and compact to a smooth, uniform surface plane, to within plus or minus 1/2-inch of finish elevations. Roll and rake and remove all ridges, and fill depressions, as required. Remove all stones larger than 1-inch in any dimension and all sticks, roots, trash and other extraneous matter.
 - 6. Perform percolation tests as for subgrades, except limit depth of holes to 2/3 the depth of loam layer.
- D. Spread ground limestone or acidulant and fertilizer, as specified. Mix ground limestone with dry loam before spreading fertilizer and work lightly into the top 4-inches of loam by harrowing or tilling at least three days before applying commercial fertilizers.
- E. Grade planting areas to smooth, even surface with loose, uniformly fine texture. Remove all stones and extraneous material in excess of 1-inch diameter. Roll, rake and remove ridges and fill depressions, as required to meet finish grades.
- F. Moisten prepared areas before seeding, sodding, sprigging or plugging. Water thoroughly and allow surface moisture to dry before planting. Do not create a muddy loam condition.
- G. Prior to seeding or planting, restore loam to specified condition, if eroded or otherwise disturbed.

3.4 CONVENTIONAL SEEDING

- A. General: Maintain grade stakes until removal is mutually agreed upon by all parties concerned.

- B. Rake or harrow all seedbeds immediately prior to seeding to produce a rough, grooved surface, no deeper than 1-inch. Seed only when seedbed is in a friable condition and not muddy or hard.
- C. Sow seed using a spreader or seeding machine.
- D. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other.
- E. Sow lawn grass seed mixture at the rate of not less than five-pounds for every 1000 square feet.
- F. Cultipacker, or approved similar equipment, may be used to cover the seed and to firm the seedbed in one operation. In areas inaccessible to cultipacker:
 - 1. Rake the seed lightly into top 1/8-inch of loam, roll in two directions with a water ballast roller, weighing not less than 100 pounds per linear foot.
 - 2. Take care during raking that seed is not raked from one spot to another.
 - 3. Protect seeded areas against erosion by spreading specified mulch after completion of seeding operations:
 - a. Protect seeded areas against hot, dry weather or drying winds by applying peat moss mulch not more than 24 hours after completion of seeding operations. Presoak and scatter evenly to a depth of from 1/8-inch to 3/16-inches thick and roll to a smooth surface. Do not mound.
 - b. Spread straw mulch to form a continuous loose blanket not less than 1-1/2-inch deep over seeded areas at the approximately rate of two tons-per acre:
 - 1) Anchor mulch by spraying with asphalt emulsion at the rate of ten to 13-gallons per 1000 square feet.
 - 2) Place mulch with equipment that will blow or eject, by means of a constant air stream, controlled quantities of the mulch and asphalt in a uniform pattern over the specified area. If the mulch is excessively cut or broken, take measures to reduce the cutting or breakage. Introduce the asphalt into the air stream by means of a spray arranged so that it will partially coat the mulch with a spotty asphalt tack prior to the depositing of the mulch covering. Rate of application not less than 75-gallons per ton of mulch.
 - c. Protect seeded areas, with slopes exceeding one on six, by providing erosion-control fiber mesh and where slopes exceed one on four, by providing erosion-control blankets. Install erosion-control materials according to manufacturer's written instructions and as follows:
 - 1) Vertically down slope without stretching fabric.
 - 2) Install hold down staples three per square yard minimum in center of fabric or as required to hold and shape the fabric to the contours of the slope. Install hold down staples along edges and overlaps of fabric at 9 inches on centers minimum, or as required to hold and shape the fabric to the contours of the slope.

3) Lap fabric 4-inches minimum and turn edges of fabric into 8-inch deep by 16-inch wide earth trench and fill trench with earth.

- G. Using a uniform fine spray, thoroughly and evenly water seeded areas. Provide adequate water to moisten seedbed to a depth of 2-inches:
 - 1. Repeat this process when peat mulch color lightens. Maintain all seedbeds in a uniformly moist condition, conducive to seed germination and plant establishment, as specified.
- H. Reseed areas that remain without mulch for longer than three days.
- I. Take precautions to prevent damage or staining of construction or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.
- J. Prevent foot or vehicular traffic, or the movement of equipment, over the mulched areas. Reseed areas damaged as a result of such activity.

3.5 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
- B. Mix slurry with asphalt-emulsion tackifier.
- C. Apply slurry uniformly to all areas to be seeded in a two-step process. Apply first slurry application at a minimum rate of 500-pounds per acre dry weight, but not less than the rate required to obtain specified seed-sowing rate so that the seed comes into direct contact with loam.
- D. Apply slurry cover coat of fiber mulch at a rate of 1000-pounds per acre.

3.9 RECONDITIONING EXISTING LAWNS AND MEADOWS

- A. Recondition existing lawn and meadow damaged by CONTRACTOR'S operations, including areas used for storage of materials or equipment and areas damaged by movement of vehicles. Recondition existing lawns and meadow areas where minor regrading is required.
- B. Recondition other existing lawn and meadow areas shown.
- C. Provide fertilizer, seed or sod and soil amendments, as specified for new lawn and meadow, and as required to provide satisfactorily reconditioned lawns and meadows. Provide new loam as required to fill low spots and meet new finish grades.
- D. Till stripped, bare, and compacted areas thoroughly to a depth of 12-inches.

- E. Remove diseased or unsatisfactory lawn and meadow areas; do not bury into soil. Remove topsoil containing extraneous materials resulting from CONTRACTOR'S operations including oil drippings, stone, gravel and other construction materials.
- F. In areas approved by ENGINEER, where substantial lawns and meadows remain (but are thin), mow, dethatch, core aerate and rake. Fill low spots, remove humps, cultivate soil, fertilize, and seed. Remove weeds before seeding or if extensive, apply selective chemical weed killers, as required. Apply a seedbed mulch, if required, to maintain moist condition.
- G. Water newly planted areas and keep moist until new lawns and meadows are established, as specified.

3.10 ACCEPTANCE CRITERIA FOR LAWNS AND MEADOWS

- A. Lawn and meadow Work will be considered acceptable when:
 - 1. Seeded Lawn: When a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 square feet and bare spots not exceeding 5-inches by 5-inches.
 - 2. Seeded Meadow: Not Used.

3.11 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris, created by lawn and meadow Work, from paved areas. Clean wheels of vehicles before leaving Site to avoid tracking soil and loam onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout extended service period and remove when service period ends. Treat, repair or replace damaged lawns and meadows.
- C. Take all precautions to ensure that hydroseed slurry is only placed on the areas designated. Completely clean any overspray, on areas not designated to receive slurry.

3.12 INSPECTION AND ACCEPTANCE

- A. Where lawns and meadows do not comply with specified acceptance criteria, reestablish lawns and meadows and continue extended service period until lawns and meadows comply with criteria for acceptance.

3.13 DEMONSTRATION

- A. Engage installer's Site supervisor to train and instruct OWNER'S personnel in the proper maintenance of lawns and meadows and procedures to be performed throughout the year for proper care and maintenance of lawn and meadows:

1. Include instructions and training on reconditioning established lawns and meadow and sources of lawn and meadow materials.
 2. Schedule training with OWNER, through ENGINEER, with at least seven days' advance notice.
- B. Review Operation and Maintenance information and be sure all instructions are clearly understood by OWNER'S personnel and are supplemented with additional information, clarifications and instructions, as required.
- C. Provide minimum of two, nonconsecutive, full days on-Site training time during day shift normal working hours.

+ + END OF SECTION + +

SECTION XI-34 78 13

PORTABLE TRUCK SCALES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials and equipment as shown, specified and required to furnish and install one portable truck scale and associated electronic controls and scale house facility.
2. Included are is all work associated with providing a suitable foundation system, power, access, scale house and all appurtenances.
3. This scope provides for a scale that is manually operated by a scale operator. If a more automated system is desired by the CONTRACTOR, then the CONTRACTOR shall submit information regarding the proposed system for review and approval by the ENGINEER.
4. The location of the portable truck scale shall be selected by the CONTRACTOR. It shall be within the Limits of Work at a location that shall allow for efficient use while maintaining the site controls and health and safety provisions of the Contract, including, but not limited to, vehicle decontamination requirements. It shall not be within 50 feet of the property line of the residence located immediately west of the Three Star Lagoon.

1.2 REFERENCES

A. Standards referenced in this Section are listed below:

1. American Welding Society, (AWS):
 - a. AWS D1.1, Structural Welding Code.
2. National Bureau of Standards, (NBS).
3. National Electrical Code, (NEC).
4. National Electrical Manufacturers Association, (NEMA).
5. Scale Manufacturers Association, (SMA)

1.3 QUALITY ASSURANCE

A. Equipment Manufacturer's Qualifications:

1. Manufacturer shall have a minimum of five years of experience of producing substantially similar equipment and shall be able to show evidence of at least five installations in satisfactory operation for at least five years.

B. Component Supply and Compatibility:

1. Obtain all equipment included in this Section, regardless of the component manufacturer, from a single truck scale equipment manufacturer.

2. The truck scale equipment manufacturer shall review and approve or shall prepare all Shop Drawings and other submittals for all components furnished under this Section.
 3. All components shall be specifically designed for truck weighing service and shall be integrated into the overall equipment design by the truck scale equipment manufacturer.
- C. Source Quality Control:
1. Visual Inspection: Verify that equipment complies with these Specifications and approved Shop Drawings.
 2. Packing:
 - a. Inspect prior to packing to ensure that assemblies and components are complete and undamaged.
 - b. Protect machined surfaces and mating connections.
 - c. Protect bearings with a shop applied corrosion prevention coating.
 - d. Crate in a manner which will prevent damage during shipment, delivery and storage.
 - e. Identify crate contents by a packing slip fastened to the outside of the crate.

1.4 SUBMITTALS

- A. Action Submittals: Submit the following:
1. Product Data:
 - a. Manufacturer's literature, illustrations, specifications and engineering data.
 2. Shop Drawings:
 - a. Drawings showing fabrication methods, assembly, installation and wiring diagrams.
 - b. Setting drawings, templates, and directions for the installation of anchor bolts and other anchorages.
 - c. Drawings showing proposed scale house structure.
- B. Informational Submittals: Submit the following:
1. Source Quality Control Submittals:
 - a. Submit results of required control panel shop tests.
 2. Site Quality Control Submittals:
 - a. Submit a written report providing the results of the required field tests.
 - b. Submit a written report of the results of each visit by a manufacturer's serviceman, including purpose and time of visit, tasks performed and results obtained.
- C. Closeout Submittals: Submit the following:
1. Operation and Maintenance Manuals:
 - a. Submit complete installation, operation and maintenance manuals including test reports, maintenance data and schedules, description of operation and spare parts information.

- b. Furnish operation and maintenance manuals.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the Site to ensure uninterrupted progress of the Work. Deliver anchor bolts and anchorage devices, which are to be embedded in cast-in-place concrete in ample time to not delay that Work.
- B. All boxes, crates and packages shall be inspected by CONTRACTOR upon delivery to the Site. CONTRACTOR shall notify ENGINEER, in writing, of any loss or damage to equipment or components. Replace losses and repair damage to new condition, in accordance with manufacturer's instructions.
- C. Store materials to permit easy access for inspection and identification. Keep all material off the ground using pallets, platforms, or other supports. Protect equipment including packaged materials from corrosion and deterioration.

PART 2 - PRODUCTS

2.1 SERVICE CONDITIONS

- A. General: Equipment shall have a clear and unobstructed weighing surface of no less than 10 feet wide and 70 feet long:
 - 1. Scale shall be of a steel deck scale designed for portable installation. Scale shall be fully electronic design with no mechanical weighing elements, check rods, or check stays.
- B. Schedule of Service Conditions:
 - 1. No. of Scales: 1
 - 2. Platform Size: 10' x 70'
 - 3. Total Capacity: 100 Ton
 - 4. Concentrated Load Capacity: 100,000 pounds
 - 5. Service Design: 250 vehicles per day for 20 year design life.

2.2 PRODUCT AND MANUFACTURER

- A. Products and Manufacturers: Provide one of the following:
 - 1. Mettler Toledo.
 - 2. Fairbanks Scale.
 - 3. Or equal.

2.3 DETAILS OF CONSTRUCTION

- A. Scale Foundation:
 - 1. Foundation shall meet the minimum specifications as required by the manufacturer.

2. Scale shall be on a level and stable surface.
- B. Weighbridge:
1. Weighbridge shall be of steel fabrication. Welding shall be completed in accordance with AWS D1.1 Structural Welding Code.
 2. Enclosed chambers shall be hermetically sealed to prevent corrosion.
 3. Design shall allow for easy replacement of load cells using lifting jack.
 4. Design shall allow for access to load cell cables, base plates, and foundation anchor bolts from the top of the scale platform.
 5. No field welding shall be required for scale installation.
 6. Weighbridge shall be painted with two part epoxy paint system to prevent corrosion.
- C. Load Cells:
1. Load cells shall be of stainless steel construction.
 2. Provide each load cell with brass fittings, neoprene dust boot, stainless steel diaphragm and steel column head components.
 3. Each load cell shall have a suitable base plate.
 4. Junction boxes shall be Nema 4X rated.
- D. Scale Instrument:
1. The scale instrument shall be capable of performing basic weighing operations, including but not limited to: inbound and outbound two-weighment operations; single weighment operations where tare weight is known through tares which are stored in the scale instrument memory or manually entered through the keyboard; and transient vehicle weighing operations where the record is not added to the memory accumulators or totals.
 2. Instrument shall output the following information: gross, Tare and Net Weight; ID; Transaction Counter; Date and Time; Variable Application Specific Information; Standard Reports Generated by scale instrument.
 3. Scale instrument shall have the ability to connect with external PC software to allow for configuration and data back-up/restoration.
- E. Ticket Printer:
1. Provide a tabletop ticket printer. Printer shall be connected to the operator panel. Provide ten feet of connecting cable with suitable connectors for this purpose.
 2. Printer shall use carbon impregnated seven-part tickets. Tickets shall be loaded and distributed by a control room operator.
 3. Provide necessary supply of tickets.
 4. Logging of printer information shall be initiated from a pushbutton located at the control panel.
- F. Lightening Protection:
1. A comprehensive lightening protection system shall be provide with the scale.

G. Scale House:

1. A scale house structure shall be provided as necessary to house the scale instrument and ticket printer as well and the scale operator.
2. Scale house shall have necessary heating, cooling, lighting and communications necessary for scale and scale operator.
3. CONTRACTOR shall provide necessary power and communications for scale house and scale system operations.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspection:

1. Inspect and verify that structures or surfaces on which the equipment will be installed have no defects which will adversely affect installation.
2. Inspect all equipment prior to installation.
3. Promptly report defects which may affect the Work to the ENGINEER, in writing.

3.2 INSTALLATION

- A. Install the truck scale equipment in a manner and to the tolerances recommended by the equipment manufacturer.

3.3 FIELD PAINTING

- A. Field painting shall conform to the requirements of the scale manufacturer.

3.4 START-UP AND TEST

- A. Perform operating tests to demonstrate that the equipment operates properly.
- B. Make adjustments required to place equipment in proper operating condition.
- C. Submit report of test results.

3.5 DECONTAMINATION AND REMOVAL

- A. At the end of the Work, CONTRACTOR shall clean and decontaminate the portable truck scale and its appurtenances and shall perform wipe testing to document that the equipment surfaces do not have residual site contaminants on them.
- B. CONTRACTOR shall remove portable truck scale and all appurtenances from the site.
- C. Submit wipe test results.

++ END OF SECTION ++

SECTION XI-35 20 23

DREDGING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment and incidentals as shown, specified and required to perform dredging (or contaminated sediment removal) in accordance with this specification and the Drawings. Dredging methods may consist of mechanical or hydraulic dredging or a combination of the two methods.
2. All temporary pipelines and equipment necessary to convey dredged sediment from the site of the dredging to the dewatering facilities are included.
3. All means necessary to protect structures against damage due to dredging are included.
4. All labor, materials, equipment and incidentals necessary to monitor turbidity in the vicinity of the dredge are included.
5. All labor, materials, equipment and incidentals necessary to control the resuspension of sediments are included.
6. Pre and post dredging bathymetric surveys of the sediment deposits are included as part of this Section.
7. Post dredging sampling of the sediment deposits is included as part of this Section.
8. Post backfill placement bathymetric survey of the backfill is included as part of the Section.
9. CONTRACTOR is advised that identifying and keeping records during the work is required.
10. Dredging shall be accomplished using mechanical or hydraulic dredging equipment and techniques, or a combination thereof.

B. Related Sections:

1. Provisions of Division 1 shall govern work under this section.
2. Section XI-01 35 44, Spill Prevention Control and Countermeasures Plan.
3. Section XI-31 11 00, Clearing.
4. Section XI-31 25 14, Turbidity Curtains.
5. Section XI-35 20 24, Geotextile Dewatering Containers.
6. Section XI-44 00 05, Water Treatment.

1.2 QUALITY ASSURANCE

- A. Permits and Regulations: Comply with conditions and requirements of equivalency for the all required permits. CONTRACTOR shall keep and maintain the following records of the dredging operation:
1. A log of the dates and times that dredging takes place and approximate hours of actual dredging each day.
 2. The location of dredging each day. CONTRACTOR shall mark up and maintain a site plan drawing showing the location of dredging work on a daily basis.
 3. A list of the floating plant and equipment on the site each day with a notation as to the approximate hours of use for each dredge or other operating equipment.
 4. A description of any large debris encountered which must be removed to facilitate dredging and the procedure used to remove and dispose of it.
 5. An estimate of daily volume of pipe (system) cleaning water.
 6. A description of any accidents, pipe breaks, equipment failures or spills which occur and a description of corrective measures taken.
 7. An estimate of slurry volume pumped per day.
 8. Upon completion of dredging, provide one copy of all records to the ENGINEER.

1.3 SUBMITTALS

- A. Submit a Dredging Work Plan within 10 days of notice of award of contract. Approval of Dredging Work Plan is required prior to any dredging work. Dredging Work Plan shall include at minimum a list of equipment to be utilized for dredging and a written description of proposed dredging procedures covering the following:
1. The dredge method (mechanical or hydraulic), dredge equipment model and manufacturer;
 2. Pump size and capacity and proposed slurry pipeline route(s);
 3. Draft of dredge boat and method of controlling depth of cut and location of dredge;
 4. Proposed method(s) of minimizing the resuspension of sediments; and
 5. Proposed method of removing debris and removing or relocating stones and rubble too large for the dredge to pump but which must be removed to gain access to sediments.
- B. Submit a key plan showing all required clearing; piping, dewatering areas, equipment, and other pertinent information for the Site.
- C. Provide shop drawings for dredge discharge piping including pipe materials, joint details, and pressure rating. Indicate proposed routes of pipeline and installation details.
- D. Emergency spill response plan.
- E. Predredging bathymetric survey showing spot elevations and contours.

- F. Post dredging bathymetric survey showing spot elevations and contours.
- G. Post dredging survey of sampling locations showing elevations and horizontal locations.
- H. Post backfill placement bathymetric survey showing spot elevations and contours.
- I. Submit a plan detailing how the geotextile dewatering containers or other storage or dewatering devices will be measured to calculate the dewatered volume of the material after undergoing dewatering.

1.4 JOB CONDITIONS

- A. The material to be removed consists of contaminated unconsolidated sediments and soil overlying the bedrock or hard pan bottom.
- B. A bathymetric approximation of the Lagoon can be found on the drawings. Known sediment physical characteristics are included in the documents referenced in Section IV Article 5. The ENGINEER or OWNER will not be responsible for interpretations or conclusions drawn therefrom by CONTRACTOR.
- C. CONTRACTOR is advised that the sediment contains organic material, stones, cobbles, debris, tree limbs and other vegetation.
- D. CONTRACTOR shall monitor turbidity levels as described in this Section.
- E. Access to the Lagoon may be accomplished from the shoreline within the Limits of Work on the site and is subject to proper erosion and sediment controls being in place. Any improvements necessary for the CONTRACTOR's access shall be made at no additional cost to the Owner.
- F. CONTRACTOR shall locate all utilities in the area of his work prior to beginning dredging. All utilities and structures shall be protected from all damage by CONTRACTOR and, if damaged, shall be repaired by CONTRACTOR at his expense.
- G. CONTRACTOR shall develop an emergency spill response plan to address fuel and/or oil spills in and around the Lagoon. CONTRACTOR shall not be permitted to place any gasoline or diesel powered equipment or boats in or near the Lagoon until the ENGINEER approves the CONTRACTOR submitted emergency spill response plan.

PART 2 – MATERIALS

2.1 DREDGING SYSTEM

- A. All dredge slurry pipelines shall be floating pipelines. Use double walled pipe for all areas outside of the limits of the perimeter turbidity silt curtain, including land areas. The annular space between the slurry carrying pipe and the outer, secondary containment pipe shall drain to temporary holding tanks on shore or to the area within the silt curtain where dredging is taking place. Single wall pipeline will be acceptable within the area bounded by the perimeter turbidity curtain.
- B. Provide dredging equipment which is capable of removing sediments from pockets and undulations in the surface of the underlying strata.

PART 3 – EXECUTION

3.1 LIMITS OF DREDGING

- A. The limits of dredging and sediment removal are shown on the drawings.
- B. CONTRACTOR shall remove sediments and other materials to the limits of dredging. No bedrock shall be removed.
- C. It is the intention of these specifications and the drawings to require the removal of all sediment and soil on the Lagoon bottom within the limits shown on the drawings. Stones and cobbles which are too large to be removed by the dredge may be moved out of the way of the dredge and left in the Lagoon beneath the backfill. Loose sediment beneath or surrounding the stones shall be removed. Debris, rubble or tree limbs shall be removed and disposed by the CONTRACTOR.
- D. The CONTRACTOR shall perform a predredging and a post dredging survey on the same 10 foot by 10 foot grid to verify that the desired cut elevations have been reached. The survey shall be completed with a horizontal accuracy of 0.25 feet and a vertical accuracy of 0.1 feet. The CONTRACTOR shall allow the ENGINEER to observe the predredging and post dredging surveys. The post dredging survey shall be performed after a minimum settling period of 5 calendar days after the last day of dredging.
- E. The CONTRACTOR shall perform a post backfill placement survey on the same 10 foot by 10 foot grid to verify that the desired fill elevations have been reached. The survey shall be completed with a horizontal accuracy of 0.25 feet and a vertical accuracy of 0.1 feet. The CONTRACTOR shall allow the ENGINEER to observe the post backfill placement survey. The post backfill placement survey shall be performed after a minimum settling period of 2 calendar days after the last day of backfill.

3.2 ENVIRONMENTAL PROTECTION

- A. Install and maintain measures to prevent the migration of sediments from the area of the dredge to areas outside the perimeter turbidity curtain as measured at monitoring stations. ENGINEER reserves the right to receive, evaluate and direct project operations based on these data. Install interior turbidity curtains or other devices within the area surrounded by the perimeter turbidity curtain to prevent fine sediments from migrating off-site.
- B. Protect against fuel or oil spills when refueling or servicing equipment. Immediately correct any fuel or oil leaks in waterborne equipment.
- C. Wherever possible, biodegradable hydraulic oil shall be used by the CONTRACTOR.
- D. Install an oil adsorbent boom around the area being dredged to control the movement of any oil or other petroleum products released from the sediments during dredging.
- E. Remove floating debris from the area daily. Prevent floating debris from damaging the turbidity curtain or escaping from the dredging area. CONTRACTOR will arrange for and pay all costs associated with disposal of debris in an approved landfill.
- F. Comply with federal, state and local requirements concerning air, noise and water pollution.
- G. No blasting shall be permitted.

3.3 DREDGING OPERATIONS

- A. CONTRACTOR shall mobilize sufficient equipment to the site to meet the requirements of the work. All equipment shall be maintained in satisfactory operating conditions, free of any oil or fuel leaks, and capable of safely and efficiently performing the work. All equipment shall be subject to inspection by ENGINEER at any time.
- B. Unless otherwise directed, CONTRACTOR shall make all efforts to pump dredge material to the dewatering area.
- C. Control dredge speed and operations of pumps and cutterheads or other devices employed to loosen sediments so as to minimize the resuspension of sediment into the water and the settling out of resuspended solids in areas previously dredged. Provide shrouds or other approved devices to reduce resuspension over cutter heads or horizontal augers, if used.
- D. Dredge cuts shall overlap to avoid leaving ridges or windrows of sediments between adjacent cuts. CONTRACTOR shall make every effort to remove all

sediment indicated for removal and to avoid redistributing sediments from areas which are being dredged into areas where dredging has been completed. Any material pushed, deposited or moved into areas outside the limits of dredging, as shown on the drawings, or into areas previously dredged shall be removed at no additional cost to the OWNER.

- E. All pipelines used in hydraulic dredging shall be kept in good condition and free of leaks at all times during their use. All breaks or leaks along their length shall be promptly repaired. All breaks in any pipeline shall be reported on the CONTRACTOR's daily report. Any material spilled during a pipeline break shall be completely removed at no additional cost to OWNER.
- F. Furnish, at request of ENGINEER or OWNER, boats, fuel, boatmen and materials necessary for inspecting work.

3.4 SUSPENDING DREDGING OPERATIONS

- A. Suspend dredging operations whenever weather or other conditions exist which might reasonably be expected to endanger the work or result in a release of sediments to the creek or other downstream areas. ENGINEER reserves the right to receive, evaluate and direct project operations based on the downstream monitoring data.
- B. CONTRACTOR is advised that dredging must be suspended whenever the water in Wappingers Creek adjacent to the Three Star Lagoon outlet is visibly in contrast to the creek or the turbidity exceeds 1.10 NTU, whichever is less stringent, unless the State deems the water quality is acceptable. Construction of a functional perimeter turbidity curtain is considered essential to the proper and efficient conduct of work.
- C. Suspend dredging operations immediately if perimeter turbidity curtain is damaged or becomes submerged. Suspend dredging operation immediately upon any pipeline leak or break.

3.5 FINAL ACCEPTANCE

- A. Dredging will be considered complete when sediments have been removed, placed in the geotextile dewatering containers or other storage or dewatering devices, and all required submittals have been submitted and approved.
- B. Site shall be restored as shown and specified and to the satisfaction of the ENGINEER and the OWNER.
- C. CONTRACTOR shall notify ENGINEER when he believes that dredging has been completed and the site is ready for measurement. Measurement shall be conducted consistent with procedures presented herein.

+ + END OF SECTION + +

SECTION XI-35 20 24

GEOTEXTILE DEWATERING CONTAINER

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall furnish all labor, materials, equipment, polymer, polymer feed system, and incidentals as shown, specified, and required in connection with deployment, and filling of the geotextile dewatering container, if utilized for the dewatering of dredged sediments, in accordance with the lines, grades, design, and dimensions shown on the drawings as specified herein.

B. General:

1. CONTRACTOR shall install the geotextile dewatering container by positioning it on a prepared surface with a 0% slope transversely (across the width) of the geotextile dewatering container with a maximum slope not to exceed 0.5% in the longitudinal (length) direction of the geotextile dewatering container. Geotextile dewatering container shall be filled with dredged or pumped material to a height not to exceed the manufacturer's specifications.

C. Related Work Specified Elsewhere:

1. Section XI-31 25 14, Turbidity Curtain.
2. Section XI-35 20 23, Dredging.
3. Section XI-44 00 05, Water Treatment.

1.2 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. All geotextile dewatering containers and ancillary products shall be the standard product of a manufacturer who has been regularly engaged in the integral design, manufacture, and fabrication of the products, and whose product has proven reliable in similar service for 5 years. The geotextile dewatering container manufacturer must be ISO 9001 certified and can provide a current ISO certification. The geotextile dewatering container manufacturer must have an on-site company lab that has a current A2LA certification.

1.3 SUBMITTALS

A. Plan of Construction:

1. The contractor must submit prior to award of contract a detailed Plan of Construction. This plan shall include, but not be limited to, site plan, dewatering containment cell, geotextile dewatering container layout, dredging or pumping methods, mass balance system showing density, percent solids, flow measurement all integrated into a real time controller, polymer type, polymer injection system/location, flocculation monitoring, filling method, compatibility assessment and disposal mechanism.
 2. A copy of the manufacturer's installation instructions detailed for this project.
 3. A copy of the bench-scale or hanging bag test report for the geotextile dewatering container, including any additives or polymers with the specific materials to be dewatered.
- B. Prior to performing any work, the contractor shall submit a "Sequence of Construction" describing the sequences of operations for the installation of the geotextile dewatering container. The sequence shall address site preparation, deployment, chemical/polymer selection, mixing, injection, and filling of the geotextiles, and anchoring or securing methods. Equipment used for these operations shall also be outlined.
- C. Treatability Study: Prior to performing any work, the contractor shall conduct a treatability study for the selection of the geotextile dewatering container and chemical/polymer selection to address proper filtration and sediment removal. The treatability study shall include, but is not limited to: dredge spoil characterization and deposition; geotextile dewatering container design and selection; chemical/polymer bench scale testing to investigate proper selection and dosage rates; chemical/polymer mixing and injection; hanging bag tests and identification of resulting effluent characteristics for water treatment.
- D. Shop Drawings:
1. Submit shop drawings of the materials, equipment, and method of installation details for the complete system.
 2. Submit manufacturer's product literature and specifications for material(s) utilized to construct geotextile dewatering containers, including Filling Port details, connection details, site layout, piping, manifold, and related components.
 3. Provide a mass balance of the pumping flow rates, chemical make-down, amount of dilution water, filtrate volume, density measurement, and percent solids, all integrated into a real time control system, showing a method of collection, and discharge point.
 4. Details and layout of the dry or emulsion polymer make-down and metering system.
- E. Submit a signed certification from the manufacturer indicating that the materials utilized meet the project specification requirements and are designed specifically for this purpose. The geotextile dewatering manufacturer must be ISO 9001 certified and have an A2LA certified laboratory.

1.4 PRODUCT DELIVERY, HANDLING, AND STORAGE

A. Product Delivery:

1. The geotextile dewatering container and related components shall be delivered to the project site in a protective wrap or cover. Each geotextile dewatering container shall be clearly labeled for easy identification. All geotextile dewatering containers greater than 1,000 lbs. gross weight or installed in the wet shall be rolled on a steel pipe and the ends fitted with PVC protective caps.

B. Product Handling:

1. No hooks, tongs, or other sharp instruments shall be used for handling geotextile dewatering containers. Also, the container shall not be dragged along the ground. Geotextile dewatering containers shall be unrolled into position as recommended by the manufacturer.

C. Product Storage:

1. Geotextile dewatering containers shall be stored in areas where water cannot accumulate, elevated off of the ground, and protected from conditions that will affect the properties or performance of the container. Geotextile dewatering containers shall not be exposed to temperatures in excess of 180° F. Duration of storage time shall not exceed manufacturer's recommendation.

PART 2 – PRODUCTS

2.1 GEOTEXTILE DEWATERING CONTAINER

A. Geotextile Dewatering Container Material:

1. The geotextile dewatering container material shall be manufactured from high tenacity polypropylene multifilament and monofilament yarns, woven into a stable network such that the yarns retain their relative position. The geotextile dewatering container material shall be inert to biological degradation and resistant to chemicals which may be encountered.

B. The geotextile dewatering container shall be fabricated by sewing together mill widths of the woven engineered textile to form a tubular shape. The seams shall be parallel stitch lines with 1.4-inch spacing. The sewing thread shall be multiply polyester filament yarn.

C. Geotextile dewatering containers fabricated 45-feet or greater in circumference must be fabricated with the mill roll length of the woven engineered textile and the adjacent seams being in the circumferential direction with the closure of the geotextile dewatering container having a longitudinal seam on the bottom of the

container. Each geotextile dewatering container shall be fabricated with one or more PVC filling ports located along the top centerline of the geotextile dewatering container. The filling port shall be comprised of 1 1/2-inch thick inside and outside flange rings that sandwiches the woven engineered textile surface between 1/8-inch thick rubber gaskets and secured with 3/4-inch bolts to provide a connection that exceeds the strength of a sewn seam. In addition to the flanges, the fill port shall include a fabric sleeve that clamps around the feed line to prevent leakage.

- D. PVC Fill Ports are to be provided for the attachment of the dredge or pump discharge line to the geotextile dewatering container and shall be located at intervals of no more than 75 feet, or as recommended by the manufacturer. Fill ports shall be ridged PVC with an inner port body and outer port body each comprising one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with steel bolts and nuts. Fill ports shall be either 4-inch (GP-4) or 8-inch (GP-8) in diameter with a 48-inch long, flexible non-woven 8 oz. geotextile sleeve.
- E. Dewatering Textile material and factory-sewn seams utilized in the construction of the geotextile dewatering container shall meet or exceed the following:

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			Machine Direction	Cross Direction
Wide Width Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/in)	70 (400)	96.3 (550)
Wide Width Tensile Elongation	ASTM D 4595	%	20 (max.)	20 (max.)
Factory Seam Strength	ASTM D 4884	kN/m (lbs/in)	70.1 (400)	
Apparent Opening Size (AOS)	ASTM D 4751	mm (U.S. Sieve #)	0.425 (40) or as determined by treatability study	
Water Flow Rate	ASTM D 4491	l/m ² (gpm/ft ²)	813 (20) or as determined by treatability study	
Mass/Unit Area	ASTM D 5261	g/m ² (oz/yd ²)	585 (17.3) (Typical Value)	
UV Resistance (% strength retained after 500 hrs.)	ASTM D 4355	%	80	

- F. Product and Manufacturer:
1. Geotube™
 - (a) TenCate
3680 Mount Olive Road
Commerce, GA 30529
Phone: (706) 693-1897
Fax: (706) 693-1896
 2. Or Equal

2.2 POLYMER

- A. CONTRACTOR shall provide polymers and flow paced polymer systems based on the results of the Bench Scale Rapid Dewatering Test (RDT) and consultations with the geotextile dewatering container manufacturer.
1. Polymer systems shall include at a minimum:
 - a. polymer storage,
 - b. metering pump,
 - c. static mixer,
 - d. calibration cylinder,
 - e. flow control valve; and
 - f. piping as required.
- B. CONTRACTOR shall provide a selection, dosing and delivery of polymers as required for dewatering operations and to maintain an adequate filtrate water quality of less than 50 NTU in the discharge to the water treatment system.
- C. CONTRACTOR shall provide dredge flow metering and density meter with interconnection necessary to flow pace the polymer system.

PART 3 – EXECUTION

3.1 SITE PREPARATION

- A. Areas in which geotextile dewatering containers are to be placed shall be constructed in the areas shown on the Drawings and coordinated with the CONTRACTOR's overall processes for dredging, material handling, water treatment and the loading, transport and off site disposal of dredged materials. All objects that could damage the geotextile dewatering containers, such as roots and projecting stones shall be removed. The site surface shall be approximately level across the width of the geotextile dewatering container and a maximum slope 1% for the first 100 feet and not to exceed 0.5% in the overall length direction of the geotextile dewatering container. The contractor shall install a drainage system of 6-inches of washed, free draining aggregate or a three-dimensional filtration fabric to a sump or low outlet ditch system around the perimeter that allows the filtrate to flow unobstructed. The dewatering cell shall be complete with perimeter barriers and lined as shown and shall remain in place

until dredging is completed. The dewatering containment area shall be lined with a geomembrane liner that has been continuously seamed and tested to ensure leakproof containment. CONTRACTOR shall note that the dewatering area subgrade will be subject to confirmation testing post-dewatering activities to verify no contamination of the subgrade occurred as a result of leakage or overtopping of the dewatering containment area. Any contamination identified will be removed by the CONTRACTOR at no additional cost to the OWNER.

- B. CONTRACTOR shall notify the ENGINEER that the site is prepared and ready for inspection prior to placing the geotextile dewatering containers. No geotextile dewatering containers shall be placed until the area has been inspected by the ENGINEER.

3.2 TESTING

- A. CONTRACTOR shall perform a Bench Scale Rapid Dewatering Test to help determine:
 - 1. The rate that the dredged material dewateres through the geotextile, volume reduction, type and dosage of conditioners and or polymers.
- B. The RDT shall be used to determine filtration rates that can be compared to full-scale material flow rates. Conditioner and/or polymer are to be used to achieve the desired rate of dewatering and the clarity and quality of the effluent water. The CONTRACTOR's proposed chemical program shall be submitted for the ENGINEER's review.

3.3 PLACEMENT OF GEOTEXTILE DEWATERING CONTAINER

- A. Place geotextile dewatering containers within the limits shown on the Drawings.
- B. The unrolled geotextile dewatering container should be placed on top of the drainage media and be unrolled down the length direction of the dewatering site and unfolded.
- C. Fill ports shall be on the top and down the centerline of the unrolled geotextile dewatering container. The dimensions of the feed pipe and the opening of the ports shall be measured prior to connecting the flanges.

3.4 FILLING PROCESS

- A. Following the geotextile dewatering container placement, filling with materials from the source shall be accomplished in accordance with the approved Plan and Sequence of Construction. The discharge line of the dredge or pump shall be fitted with a valve or manifold system to allow control of the rate of filling and enable the material to be directed to the geotextile dewatering container intended to be filled. The manifold system shall be fitted with an internal mechanism such as a pinch valve to allow the regulation of the filling rate and pressure into the geotextile dewatering container. The manifold must also be fitted with a sampling

- port installed close to the first point of connection to the first geotextile dewatering container to enable sampling of the material being pumped to insure the proper flocculation if conditioner and or polymer are being used. Any excess discharge shall be directed away from the geotextile dewatering container into a designated area. Before filling, the fill ports not being used for filling shall be closed according to the manufacturer's recommendations to prevent loss of material during filling of the geotextile dewatering containers.
- B. The CONTRACTOR shall show that the Polymer Injection System is installed and functioning properly before the geotextile dewatering container is filled. The CONTRACTOR is responsible for sizing and implementing the polymer system. The flow measuring equipment shall be the electromagnetic meter type.
 - C. The dredge or pump discharge pipe shall be free of protrusions that could tear the geotextile dewatering container surface. The dredge or pump discharge pipe shall be supported above the fill port in a manner which reduces stress on the PVC fill port. Prevent excessive movement of the dredge or pump discharge pipe during filling to prevent damage to the geotextile dewatering container or to the PVC fill port. Follow the manufacturer's recommended Connection Detail to affix the dredge or pump discharge pipe to the fill port.
 - D. Upon filling the geotextile dewatering container, the Fill Port sleeves shall be closed by rolling the sleeve down to the top of the port and closing with a clamp. The geotextile dewatering containers shall be filled as evenly as possible until the design height has been achieved. Effluent water shall be allowed to adequately drain away from the geotextile dewatering container.
 - E. After filling, allow Geotextile dewatering container to dewater, then the geotextile dewatering container can be filled again to the recommended height. This process can be repeated until the dewatering process is completed.
 - F. Geotextile dewatering container filling heights shall be in accordance with the manufacturer's recommendations.
 - G. Comply with the manufacturer's installation instructions.

3.5 MANUFACTURER'S REPRESENTATIVE

- A. A manufacturer's representative shall be present for the installation and filling of the first geotextile dewatering container unless the contractor can prove adequate, successful experience with this technology.

3.6 DEWATERING

- A. When dredging is accepted as complete by ENGINEER, the geotextile dewatering container shall dewater and no additional material shall be added to the geotextile dewatering container.

3.7 GEOTEXTILE DEWATERING CONTAINER REMOVAL AND SITE RESTORATION

- A. After dewatering, the CONTRACTOR shall measure the geotextile dewatering container in the presence of the ENGINEER to determine the general quantity of dredge material. The CONTRACTOR shall remove and dispose of the geotextile dewatering container and the dewatered material at an approved off site facility permitted to receive materials of the type to be encountered, and restore disturbed areas in accordance with the Contract Documents.

+ + END OF SECTION + +

SECTION XI-44 00 05

WATER TREATMENT

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified, and required for a water management system for the Work by:
 - a. Collecting, containing and disposing of water at an off site facility, or
 - b. Designing, furnishing, installing, checking, calibrating, testing, documenting start-up of, placing in satisfactory operation, operating, dismantling, and removing an on site water treatment system.

The Work included herein shall be performed by the CONTRACTOR as required to design, to place the water management system in operation and to operate the system throughout the Work to achieve the specified water quality and continuously achieve compliance with all permit and Specification requirements for collection and remediation of waters from the following sources:

- a. Contaminated surface water.
 - b. Stormwater and precipitation.
 - c. Decontamination and wash water.
 - d. Dewatering water from excavation and dredging operations.
 - e. Water from the containment pad areas.
 - f. All other waters encountered at the Three-Star Anodizing Site.
2. Items to be provided under this Section shall include, but are not limited to, the following:
 - a. Water recovery trenches, pumps, piping, meters, tanks and all other necessary equipment.
 - b. Maintenance tools, supplies and spare parts.
 - c. All power, sanitary sewer and other utilities required.
3. Should the CONTRACTOR opt to perform treatment of contaminated water on site, additional items furnished under this Section shall include, but are not limited to, the following:
 - a. Treatment system controls.
 - b. Treatment system, generally consisting of storage tanks, equalization tanks, mechanical separators (e.g. hydrocyclones), sediment filters, organically modified clay filters, granular activated carbon (GAC) canisters, other treatment components and storage tanks for treated effluent prior to discharge.
 - c. Characterization and appropriate disposal of all sediment and oils collected in the system equipment.
 - d. Characterization and appropriate disposal of all other wastes generated during water treatment.

4. Water collection and treatment system shall be operational, all permits and approvals shall be secured, and all required submittals shall be approved prior to the start of any intrusive work on site that may cause runoff and/or precipitation to contact contaminated soils or other materials. The water collection and treatment shall continue on all contaminated precipitation, runoff, groundwater, dredge dewatering water, and other contaminated waters until the contamination sources have been removed and treated or otherwise prevented from contact with water, precipitation or runoff.
5. CONTRACTOR is responsible for obtaining all permits, approvals, payment of fees and coordination for:
 - a. On site treatment of water,
 - b. Connection and discharge to the municipal sewer system,
 - c. Discharge to surface water or groundwater, or
 - d. Characterization, shipping and disposal costs to an appropriately permitted off site facility.

B. Coordination:

1. Review treatment procedures under other Sections and coordinate Work with this Section.
2. Review data on contaminated water characteristics as provided in documents referenced in Section IV Article 5.
3. CONTRACTOR shall coordinate collection and treatment of contaminated water to allow sufficient time as required for treatment to the applicable standards.

C. Related Sections:

1. Section XI-01 41 26, Stormwater Pollution Prevention Plan.
2. Section XI-01 45 29.13, Testing Laboratory Services Furnished by Contractor.
3. Section XI-31 23 05, Excavation and Fill.
4. Section XI-35 20 23, Dredging.
5. Section XI-35 20 24, Geotextile Dewatering Container.

1.2 QUALITY ASSURANCE

- A. Qualifications: Should the CONTRACTOR opt to treat contaminated waters on site, the CONTRACTOR shall be experienced in the use of GAC and organic clay for water treatment, and shall provide the following information detailing experience of previous systems and remediation projects:
1. Provide project description and references of a minimum of five similar water treatment systems performed by the CONTRACTOR utilizing organically modified clay filters and GAC.
 2. Provide documented experience of at least one year of experience in the set-up and operation of similar equipment and systems.
 3. Provide information regarding any violations of regulations or standards at previous projects. Include information on corrective measures taken, fines imposed, etc.

- B. On Site Treatment System Work Plan: The CONTRACTOR shall prepare a Work Plan for the proposed Work and submit the plan to the ENGINEER within two weeks of the authorization to proceed. The Work Plan shall include the following:
1. Treatment System Design:
 - a. A process flow diagram and calculations showing material and energy balances, contact times, water treatment rate and theoretical emissions.
 - b. Process control instrumentation and instrumentation diagrams.
 - c. Effluent monitoring plan.
 - d. CONTRACTOR'S utility requirements and proposed arrangements with utility authorities.
 2. Treatment schedule:
 - a. Provide a detailed description of the proposed schedule for mobilization, setup, start-up, operation and demobilization of the water treatment system.
- C. On Site Treatment system: The CONTRACTOR shall be solely responsible for the sizing and operation of the water recovery and treatment system. The CONTRACTOR shall provide all necessary equipment, personnel and supplies necessary to ensure proper and continuous operation of the treatment system.
- D. Effluent Standards: If treatment of waters is performed on site, the CONTRACTOR shall design, install and operate the water treatment system after start-up to meet the effluent quality standards indicated in the documents appended to this Section.
- E. Effluent Testing Plan: If treatment of waters is performed on site, the CONTRACTOR shall prepare an effluent testing plan to ensure all treated effluent complies with the effluent quality specified, but shall not be limited to the following:
1. Effluent testing shall be performed on treated effluent.
 2. Effluent testing shall consist of collection of grab samples at the minimum intervals indicated in the documents appended to this Section.
 3. Effluent testing shall be performed in accordance with the test methods identified in the effluent standards.
 4. CONTRACTOR'S laboratory shall submit all test results, chain-of-custody forms and all other documents directly to the ENGINEER for review and approval. CONTRACTOR shall not discharge treated water until test results have been approved by the ENGINEER.
 5. CONTRACTOR shall re-treat all water not meeting effluent standards at no additional cost to the DEPARTMENT.
- F. Regulatory Agencies: The CONTRACTOR shall comply with the applicable provisions of all regulatory agencies including, but not limited to, the following:
1. State and local building codes and ordinances.
 2. Town of Wappingers Falls Sewage Treatment Plant.
 3. New York State Department of Environmental Conservation (NYSDEC).
 4. United States Environmental Protection Agency (USEPA).
 5. United States Occupational Health and Safety Administration (OSHA).

6. Underwriter's Laboratories, Inc. (UL).
 7. Any successors to the agencies listed above.
- G. Reference Standards: CONTRACTOR shall comply with the applicable provisions and recommendations of the following, except where otherwise shown or specified:
1. American National Standards Institute (ANSI).
 2. American Society of Mechanical Engineers (ASME).
 3. American Society for Testing and Materials (ASTM).
 4. Institute of Electrical and Electronics Engineers (IEEE).
 5. National Electric Code (NEC).
 6. National Electric Manufacturers Association (NEMA).
 7. United States Occupational Health and Safety Administration (OSHA).
 8. Society of the Plastics Industry (SPI).

1.3 SUBMITTALS

- A. Qualifications: The CONTRACTOR shall submit statement of qualifications as defined in Paragraph 1.2.A.
- B. Shop Drawings: The CONTRACTOR shall submit the following for approval:
1. Work Plan shall be submitted for review and approved by the ENGINEER prior to startup of the water treatment system.
 2. Submit sufficient information, literature, detailed specifications and drawings to show general arrangement, dimensions, make, style, speed, size, type, horsepower, service factors, efficiency, materials used, design features, internal construction, weights and all other information required by the ENGINEER for review of all water treatment equipment. No water treatment equipment will be accepted by the ENGINEER, nor installation allowed until such review has been completed and approval granted by the ENGINEER.
- C. Test Reports: The CONTRACTOR shall coordinate all verification testing with the laboratory. The laboratory shall submit the results of all verification testing directly to the ENGINEER for review and approval.
- D. Permits: The CONTRACTOR shall obtain and submit copies of all permits, proof of permit-equivalency documents, registrations and approvals required by regulatory agencies to operate the water treatment system.
- E. OSHA: The CONTRACTOR shall submit a separate statement that the equipment complies with all current regulations promulgated by the Occupational Health and Safety Administration. The CONTRACTOR shall be solely responsible for all of the CONTRACTOR'S on-site workers and personnel health and safety as required by OSHA.
- F. Current operating permit and disposal receipts from the receiving facility, and analytical results from characterization, if waters are transported for disposal.

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SETUP

- A. Provide on site water management equipment and accessories in accordance with the approved shop drawings and the manufacturer's instructions.
- B. Perform all on site work in accordance with all local, State and Federal regulations and requirements.
- C. The CONTRACTOR shall obtain all required local, State and Federal permits or proof of permit equivalency prior to operation of the on site water management system.

3.2 TESTING AND ACCEPTANCE

- A. On Site Management System checkout:
 - 1. Following completion of setup of the water management system, the CONTRACTOR shall notify the ENGINEER, in writing, of readiness to begin system checkout, and schedule a system checkout date agreed to by the ENGINEER.
 - 2. The CONTRACTOR shall continuously operate the system for a system checkout period of four hours during normal working hours.
 - 3. During the system checkout operating period, the CONTRACTOR shall demonstrate satisfactory operation of the equipment to the ENGINEER.
 - 4. It shall be the CONTRACTOR's responsibility to record results of the system checkout, effect whatever remedial action is required and arrange for reinspection to review the remedial action taken, at no additional cost to the DEPARTMENT.
 - 5. Completion of the above does not relieve the CONTRACTOR from guarantees specified elsewhere in this Section.
 - 6. All labor, electric energy, fuels and other materials required for operation of the water treatment system shall be furnished by the CONTRACTOR.
- B. On Site Management System Operation:
 - 1. Unless otherwise directed by the ENGINEER, the CONTRACTOR shall operate the water management system until all specified waters have been successfully treated or disposed off site. All sumps, operating areas and excavations shall be maintained in a continuously dewatered condition.
 - 2. Following completion of setup of the water management system and after the CONTRACTOR and ENGINEER mutually agree that the system is ready for operation, the CONTRACTOR shall operate and maintain the system until all waters specified are treated to the required effluent standards and successful treatment is confirmed by verification testing or transported and disposed at an off site facility.

3. During full scale system operation, the CONTRACTOR shall notify the engineer immediately of significant operational problems encountered during the course of operating the water management system.
4. The CONTRACTOR shall furnish, install and use calibrated totalizing flow meters to measure, record and document the quantity of all water discharged to the water management system which is not generated as a result of the Three Star Lagoon dredging and backfill operations or from precipitation on the Lagoon and the Temporary Dewatering and Treatment Area. The transfer of all such water to the water management system will be observed by the ENGINEER. The CONTRACTOR shall be responsible for coordinating such transfers at times during which the ENGINEER is available to observe the transfer.

3.3 DISMANTLING AND DEMOBILIZATION

- A. Upon verification by the ENGINEER, the CONTRACTOR shall dismantle, decontaminate and remove all water treatment equipment and restore disturbed areas to original condition or as shown and specified.

+ + END OF SECTION + +

APPENDIX 1

New York State Department of Environmental Conservation
Generic Effluent Criteria for Surface Water Discharges

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-3505



MEMORANDUM

Michael D. Zagata
Commissioner

TO: Michael O'Toole, Director, Division of Hazardous Waste Remediation

FROM: ☒ N.G. Kaul, Director, Division of Water

SUBJECT: Generic Effluent Criteria for Surface Water Discharges

DATE: SEP 28 1995

This memo is to transmit a general authorization for short term, batch surface water discharges of pump test and containerized well development waters. Remedial investigations and designs have often required DOW to provide rapid turnaround times to develop short term surface water pump test and containerized well development water discharge criteria. The attached generic surface water effluent criteria and general conditions were developed by DOW staff to reduce delays in implementing these short term surface water discharges and to save staff time for both Divisions. Please have your staff pay particular attention to the footnotes listed at the end of the document.

The attached criteria are subject to the following conditions:

1. Discharges to surface waters within the New York City watershed are not authorized by the attached criteria. A full DOW review is required by these discharges.
2. The criteria do not contain discharge limitations for radioactive discharges. Limitations on discharges of radiation or radioactive isotopes are addressed under Part 380 Radiation Control Permits.
3. Alternate monitoring frequencies, discharge limitations (where appropriate) or inclusion of parameters not identified in the attachment will be considered; however, a complete review by DOW staff will be required.
4. The attached parameter list is extensive and DOW's intent is for monitoring to be conducted only for those parameters which are known or suspected to be present at the site. Monitoring of parameters not present is not required by these criteria.

The DOW does not have any regulatory authority over a discharge from State, PRP, Federal Superfund Sites without SPDES permits. DHWR will be responsible for ensuring compliance with the attached effluent criteria and approval of all engineering submissions. Footnote (11) requires identification of the DHWR contact person who will receive all effluent results, engineering submissions and modification requests. The Regional Water Engineer should be kept appraised of the status of each discharge and sent a copy of the effluent results for informational purposes.

Long term groundwater and surface water discharges are not addressed in the attached criteria or in the short term groundwater criteria sent in a previous memo. A complete review of these proposed discharge scenarios will still require full DOW review. The attached criteria may be used as a planning tool by your staff, consultants and PRPs determining the most feasible discharge option. All long term groundwater and surface water discharge requests and modifications of the short term discharge criteria should be directed to Mr. Angus Eaton, Chief, Chemical Systems Section, Bureau of Wastewater Facilities Design.

If you have any questions, please call Mr. Angus Eaton at 457-0625.

Attachment

cc: Regional Water Engineers
A. Eaton, DOW

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
<u>Outfall 001 - Containerized Well Development Water and/or Pump Test Water:</u>					
Flow	NA	Monitor	gpd	Continuous	Meter
pH(Range)	NA	6.5 to 8.5	SU	(1)	Grab
Oil and Grease	NA	15	mg/l	(1)	Grab
BOD, 5-day	NA	5	mg/l	(1)	Grab
Solids, Total Suspended	NA	10	mg/l	(1)	Grab
Solids, Total Dissolved	NA	200	mg/l	(1)	Grab
Turbidity	NA	5	NTUs	(1)	Grab
Acenaphthene	83-32-9	10	µg/l	(1)	Grab
Acenaphthylene	208-96-8	10	µg/l	(1)	Grab
Acetone	67-64-1	100.0 ²	µg/l	(1)	Grab
Acrylic acid	79-10-7	50	µg/l	(1)	Grab
Acrylonitrile	107-13-1	0.07	µg/l	(1)	Grab
Alachlor	15972-60-8	0.3	µg/l	(1)	Grab
Aldicarb	116-06-3	8.0 ²	µg/l	(1)	Grab
Methomyl	16752-77-5	40.0 ²	µg/l	(1)	Grab
Aldicarb sulfone	1646-88-4	2	µg/l	(1)	Grab
Aldicarb sulfoxide	1646-87-3	4	µg/l	(1)	Grab
Aldrin	309-00-2	0.020 ²	µg/l	(1)	Grab
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	50	µg/l	(1)	Grab
Alkyl diphenyl oxide sulfonates ³	NA	50	µg/l	(1)	Grab
Aluminum, Total	NA	100	µg/l	(1)	Grab
Ametryn	834-12-8	50	µg/l	(1)	Grab
Aminomethylene phosphonic acid salts ⁴	NA	50	µg/l	(1)	Grab
Sum of Aminopyridines	NA	1.0	µg/l	(1)	Grab
Ammonia, Total (as NH ₃)	7664-41-7	660	µg/l	(1)	Grab
Aniline	62-53-3	10.0 ²	µg/l	(1)	Grab
Anthracene	120-12-7	10	µg/l	(1)	Grab
Antimony, Total	NA	10.0 ²	µg/l	(1)	Grab
Arsenic, Total	NA	36	µg/l	(1)	Grab
Aryltriazoles ³	NA	50	µg/l	(1)	Grab
Atrazine	1912-24-9	8.0 ²	µg/l	(1)	Grab
Azinphosmethyl	86-50-0	0.60 ²	µg/l	(1)	Grab
Azobenzene	103-33-3	0.5	µg/l	(1)	Grab
Barium, Total	NA	1,000	µg/l	(1)	Grab
Benz(a)anthracene	56-55-3	0.050 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Benzene	71-43-2	0.80 ²	µg/l	(1)	Grab
Benzidine	92-87-5	0.30 ²	µg/l	(1)	Grab
Benzisothiazole	271-61-4	50	µg/l	(1)	Grab
Benzo(a)anthracene	56-55-3	10	µg/l	(1)	Grab
Benzo(b)fluoranthene	205-99-2	0.070 ²	µg/l	(1)	Grab
Benzo(k)fluoranthene	207-08-9	0.020 ²	µg/l	(1)	Grab
Benzo(ghi)Perylene	191-24-2	10	µg/l	(1)	Grab
Benzo(a)pyrene	50-32-8	0.090 ²	µg/l	(1)	Grab
Beryllium, Total	NA	3	µg/l	(1)	Grab
Bis(2-chloroethyl)ether	111-44-4	1.0 ²	µg/l	(1)	Grab
Bis(2-ethylhexyl)phthalate	117-81-7	8.0 ²	µg/l	(1)	Grab
Boric acid, Borates & Metaborates ⁵	NA	125	µg/l	(1)	Grab
Boron, Total	NA	1,000	µg/l	(1)	Grab
Bromide, Total	NA	2,000	µg/l	(1)	Grab
Bromobenzene	108-86-1	5	µg/l	(1)	Grab
Bromochloromethane	74-97-5	5	µg/l	(1)	Grab
Bromodichloromethane	75-27-4	10	µg/l	(1)	Grab
Bromoform	75-25-2	10	µg/l	(1)	Grab
Bromomethane	74-83-9	5	µg/l	(1)	Grab
Butoxyethoxyethanol	112-34-5	50	µg/l	(1)	Grab
Butoxypropanol	5131-66-8	50	µg/l	(1)	Grab
Butylate	2008-41-5	50	µg/l	(1)	Grab
n-Butylbenzene	104-51-8	5	µg/l	(1)	Grab
sec-Butylbenzene	135-98-8	5	µg/l	(1)	Grab
tert-Butylbenzene	98-06-6	5	µg/l	(1)	Grab
Butyl benzyl phthalate	85-68-7	50	µg/l	(1)	Grab
Butyl isopropyl phthalate	NA	50	µg/l	(1)	Grab
Cadmium, Total	NA	1.2	µg/l	(1)	Grab
Carbofuran	1563-66-2	10.0 ²	µg/l	(1)	Grab
Carbon tetrachloride	56-23-5	0.50 ²	µg/l	(1)	Grab
Carboxin	5234-68-4	50	µg/l	(1)	Grab
Chloramben ⁶	NA	50	µg/l	(1)	Grab
Chlordane	57-74-9	0.060 ²	µg/l	(1)	Grab
Chloride	NA	250,000	µg/l	(1)	Grab
2,3,7,8-Tetrachlorodibenzo-p-dioxin	NA	0.0080 ²	µg/l	(1)	Grab
Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans	NA	0.0080 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Chlorine, Total Residual	NA	100.0 ²	µg/l	(1)	Grab
Chlorobenzene	108-90-7	5	µg/l	(1)	Grab
4-Chlorobenzotrifluoride	98-56-6	5	µg/l	(1)	Grab
Chloroethane	75-00-3	5	µg/l	(1)	Grab
Chloroform	67-66-3	7	µg/l	(1)	Grab
2-Chloronaphthalene	91-58-7	10	µg/l	(1)	Grab
2-Chlorotoluene	95-49-8	5	µg/l	(1)	Grab
4-Chlorotoluene	106-43-4	5	µg/l	(1)	Grab
5-Chloro-o-toluidine	95-79-4	0.7	µg/l	(1)	Grab
Chromium, Total	NA	207	µg/l	(1)	Grab
Chromium, Hexavalent	NA	11	µg/l	(1)	Grab
Chrysene	218-01-0	0.60 ²	µg/l	(1)	Grab
Cobalt, Total	NA	5	µg/l	(1)	Grab
Copper, Dissolved	NA	Monitor	µg/l	(1)	Grab
Copper, Total	NA	24	µg/l	(1)	Grab
Cyanide, Amenable to Chlorination	NA	60.0 ²	µg/l	(1)	Grab
Dalapon ⁵	NA	50	µg/l	(1)	Grab
4,4'-DDT	50-29-3	0.050 ²	µg/l	(1)	Grab
4,4'-DDD	72-54-8	0.040 ²	µg/l	(1)	Grab
4,4'-DDE	72-55-9	0.020 ²	µg/l	(1)	Grab
Sum of Demeton	NA	0.1	µg/l	(1)	Grab
Dechlorane Plus	13560-89-9	5	µg/l	(1)	Grab
Diazinon	333-41-5	0.7	µg/l	(1)	Grab
Dibenzo(a,h)Anthracene	53-70-3	10	µg/l	(1)	Grab
Dibromochloromethane	124-48-1	10	µg/l	(1)	Grab
1,2-Dibromo-3-chloropropane	96-12-8	0.2	µg/l	(1)	Grab
Dibromodichloromethane	594-18-3	5	µg/l	(1)	Grab
Dibromomethane	74-95-3	5	µg/l	(1)	Grab
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	20	µg/l	(1)	Grab
Di-n-butyl phthalate	84-74-2	50	µg/l	(1)	Grab
1,2-Dichlorobenzene	95-50-1	see sum of Dichlorobenzenes			
1,4-Dichlorobenzene	106-46-7	see sum of Dichlorobenzenes			
1,3-Dichlorobenzene	541-73-1	see sum of Dichlorobenzenes			
Sum of Dichlorobenzenes	NA	5	µg/l	(1)	Grab
4-Dichlorobenzotrifluoride	328-84-7	5	µg/l	(1)	Grab
Wichlorodifluoromethane	75-71-8	5	µg/l	(1)	Grab
1,1-Dichloroethane	75-34-3	5	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
1,2-Dichloroethane	107-06-2	0.8	µg/l	(1)	Grab
cis-1,2-Dichloroethylene	156-59-2	5	µg/l	(1)	Grab
trans-1,2-Dichloroethylene	156-60-5	5	µg/l	(1)	Grab
1,1-Dichloroethylene	75-35-4	0.50 ²	µg/l	(1)	Grab
Dichlorofluoromethane	75-43-4	5	µg/l	(1)	Grab
2,4-Dichlorophenol	120-83-2	2.0 ²	µg/l	(1)	Grab
2,4-Dichlorophenoxyacetic acid	94-75-7	10	µg/l	(1)	Grab
1,2-Dichloropropane	78-87-5	0.5	µg/l	(1)	Grab
1,1-Dichloropropane	78-99-9	5	µg/l	(1)	Grab
1,3-Dichloropropane	142-28-9	5	µg/l	(1)	Grab
2,2-Dichloropropane	594-20-7	5	µg/l	(1)	Grab
1,1-Dichloropropene	563-58-6	5	µg/l	(1)	Grab
cis-1,3-Dichloropropene	10061-01-5	5	µg/l	(1)	Grab
trans-1,3-Dichloropropene	10061-02-6	5	µg/l	(1)	Grab
2,3-Dichlorotoluene	32768-54-0	5	µg/l	(1)	Grab
2,4-Dichlorotoluene	95-73-8	5	µg/l	(1)	Grab
2,5-Dichlorotoluene	19398-61-9	5	µg/l	(1)	Grab
2,6-Dichlorotoluene	118-69-4	5	µg/l	(1)	Grab
3,4-Dichlorotoluene	95-75-0	5	µg/l	(1)	Grab
3,5-Dichlorotoluene	25186-47-4	5	µg/l	(1)	Grab
Dieldrin	60-57-1	0.0080 ²	µg/l	(1)	Grab
Di(2-ethylhexyl)adipate	103-23-1	50	µg/l	(1)	Grab
Diethyl phthalate	84-66-2	50	µg/l	(1)	Grab
N,N-Dimethyl aniline	121-69-7	1.0	µg/l	(1)	Grab
Dimethylformamide	68-12-2	50	µg/l	(1)	Grab
Dimethyl phthalate	131-11-3	50	µg/l	(1)	Grab
Dimethyl tetrachloroterephthalate	1861-32-1	50	µg/l	(1)	Grab
2,6-Dinitrotoluene	606-20-2	0.080 ²	µg/l	(1)	Grab
Di-n-octyl phthalate	117-84-0	50	µg/l	(1)	Grab
Diphenamid	957-51-7	50	µg/l	(1)	Grab
1,2-Diphenylhydrazine	122-66-7	0.05	µg/l	(1)	Grab
Diquat dibromide	85-00-7	20	µg/l	(1)	Grab
Dodecylguanidine acetate	2439-10-3	see sum of Dodecylguanidine acetate and Dodecylguanidine hydrochloride			
Dodecylguanidine hydrochloride	13590-97-1				
sum of Dodecylguanidine acetate and dodecylguanidine hydrochloride	NA	50	µg/l	(1)	Grab
Dyphylline	479-18-5	50	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Endosulfan	115-73-3	0.020 ²	µg/l	(1)	Grab
Endothall	145-73-3	50	µg/l	(1)	Grab
Endrin	72-20-8	0.020 ²	µg/l	(1)	Grab
Ethylbenzene	100-41-4	5	µg/l	(1)	Grab
Ethylene chlorohydrin	107-07-3	50	µg/l	(1)	Grab
Ethylene dibromide	106-93-4	0.05	µg/l	(1)	Grab
Ethylene glycol	107-21-1	50	µg/l	(1)	Grab
Ethylene oxide	75-21-8	0.05	µg/l	(1)	Grab
Fluometuron	2164-17-2	50	µg/l	(1)	Grab
Fluoranthene	206-44-0	10	µg/l	(1)	Grab
Fluorene	86-73-7	10	µg/l	(1)	Grab
Fluoride	NA	2000	µg/l	(1)	Grab
Glyphosate	1071-83-6	50	µg/l	(1)	Grab
Guaifenesin	93-14-1	50	µg/l	(1)	Grab
Heptachlor	76-44-8	0.010 ²	µg/l	(1)	Grab
Heptachlor epoxide	1024-74-3	0.30 ²	µg/l	(1)	Grab
Hexachlorobenzene	118-74-1	0.20 ²	µg/l	(1)	Grab
Hexachlorobutadiene	87-68-3	1.0 ²	µg/l	(1)	Grab
α-Hexachlorocyclohexane(α-BHC)	319-84-6	0.010 ²	µg/l	(1)	Grab
β-Hexachlorocyclohexane(β-BHC)	319-85-7	0.020 ²	µg/l	(1)	Grab
δ-Hexachlorocyclohexane(δ-BHC)	319-86-8	0.040 ²	µg/l	(1)	Grab
γ-Hexachlorocyclohexane(Lindane)	58-89-9	0.020 ²	µg/l	(1)	Grab
Hexachlorocyclopentadiene	77-47-4	2.0 ²	µg/l	(1)	Grab
2-Hexanone	591-78-6	50	µg/l	(1)	Grab
Hexazinone	51235-04-2	50	µg/l	(1)	Grab
Hydrazine	302-01-2	5	µg/l	(1)	Grab
Hydrogen sulfide	7783-06-4	2.0	µg/l	(1)	Grab
Hydroquinone	123-31-9	2.2	µg/l	(1)	Grab
1-Hydroxyethylidene- 1,1-diphosphonic acid	2809-21-4	50	µg/l	(1)	Grab
2-(2-Hydroxy-3,5-di-tert- pentyphenyl)benzotriazole	25973-55-1	50	µg/l	(1)	Grab
Indeno(1,2,3-cd)pyrene	193-39-5	0.20 ²	µg/l	(1)	Grab
Iron, Total	NA	300	µg/l	(1)	Grab
Dodecyl diphenyl phosphate	29761-21-5	1.7	µg/l	(1)	Grab
Sophorone	78-59-1	10	µg/l	(1)	Grab
Isopropylbenzene	98-82-8	5	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
4-Isopropyltoluene	99-87-6	5	µg/l	(1)	Grab
Total Isothiazolones	NA	1	µg/l	(1)	Grab
Lead, Total	NA	4.0 ²	µg/l	(1)	Grab
Magnesium, Total	NA	35,000	µg/l	(1)	Grab
Malathion	121-75-5	0.6 ²	µg/l	(1)	Grab
Manganese, Total	NA	300	µg/l	(1)	Grab
Mercaptobenzothiazole	149-30-4	50	µg/l	(1)	Grab
Mercury, Total	NA	0.8 ²	µg/l	(1)	Grab
Methacrylic acid	79-41-4	50	µg/l	(1)	Grab
Methoxychlor	72-43-5	0.4 ²	µg/l	(1)	Grab
(2-Methoxyethyl)benzene	4013-34-7	50	µg/l	(1)	Grab
(1-Methoxyethyl)benzene	3558-60-9	50	µg/l	(1)	Grab
Sum of Methybenz(a)anthracenes	NA	0.002	µg/l	(1)	Grab
Methyl chloride	74-87-3	5	µg/l	(1)	Grab
Methylene bithiocyanate	6317-18-6	1.0	µg/l	(1)	Grab
Methylene chloride	75-09-2	5	µg/l	(1)	Grab
4-(1-Methylethoxy)-1-butanol	31600-69-8	50	µg/l	(1)	Grab
2-Methylethyl-1,3-dioxolane	126-39-6	50	µg/l	(1)	Grab
Methyl ethyl ketone	78-93-3	50	µg/l	(1)	Grab
2-Methylstyrene	611-15-4	5	µg/l	(1)	Grab
3-Methylstyrene	100-80-1	5	µg/l	(1)	Grab
Metribuzin	21087-64-9	50	µg/l	(1)	Grab
Mirex	2385-85-5	0.4 ²	µg/l	(1)	Grab
Naphthalene	91-20-3	10	µg/l	(1)	Grab
Niacinamide	98-92-0	500	µg/l	(1)	Grab
Nickel, Total	NA	96	µg/l	(1)	Grab
Nitrate (as N)	NA	10,000	µg/l	(1)	Grab
Nitrilotriacetic acid ⁷	NA	3	µg/l	(1)	Grab
Nitrite	NA	20	µg/l	(1)	Grab
Nitrobenzene	98-95-3	5	µg/l	(1)	Grab
N-Nitrosodiphenylamine	86-30-6	10	µg/l	(1)	Grab
Oxamyl(Vydate)	23135-22-0	10	µg/l	(1)	Grab
Parathion	56-38-2	0.6 ²	µg/l	(1)	Grab
Methyl parathion	298-00-0	0.6 ²	µg/l	(1)	Grab
pentachlorophenol	87-86-5	2 ²	µg/l	(1)	Grab
phenanthrene	85-01-8	10	µg/l	(1)	Grab
Phenolic compounds (total phenols) ¹¹	NA	8.0 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Phenyl ether	101-84-8	10	µg/l	(1)	Grab
Phenylpropanolamine	14838-15-4	50	µg/l	(1)	Grab
cis-1-Phenyl-1-propene	766-90-5	5	µg/l	(1)	Grab
trans-1-Phenyl-1-propene	873-66-5	5	µg/l	(1)	Grab
3-Phenyl-1-propene	637-50-3	5	µg/l	(1)	Grab
Phosphorus	NA	20	µg/l	(1)	Grab
Picloram ⁶	1918-02-1	50	µg/l	(1)	Grab
PCB-1016	12674-11-2	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1221	11104-28-2	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1232	11141-16-5	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1242	53469-21-9	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1248	12672-29-6	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1254	11097-69-1	0.30 ^{2,8}	µg/l	(1)	Grab
PCB-1260	11096-82-5	0.30 ^{2,8}	µg/l	(1)	Grab
Prometon	1610-18-0	50	µg/l	(1)	Grab
Propham	122-42-9	50	µg/l	(1)	Grab
n-Propylbenzene	103-65-1	5	µg/l	(1)	Grab
Pyrene	129-00-0	10	µg/l	(1)	Grab
Pyridine	110-86-1	50	µg/l	(1)	Grab
Sum of Quaternary ammonium compounds	NA	10	µg/l	(1)	Grab
Selenium, Total	NA	4 ²	µg/l	(1)	Grab
Silver, Total	NA	200	µg/l	(1)	Grab
Simazine	122-34-9	8 ²	µg/l	(1)	Grab
Styrene	100-42-5	50	µg/l	(1)	Grab
Sulfate	NA	250,000	µg/l	(1)	Grab
Sulfides, Total	NA	50	µg/l	(1)	Grab
Sulfite	NA	200	µg/l	(1)	Grab
Tebuthiuron	34014-18-1	50	µg/l	(1)	Grab
Terbufos	13071-79-9	100.0 ²	µg/l	(1)	Grab
Sum of Tetrachlorobenzenes	12408-10-5	10	µg/l	(1)	Grab
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/l	(1)	Grab
1,1,2,2-Tetrachloroethane	79-34-5	0.2	µg/l	(1)	Grab
Tetrachloroethylene	127-18-4	0.7	µg/l	(1)	Grab
Tetrahydrofuran	109-99-9	50	µg/l	(1)	Grab
Thallium, Total	NA	4	µg/l	(1)	Grab
Neophylline	58-55-9	40	µg/l	(1)	Grab
Terbufos	13071-79-9	100.0 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Sum of Tetrachlorobenzenes	12408-10-5	10	µg/l	(1)	Grab
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/l	(1)	Grab
1,1,2,2-Tetrachloroethane	79-34-5	0.2	µg/l	(1)	Grab
Tetrachloroethylene	127-18-4	0.7	µg/l	(1)	Grab
Toluene	108-88-3	5	µg/l	(1)	Grab
o-Toluidine	95-53-4	10 ²	µg/l	(1)	Grab
Tolytriazole	29385-43-1	50	µg/l	(1)	Grab
Toxaphene	8001-35-2	1.0 ²	µg/l	(1)	Grab
1,2,4-Tribromobenzene	615-54-3	5	µg/l	(1)	Grab
Tributyltin oxide	56-35-9	50	µg/l	(1)	Grab
Sum of Trichlorobenzenes	12002-48-1	10	µg/l	(1)	Grab
1,1,1-Trichloroethane	71-55-6	5	µg/l	(1)	Grab
1,1,2-Trichloroethane	79-00-5	0.6	µg/l	(1)	Grab
Trichloroethylene	79-01-6	3	µg/l	(1)	Grab
Trichlorofluoromethane	75-69-4	5	µg/l	(1)	Grab
2,4,5-Trichloro-phenoxypropionic acid	93-72-1	10	µg/l	(1)	Grab
1,1,2-Trichloropropane	598-77-6	5	µg/l	(1)	Grab
1,2,3-Trichloropropane	96-18-4	5	µg/l	(1)	Grab
cis-1,2,3-Trichloropropene	13116-57-9	5	µg/l	(1)	Grab
trans-1,2,3-Trichloropropene	13116-58-0	5	µg/l	(1)	Grab
alpha,2,4-Trichlorotoluene	94-99-5	5	µg/l	(1)	Grab
alpha,2,6-Trichlorotoluene	2014-83-7	5	µg/l	(1)	Grab
alpha,3,4-Trichlorotoluene	102-47-6	5	µg/l	(1)	Grab
alpha,alpha,2-Trichlorotoluene	88-66-4	5	µg/l	(1)	Grab
alpha,alpha,4-Trichlorotoluene	13940-94-8	5	µg/l	(1)	Grab
2,3,4-Trichlorotoluene	7359-72-0	0.34	µg/l	(1)	Grab
2,3,5-Trichlorotoluene	56961-86-5	0.34	µg/l	(1)	Grab
2,3,6-Trichlorotoluene	2077-46-5	0.34	µg/l	(1)	Grab
2,4,5-Trichlorotoluene	6639-30-1	0.34	µg/l	(1)	Grab
2,4,6-Trichlorotoluene	23749-65-7	0.34	µg/l	(1)	Grab
1,1,1-Trichloro-2,2,2-trifluoroethane	354-58-5	5	µg/l	(1)	Grab
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	µg/l	(1)	Grab
1,2,3-Trimethylbenzene	526-73-8	5	µg/l	(1)	Grab
1,2,4-Trimethylbenzene	95-63-6	5	µg/l	(1)	Grab
3,5-Trimethylbenzene	108-67-8	5	µg/l	(1)	Grab
3,6-Trimethylpyridine	1462-84-6	50	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from start of discharge.

the discharges from the treatment facility to surface water shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
2,4,6-Trimethylpyridine	108-75-8	50	µg/l	(1)	Grab
Triphenyl phosphate	115-86-6	4	µg/l	(1)	Grab
Vanadium, Total	NA	14	µg/l	(1)	Grab
Vinyl chloride	75-01-4	0.70 ²	µg/l	(1)	Grab
1,2-Xylene	95-47-6	5	µg/l	(1)	Grab
1,3-Xylene	108-38-2	5	µg/l	(1)	Grab
1,4-Xylene	106-42-3	5	µg/l	(1)	Grab
Zinc, Total	NA	166	µg/l	(1)	Grab

Footnotes:

- (1) Samples must be collected prior to each discharge event. Discharge may not commence until the sample results show compliance with the above discharge limitations.
- (2) Discharge limit is set at the Practical Quantitation Limit (PQL). Actual surface water effluent standard/limitation is below this limit.
- (3) Limit applies to each isomer individually.
- (4) Limit applies to each salt individually.
- (5) Limit applies as boron equivalents to the sum of these substances.
- (6) Limit includes forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.
- (7) Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less.

SEE PAGE 10 OF 10 FOR ADDITIONAL FOOTNOTES.

Footnotes (continued):

- (8) a. The treatment plant operator must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve a Minimum Detection Level (MDL) of 0.065 $\mu\text{g/l}$.
- b. 0.065 $\mu\text{g/l}$ is the discharge goal. The treatment plant operator shall report all values above the MDL (0.065 $\mu\text{g/l}$ per Aroclor). If the level of any Aroclor is above 0.065 $\mu\text{g/l}$, the treatment plant operator must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge.
- c. If the Department determines that effluent monitoring results above 0.065 $\mu\text{g/l}$ can be prevented by implementation of additional measures as proposed by the treatment plant operator in footnote 10.b above, and approved by the Department, the treatment plant operator shall implement such additional measures.
- (8) Only site generated pump test and containerized well development water are authorized for treatment and discharge.
- (9) Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the holding tank prior to discharge to _____.
- (10) Discharge is not authorized until such time as an engineering submission showing the method of treatment and discharge is approved by the Department. The discharge rate may not exceed the effective treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to the following DHWR contact person: _____.
- (11) Total phenolics must be analyzed using EPA Methods 420.1 or 420.2.
- (12) Discharge to a surface water body within the New York City Watershed is not authorized by these effluent criteria. Seperate review of any proposed discharge to a surface water within the New York City Watershed is required.

APPENDIX 2

New York State Department of Environmental Conservation
Generic Effluent Criteria for Groundwater Discharges

xc: Section Chief Bob


New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-3505



MEMORANDUM

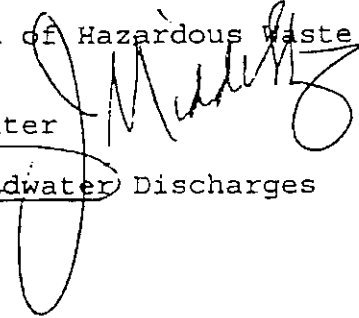
Michael D. Zagata
Commissioner

TO: Michael O'Toole, Director, Division of Hazardous Waste Remediation

FROM:  N.G. Kaul, Director, Division of Water

SUBJECT: Generic Effluent Criteria for Groundwater Discharges

DATE: SEP 28 1995



This memo is to transmit a general authorization for short term, batch groundwater discharges of pump test and containerized well development waters. Remedial investigations and designs have often required DOW to provide rapid turnaround times to develop short term groundwater pump test and containerized well development water discharge criteria. The attached generic groundwater effluent criteria and general conditions were developed by DOW staff to reduce delays in implementing these short term groundwater discharges and to save staff time for both Divisions. Please have your staff pay particular attention to the footnotes listed at the end of the document.

The attached criteria do not contain discharge limitations for radioactive discharges. Limitations on discharges of radiation or radioactive isotopes are addressed under Part 380 Radiation Control Permits. Alternate monitoring frequencies, discharge limitations (where appropriate) or inclusion of parameters not identified in the attachment will be considered; however, a complete review by DOW staff will be required. The attached parameter list is extensive and DOW's intent is for monitoring to be conducted only for those parameters which are known or suspected to be present at the site. Monitoring of parameters not present is not required by these criteria.

The DOW does not have any regulatory authority over a discharge from State, PRP, Federal Superfund Sites without SPDES permits. DHWR will be responsible for ensuring compliance with the attached effluent criteria and approval of all engineering submissions. Footnote (15) requires identification of the DHWR contact person who will receive all effluent results, engineering submissions and modification requests. The Regional Water Engineer should be kept apprised of the status of this discharge and sent a copy of the effluent results for informational purposes.

Long term groundwater and both short and long term surface water discharges are not addressed in the attached criteria. A complete review of these proposed discharge scenarios will still require full DOW review. The attached criteria may be used as a planning tool by your staff, consultants and PRPs determining the most feasible discharge option. All long term groundwater and surface water discharge requests and modifications of the short term groundwater discharge criteria should be directed to Mr. Angus Eaton, Chief, Chemical Systems Section, Bureau of Wastewater Facilities Design.

If you have any questions, please call Mr. Angus Eaton at 457-0625.

Attachment

cc: Regional Water Engineers
A. Eaton, DOW

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge eventand lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
<u>Outfall 001 - Containerized Well Development Water and/or Pump Test Water:</u>					
Flow	NA	Monitor	gpd	Continuous	Meter
pH(Range)	NA	6.5 to 8.5	SU	(1)	Grab
Oil and Grease	NA	15	mg/l	(1)	Grab
Solids, Total Dissolved	NA	1,000	mg/l	(1)	Grab
Nitrogen, Total (as N)	NA	10	mg/l	(1)	Grab
Foaming Agents (as MBAS)	NA	1.0	mg/l	(1)	Grab
Acenaphthene	83-32-9	20	µg/l	(1)	Grab
Acetone	67-64-1	100.0 ²	µg/l	(1)	Grab
Acrylic acid	79-10-7	50	µg/l	(1)	Grab
Acrylonitrile	107-13-1	5	µg/l	(1)	Grab
Alachlor	15972-60-8	35	µg/l	(1)	Grab
Aldicarb	116-06-3	8.0 ²	µg/l	(1)	Grab
Methomyl	16752-77-5	40.0 ²	µg/l	(1)	Grab
Aldicarb sulfone	1646-88-4	2	µg/l	(1)	Grab
Aldicarb sulfoxide	1646-87-3	4	µg/l	(1)	Grab
Aldrin	309-00-2	0.020 ²	µg/l	(1)	Grab
Alkyl dimethyl benzyl ammonium chloride	68391-01-5	50	µg/l	(1)	Grab
Alkyl diphenyl oxide sulfonates ³	NA	50	µg/l	(1)	Grab
Aluminum, Total	NA	2000	µg/l	(1)	Grab
Ametryn	834-12-8	50	µg/l	(1)	Grab
Aminomethylene phosphonic acid salts ⁴	NA	50	µg/l	(1)	Grab
Sum of Aminopyridines	NA	1.0	µg/l	(1)	Grab
Ammonia (as N)	7664-41-7	2000	µg/l	(1)	Grab
Aniline	62-53-3	10	µg/l	(1)	Grab
Anthracene	120-12-7	50	µg/l	(1)	Grab
Antimony, Total	NA	10	µg/l	(1)	Grab
Arsenic, Total	NA	50	µg/l	(1)	Grab
Aryltriazoles ³	NA	50	µg/l	(1)	Grab
Atrazine	1912-24-9	8	µg/l	(1)	Grab
Azinphosmethyl	86-50-0	4.4	µg/l	(1)	Grab
Azobenzene	103-33-3	5	µg/l	(1)	Grab
Barium, Total	NA	2,000	µg/l	(1)	Grab
Benefin(Benfluralin)	1861-40-1	35	µg/l	(1)	Grab
Benz(a)anthracene	56-55-3	0.050 ²	µg/l	(1)	Grab
Benzene	71-43-2	0.80 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Benzidine	92-87-5	5	µg/l	(1)	Grab
Benzisothiazole	271-61-4	50	µg/l	(1)	Grab
Benzo(b)fluoranthene	205-99-2	0.070 ²	µg/l	(1)	Grab
Benzo(k)fluoranthene	207-08-9	0.020 ²	µg/l	(1)	Grab
Benzo(a)pyrene	50-32-8	0.090 ²	µg/l	(1)	Grab
Beryllium, Total	NA	3	µg/l	(1)	Grab
Bis(2-chloroethyl)ether	111-44-4	1.0	µg/l	(1)	Grab
Bis(2-ethylhexyl)phthalate	117-81-7	4,200	µg/l	(1)	Grab
Boric acid, Borates & Metaborates ⁵	NA	125	µg/l	(1)	Grab
Boron, Total	NA	2,000	µg/l	(1)	Grab
Bromacil	314-40-9	10.0 ²	µg/l	(1)	Grab
Bromide, Total	NA	2,000	µg/l	(1)	Grab
Bromobenzene	108-86-1	5	µg/l	(1)	Grab
Bromochloromethane	74-97-5	5	µg/l	(1)	Grab
Bromodichloromethane	75-27-4	50	µg/l	(1)	Grab
Bromoform	75-25-2	50	µg/l	(1)	Grab
Bromomethane	74-83-9	5	µg/l	(1)	Grab
Butachlor	23184-66-9	3.5	µg/l	(1)	Grab
Butoxyethoxyethanol	112-34-5	50	µg/l	(1)	Grab
Butoxypropanol	5131-66-8	50	µg/l	(1)	Grab
Butylate	2008-41-5	50	µg/l	(1)	Grab
n-Butylbenzene	104-51-8	5	µg/l	(1)	Grab
sec-Butylbenzene	135-98-8	5	µg/l	(1)	Grab
tert-Butylbenzene	98-06-6	5	µg/l	(1)	Grab
Butyl benzyl phthalate	85-68-7	50	µg/l	(1)	Grab
Butyl isopropyl phthalate	NA	50	µg/l	(1)	Grab
Cadmium, Total	NA	20	µg/l	(1)	Grab
Captan	133-06-2	18	µg/l	(1)	Grab
Carbaryl	63-25-2	29	µg/l	(1)	Grab
Carbofuran	1563-66-2	15	µg/l	(1)	Grab
Carbon tetrachloride	56-23-5	5	µg/l	(1)	Grab
Carboxin	5234-68-4	50	µg/l	(1)	Grab
Chloramben ⁵	NA	88	µg/l	(1)	Grab
Chlordane	57-74-9	0.1	µg/l	(1)	Grab
Chloride	NA	500,000	µg/l	(1)	Grab
2,3,7,8-Tetrachlorodibenzo-p-dioxin	NA	0.0080 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans	NA	0.0080 ²	µg/l	(1)	Grab
Chlorobenzene	108-90-7	5	µg/l	(1)	Grab
4-Chlorobenzotrifluoride	98-56-6	5	µg/l	(1)	Grab
Chloroethane	75-00-3	5	µg/l	(1)	Grab
Chloroform	67-66-3	7	µg/l	(1)	Grab
2-Chloronaphthalene	91-58-7	10	µg/l	(1)	Grab
2-Chlorotoluene	95-49-8	5	µg/l	(1)	Grab
4-Chlorotoluene	106-43-4	5	µg/l	(1)	Grab
5-Chloro-o-toluidine	95-79-4	5	µg/l	(1)	Grab
Chromium, Total	NA	100	µg/l	(1)	Grab
Chromium, Hexavalent	NA	100	µg/l	(1)	Grab
Chrysene	218-01-0	0.60 ²	µg/l	(1)	Grab
Copper, Total	NA	1,000	µg/l	(1)	Grab
Cyanide, Total	NA	400	µg/l	(1)	Grab
Dalapon ⁵	NA	50	µg/l	(1)	Grab
4,4'-DDT	50-29-3	0.050 ²	µg/l	(1)	Grab
4,4'-DDD	72-54-8	0.040 ²	µg/l	(1)	Grab
4,4'-DDE	72-55-9	0.020 ²	µg/l	(1)	Grab
Dechlorane Plus	13560-89-9	5	µg/l	(1)	Grab
Diazinon	333-41-5	0.7	µg/l	(1)	Grab
Dibromochloromethane	124-48-1	50	µg/l	(1)	Grab
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/l	(1)	Grab
Dibromodichloromethane	594-18-3	5	µg/l	(1)	Grab
Dibromomethane	74-95-3	5	µg/l	(1)	Grab
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	50	µg/l	(1)	Grab
Di-n-butyl phthalate	84-74-2	770	µg/l	(1)	Grab
Dicamba	1918-00-9	0.44	µg/l	(1)	Grab
1,2-Dichlorobenzene	95-50-1	see sum of 1,2- & 1,4-Dichlorobenzenes			
1,4-Dichlorobenzene	106-46-7	see sum of 1,2- & 1,4-Dichlorobenzenes			
Sum of 1,2- & 1,4-Dichlorobenzenes	NA	4.7	µg/l	(1)	Grab
1,3-Dichlorobenzene	541-73-1	5	µg/l	(1)	Grab
3,4-Dichlorobenzotrifluoride	328-84-7	5	µg/l	(1)	Grab
Dichlorodifluoromethane	75-71-8	5	µg/l	(1)	Grab
1,1-Dichloroethane	75-34-3	5	µg/l	(1)	Grab
1,2-Dichloroethane	107-06-2	5	µg/l	(1)	Grab
cis-1,2-Dichloroethylene	156-59-2	5	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
trans-1,2-Dichloroethylene	156-60-5	5	µg/l	(1)	Grab
1,1-Dichloroethylene	75-35-4	5	µg/l	(1)	Grab
Dichlorofluoromethane	75-43-4	5	µg/l	(1)	Grab
2,4-Dichlorophenoxyacetic acid	94-75-7	4.4	µg/l	(1)	Grab
1,2-Dichloropropane	78-87-5	5	µg/l	(1)	Grab
1,1-Dichloropropane	78-99-9	5	µg/l	(1)	Grab
1,3-Dichloropropane	142-28-9	5	µg/l	(1)	Grab
2,2-Dichloropropane	594-20-7	5	µg/l	(1)	Grab
1,1-Dichloropropene	563-58-6	5	µg/l	(1)	Grab
cis-1,3-Dichloropropene	10061-01-5	5	µg/l	(1)	Grab
trans-1,3-Dichloropropene	10061-02-6	5	µg/l	(1)	Grab
2,3-Dichlorotoluene	32768-54-0	5	µg/l	(1)	Grab
2,4-Dichlorotoluene	95-73-8	5	µg/l	(1)	Grab
2,5-Dichlorotoluene	19398-61-9	5	µg/l	(1)	Grab
2,6-Dichlorotoluene	118-69-4	5	µg/l	(1)	Grab
3,4-Dichlorotoluene	95-75-0	5	µg/l	(1)	Grab
3,5-Dichlorotoluene	25186-47-4	5	µg/l	(1)	Grab
Dieldrin	60-57-1	0.0080 ²	µg/l	(1)	Grab
Di(2-ethylhexyl)adipate	103-23-1	50	µg/l	(1)	Grab
Diethyl phthalate	84-66-2	50	µg/l	(1)	Grab
N,N-Dimethyl aniline	121-69-7	5	µg/l	(1)	Grab
Dimethylformamide	68-12-2	50	µg/l	(1)	Grab
Dimethyl phthalate	131-11-3	50	µg/l	(1)	Grab
Dimethyl tetrachloroterephthalate	1861-32-1	50	µg/l	(1)	Grab
2,6-Dinitrotoluene	606-20-2	5	µg/l	(1)	Grab
Di-n-octyl phthalate	117-84-0	50	µg/l	(1)	Grab
Diphenamid	957-51-7	50	µg/l	(1)	Grab
1,2-Diphenylhydrazine	122-66-7	ND	µg/l	(1)	Grab
1,1-Diphenylhydrazine	530-50-7	ND	µg/l	(1)	Grab
Diquat dibromide	85-00-7	20	µg/l	(1)	Grab
Dodecylguanidine acetate	2439-10-3	see sum of Dodecylguanidine acetate and Dodecylguanidine hydrochloride			
Dodecylguanidine hydrochloride	13590-97-1				
Sum of Dodecylguanidine acetate and dodecylguanidine hydrochloride	NA	50	µg/l	(1)	Grab
Dyphylline	479-18-5	50	µg/l	(1)	Grab
Endothall	145-73-3	50	µg/l	(1)	Grab
Endrin	72-20-8	0.020 ²	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Ethylbenzene	100-41-4	5	µg/l	(1)	Grab
Ethylene chlorohydrin	107-07-3	50	µg/l	(1)	Grab
Ethylene dibromide	106-93-4	5	µg/l	(1)	Grab
Ethylene glycol	107-21-1	50	µg/l	(1)	Grab
Ethylene oxide	75-21-8	0.05	µg/l	(1)	Grab
Ethylenethiourea	96-45-7	ND	µg/l	(1)	Grab
Ferbam	14484-64-1	4.2	µg/l	(1)	Grab
Fluometuron	2164-17-2	50	µg/l	(1)	Grab
Fluoranthene	206-44-0	50	µg/l	(1)	Grab
Fluorene	86-73-7	50	µg/l	(1)	Grab
Fluoride	NA	3,000	µg/l	(1)	Grab
Folpet	133-07-3	56	µg/l	(1)	Grab
Glyphosate	1071-83-6	50	µg/l	(1)	Grab
Guaifenesin	93-14-1	50	µg/l	(1)	Grab
Heptachlor	76-44-8	0.010 ²	µg/l	(1)	Grab
Heptachlor epoxide	1024-74-3	0.30 ²	µg/l	(1)	Grab
Hexachlorobenzene	118-74-1	0.35	µg/l	(1)	Grab
Hexachlorobutadiene	87-68-3	5	µg/l	(1)	Grab
α-Hexachlorocyclohexane(α-BHC)	319-84-6	0.010 ²	µg/l	(1)	Grab
β-Hexachlorocyclohexane(β-BHC)	319-85-7	0.020 ²	µg/l	(1)	Grab
δ-Hexachlorocyclohexane(δ-BHC)	319-86-8	0.040 ²	µg/l	(1)	Grab
Γ-Hexachlorocyclohexane(Lindane)	58-89-9	0.020 ²	µg/l	(1)	Grab
Hexachlorocyclopentadiene	77-47-4	5	µg/l	(1)	Grab
Hexachlorophene	70-30-4	7	µg/l	(1)	Grab
2-Hexanone	591-78-6	50	µg/l	(1)	Grab
Hexazinone	51235-04-2	50	µg/l	(1)	Grab
1-Hydroxyethylidene- 1,1-diphosphonic acid	2809-21-4	50	µg/l	(1)	Grab
2-(2-Hydroxy-3,5-di-tert- pentylphenyl)benzotriazole	25973-55-1	50	µg/l	(1)	Grab
Indeno(1,2,3-cd)pyrene	193-39-5	0.20 ²	µg/l	(1)	Grab
Iron, Total ⁷	NA	600	µg/l	(1)	Grab
Isophorone	78-59-1	50	µg/l	(1)	Grab
Isopropylbenzene	98-82-8	5	µg/l	(1)	Grab
4-Isopropyltoluene	99-87-6	5	µg/l	(1)	Grab
Kepone	143-50-0	10.0 ²	µg/l	(1)	Grab
Lead, Total	NA	50	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Magnesium, Total	NA	35,000	µg/l	(1)	Grab
Malathion	121-75-5	7.0	µg/l	(1)	Grab
Mancozeb	8018-01-7	60.0 ²	µg/l	(1)	Grab
Maneb	12427-38-2	60.0 ²	µg/l	(1)	Grab
Manganese, Total ⁷	NA	600	µg/l	(1)	Grab
Mercaptobenzothiazole	149-30-4	50	µg/l	(1)	Grab
Mercury, Total	NA	4	µg/l	(1)	Grab
Methacrylic acid	79-41-4	50	µg/l	(1)	Grab
Methoxychlor	72-43-5	35	µg/l	(1)	Grab
(2-Methoxyethyl)benzene	4013-34-7	50	µg/l	(1)	Grab
(1-Methoxyethyl)benzene	3558-60-9	50	µg/l	(1)	Grab
Sum of Methybenz(a)anthracenes	NA	0.002	µg/l	(1)	Grab
Methyl chloride	74-87-3	5	µg/l	(1)	Grab
2-Methyl-4-chlorophenoxyacetic acid(MCPA)	94-74-6	1000 ²	µg/l	(1)	Grab
Methylene bithiocyanate	6317-18-6	50	µg/l	(1)	Grab
Methylene chloride	75-09-2	5	µg/l	(1)	Grab
4-(1-Methylethoxy)-1-butanol	31600-69-8	50	µg/l	(1)	Grab
2-Methylethyl-1,3-dioxolane	126-39-6	50	µg/l	(1)	Grab
Methyl ethyl ketone	78-93-3	50	µg/l	(1)	Grab
Methyl methacrylate	80-62-6	700	µg/l	(1)	Grab
2-Methylstyrene	611-15-4	5	µg/l	(1)	Grab
3-Methylstyrene	100-80-1	5	µg/l	(1)	Grab
Metribuzin	21087-64-9	50	µg/l	(1)	Grab
Mirex	2385-85-5	5	µg/l	(1)	Grab
Nabam	142-59-6	60.0 ²	µg/l	(1)	Grab
Naphthalene	91-20-3	10	µg/l	(1)	Grab
Niacinamide	98-92-0	500	µg/l	(1)	Grab
Nickel, Total	NA	2,000	µg/l	(1)	Grab
Nitralin	4726-14-1	35	µg/l	(1)	Grab
Nitrate (as N)	NA	20,000	µg/l	(1)	Grab
Nitrilotriacetic acid ⁸	NA	3	µg/l	(1)	Grab
Nitrobenzene	98-95-3	5	µg/l	(1)	Grab
N-Nitrosodiphenylamine	86-30-6	50	µg/l	(1)	Grab
Oxamyl	23135-22-0	50	µg/l	(1)	Grab
Paraquat	4685-14-7	3.0	µg/l	(1)	Grab
Parathion	56-38-2	see sum of Parathion & Methyl parathion			
Methyl parathion	298-00-0	see sum of Parathion and Methyl parathion			

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Sum of Parathion & Methyl parathion	NA	1.5	µg/l	(1)	Grab
Pentachloronitrobenzene	82-68-8	0.40 ²	µg/l	(1)	Grab
Phenanthrene	85-01-8	50	µg/l	(1)	Grab
Phenolic compounds (total phenols) ¹⁵	NA	8.0 ²	µg/l	(1)	Grab
Phenyl ether	101-84-8	10	µg/l	(1)	Grab
Phenylpropanolamine	14838-15-4	50	µg/l	(1)	Grab
cis-1-Phenyl-1-propene	766-90-5	5	µg/l	(1)	Grab
trans-1-Phenyl-1-propene	873-66-5	5	µg/l	(1)	Grab
3-Phenyl-1-propene	637-50-3	5	µg/l	(1)	Grab
Phorate	298-02-2	0.60 ²	µg/l	(1)	Grab
Disulfoton	298-04-4	0.60 ²	µg/l	(1)	Grab
Picloram ⁵	NA	50	µg/l	(1)	Grab
PCB-1016	12674-11-2	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1221	11104-28-2	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1232	11141-16-5	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1242	53469-21-9	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1248	12672-29-6	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1254	11097-69-1	0.30 ^{2,10}	µg/l	(1)	Grab
PCB-1260	11096-82-5	0.30 ^{2,10}	µg/l	(1)	Grab
Principal organic contaminant(POC) ⁹	NA	5	µg/l	(1)	Grab
Prometon	1610-18-0	50	µg/l	(1)	Grab
Propachlor	1918-16-7	35	µg/l	(1)	Grab
Propanil	709-98-8	7.0	µg/l	(1)	Grab
Propazine	139-40-2	16	µg/l	(1)	Grab
Propham	122-42-9	50	µg/l	(1)	Grab
n-Propylbenzene	103-65-1	5	µg/l	(1)	Grab
Pyrene	129-00-0	50	µg/l	(1)	Grab
Pyridine	110-86-1	50	µg/l	(1)	Grab
Selenium, Total	NA	40	µg/l	(1)	Grab
Silver, Total	NA	100	µg/l	(1)	Grab
Simazine	122-34-9	75	µg/l	(1)	Grab
Sodium	NA	20,000	µg/l	(1)	Grab
Styrene	100-42-5	930	µg/l	(1)	Grab
Sulfate	NA	500,000	µg/l	(1)	Grab
Sulfides, Total	NA	1,000	µg/l	(1)	Grab
Tebuthiuron	34014-18-1	50	µg/l	(1)	Grab
Terbacil	5902-51-2	50	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
Terbufos	13071-79-9	100.0 ^c	µg/l	(1)	Grab
Sum of Tetrachlorobenzenes	12408-10-5	10	µg/l	(1)	Grab
1,2,3,4-Tetrachlorobenzene	634-66-2	5	µg/l	(1)	Grab
1,2,3,5-Tetrachlorobenzene	634-90-2	5	µg/l	(1)	Grab
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0 ²	µg/l	(1)	Grab
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/l	(1)	Grab
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/l	(1)	Grab
Tetrachloroethylene	127-18-4	5	µg/l	(1)	Grab
Tetrachloroterephthalic acid	2136-79-0	50	µg/l	(1)	Grab
Tetrahydrofuran	109-99-9	50	µg/l	(1)	Grab
Thallium, Total	NA	4	µg/l	(1)	Grab
Theophylline	58-55-9	40	µg/l	(1)	Grab
Thiram	137-26-8	1.8	µg/l	(1)	Grab
Toluene	108-88-3	5	µg/l	(1)	Grab
o-Toluidine	95-53-4	5	µg/l	(1)	Grab
Tolytriazole	29385-43-1	50	µg/l	(1)	Grab
Toxaphene	8001-35-2	1.0 ²	µg/l	(1)	Grab
1,2,4-Tribromobenzene	615-54-3	5	µg/l	(1)	Grab
Tributyltin oxide	56-35-9	50	µg/l	(1)	Grab
Sum of Trichlorobenzenes	12002-48-1	10	µg/l	(1)	Grab
1,2,3-Trichlorobenzene	87-61-6	5	µg/l	(1)	Grab
1,2,4-Trichlorobenzene	120-82-1	5	µg/l	(1)	Grab
1,3,5-Trichlorobenzene	108-70-3	5	µg/l	(1)	Grab
1,1,1-Trichloroethane	71-55-6	5	µg/l	(1)	Grab
1,1,2-Trichloroethane	79-00-5	5	µg/l	(1)	Grab
Trichloroethylene	79-01-6	5	µg/l	(1)	Grab
Trichlorofluoromethane	75-69-4	5	µg/l	(1)	Grab
2,4,5-Trichloro-phenoxyacetic acid	93-76-5	35	µg/l	(1)	Grab
2,4,5-Trichloro-phenoxypropionic acid	93-72-1	0.26	µg/l	(1)	Grab
1,1,2-Trichloropropane	598-77-6	5	µg/l	(1)	Grab
1,2,3-Trichloropropane	96-18-4	5	µg/l	(1)	Grab
cis-1,2,3-Trichloropropene	13116-57-9	5	µg/l	(1)	Grab
trans-1,2,3-Trichloropropene	13116-58-0	5	µg/l	(1)	Grab
alpha,2,4-Trichlorotoluene	94-99-5	5	µg/l	(1)	Grab
alpha,2,6-Trichlorotoluene	2014-83-7	5	µg/l	(1)	Grab
alpha,3,4-Trichlorotoluene	102-47-6	5	µg/l	(1)	Grab
alpha,alpha,2-Trichlorotoluene	88-66-4	5	µg/l	(1)	Grab

SEE PAGES 9 OF 10 AND 10 OF 10 FOR FOOTNOTES.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning with the start of each discharge event

and lasting until 7 days from the start of the discharge.

the discharges from the treatment facility to groundwater shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	CAS No.	Discharge Limitations Daily Max.	Units	Minimum Monitoring Requirements	
				Measurement Frequency	Sample Type
alpha,alpha,4-Trichlorotoluene	13940-94-8	5	µg/l	(1)	Grab
2,3,4-Trichlorotoluene	7359-72-0	5	µg/l	(1)	Grab
2,3,5-Trichlorotoluene	56961-86-5	5	µg/l	(1)	Grab
2,3,6-Trichlorotoluene	2077-46-5	5	µg/l	(1)	Grab
2,4,5-Trichlorotoluene	6639-30-1	5	µg/l	(1)	Grab
2,4,6-Trichlorotoluene	23749-65-7	5	µg/l	(1)	Grab
1,1,1-Trichloro-2,2,2-trifluoroethane	354-58-5	5	µg/l	(1)	Grab
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	µg/l	(1)	Grab
Trifluralin	1582-09-8	35	µg/l	(1)	Grab
1,2,3-Trimethylbenzene	526-73-8	5	µg/l	(1)	Grab
1,2,4-Trimethylbenzene	95-63-6	5	µg/l	(1)	Grab
1,3,5-Trimethylbenzene	108-67-8	5	µg/l	(1)	Grab
2,3,6-Trimethylpyridine	1462-84-6	50	µg/l	(1)	Grab
2,4,6-Trimethylpyridine	108-75-8	50	µg/l	(1)	Grab
Triphenyl phosphate	115-86-6	50	µg/l	(1)	Grab
Uranyl ion	NA	10,000	µg/l	(1)	Grab
Vinyl chloride	75-01-4	2	µg/l	(1)	Grab
1,2-Xylene	95-47-6	5	µg/l	(1)	Grab
1,3-Xylene	108-38-2	5	µg/l	(1)	Grab
1,4-Xylene	106-42-3	5	µg/l	(1)	Grab
Zinc, Total	NA	5,000	µg/l	(1)	Grab
Zineb	12112-67-7	60.0 ²	µg/l	(1)	Grab
Ziram	137-30-4	8.0 ²	µg/l	(1)	Grab

Footnotes:

- (1) Samples must be collected prior to each discharge event. Discharge may not commence until the sample results show compliance with the above discharge limitations.
- (2) Discharge limit is set at the Practical Quantitation Limit (PQL). Actual groundwater effluent standard/limitation is below this limit.
- (3) Limit applies to each isomer individually.
- (4) Limit applies to each salt individually.
- (5) Limit applies as boron equivalents to the sum of these substances.

SEE PAGE 10 OF 10 FOR ADDITIONAL FOOTNOTES.

Footnotes(continued):

- (6) Limit includes forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid.
- (7) The combined concentration of iron, total and manganese, total shall not exceed 1000 µg/l.
- (8) Includes related forms that convert to nitrilotriacetic acid upon acidification to a pH of 2.3 or less.
- (9) Applies to any and every individual substance to which the ambient principal organic contaminant standard applies, except any substance that has an effluent standard or limitation value listed above. See DOW TOGS 1.1.1 for information on determining the applicability of the ambient POC standard to individual substances.
- (10)
 - a. The treatment plant operator must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve an Minimum Detection Level (MDL) of 0.065 µg/l.
 - b. 0.10 µg/l is the discharge goal. The treatment plant operator shall report all values above the MDL (0.065 µg/l per Aroclor). If the level of any Aroclor is above 0.10 µg/l, the treatment plant operator must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge.
 - c. If the Department determines that effluent monitoring results above 0.10 µg/l can be prevented by implementation of additional measures as proposed by the treatment plant operator in footnote 10.b above, and approved by the Department, the treatment plant operator shall implement such additional measures.
- (11) Only site generated pump test and containerized well development water are authorized for treatment and discharge.
- (12) Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the holding tank prior to discharge to groundwater.
- (13) Discharge may not occur unless the ground is capable of accepting the treated effluent. The discharged water may not be ponded on top of saturated or frozen ground or permitted to flow across the ground surface. Also, a minimum separation distance of 100 feet must be maintained between the discharge location and any surface waters (including wetlands).
- (14) Discharge is not authorized until such time as an engineering submission showing the method of treatment and discharge is approved by the Department. The discharge rate may not exceed the effective treatment system or ground adsorptive capacity. All monitoring data, engineering submissions and modification requests must be submitted to the following DHWR contact person: _____.
- (15) Total phenolics must be analyzed using EPA Methods 420.1 or 420.2.

SECTION XII

Measurement for Payment

SECTION 01 22 13

MEASUREMENT FOR PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section covers the methods and procedures that the Department will use to measure the CONTRACTOR's Work and provide payment. This description of the measurement and payment features will not, in any way, limit the responsibility of the CONTRACTOR for making a thorough investigation of the Contract Documents and Site conditions to determine the scope of the work included in each bid item.
- B. Items listed starting in Article 1.7 of this Section refer to and are the same pay items listed in the Bid Form and constitute all pay items for completing the Work. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant services, CONTRACTOR's or ENGINEER's field offices, layout surveys, Project signs, sanitary requirements, testing, safety provisions and safety devices, submittals and record drawings, water supplies, power and fuel, traffic maintenance, removal of waste, security, coordination with OWNER's operations, information technology (including hardware, software, and services) required during construction, bonds, insurance, or other requirements of the General Conditions, Supplementary Conditions, General Requirements, and other requirements of the Contract Documents. Payment will constitute complete compensation for all Work required by the Contract Documents, including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Compensation for providing, as required, all supervision, labor, equipment, overhead, profit, material, tests, required services, applicable taxes, and for performing all other related Work items, shall be included in prices stipulated for lump sum and unit price pay items listed in this Section and included in the Contract.
- C. Each lump sum and unit bid price shall include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.
- D. No payment will be made for work performed by the CONTRACTOR to replace defective work, work which is not required by the Contract Documents, work outside the limits of the Contract and additional work necessary due to actions of the CONTRACTOR.

1.2 ENGINEER'S ESTIMATE OF QUANTITIES

- A. ENGINEER's estimated quantities for items of Unit Price Work, as included in the Contract, are approximate only and are included solely for purpose of comparing Bids and pricing. OWNER does not expressly or by implication agree that nature of materials encountered below the ground surface or actual quantities of material encountered or required will correspond with the quantities included in the Contract at the time of award and reserves right to increase or decrease quantities or to eliminate quantities as the Department may deem necessary. CONTRACTOR or Department will not be entitled to adjustment in unit prices as a result of a change in estimated quantity, except as stated in the General Conditions, and agrees to accept the unit prices accepted

in the Bid as complete and total compensation for additions caused by changes or alterations in the Unit Price Work directed by the Department.

1.3 RELATED PROVISIONS

- A. Payments to CONTRACTOR: Refer to General Conditions, Supplementary Conditions, and Agreement.
- B. Changes in Contract Price: Refer to General Conditions and Supplementary Conditions.
- C. Schedule of Values: Refer to General Conditions, Supplementary Conditions, and Section 01 29 73, Schedule of Values.

1.4 QUANTITIES

- A. The Estimated quantities indicated in the Bid Schedule are the quantities for the evaluation of bids. The actual quantities of items to be paid for on a unit price basis may vary significantly from the quantities indicated in the Bid Schedule.

1.5 SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Section VIII, Article 1.4, 1.6 and Article 13.

1.6 MEASUREMENT

- A. Under this Contract, the CONTRACTOR shall provide all labor, equipment, and materials and shall complete all Work as shown and described in the Contract Documents and as directed by the Engineer and the Department, in accordance with the expressed intent of the Contract to secure a complete construction of a functionally complete Project. The bid items described in this Section shall together include all work set forth in the Contract Documents or required to properly complete the Work. Any necessary Work that is not explicitly described shall be considered included in the item to which it properly belongs. Where used in the Contract Documents, the word “including” (“includes”, “include”) shall mean “including (includes, include) but not limited to”. Each item includes:
 - 1. All tools, labor, material, equipment, plant services, bonds and insurance, tests, adjustments, warranties, overhead, supervision and other expenses required to perform the Work.
 - 2. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.
 - 3. All accessories, manuals, and services pertinent to the proper start-up, operation, and maintenance of materials and equipment.
- B. Lump Sum Items: Measurement of all Lump Sum Items will be on a total job basis.

- 1. The quantities of Work performed under lump sum items will not be measured except for

the purpose of determining reasonable interim payments. Interim payments will be made in accordance with the estimated value of Work performed and found acceptable as determined by the Engineer or the Department, or as specified in this Section.

2. For each lump sum bid item, the Contractor shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the lump sum in sufficient detail to document the specific costs of all items included in the lump sum bid item. The schedule of values shall be provided prior to initiation of the Work.
 3. Measurement for Progress Payments of all lump sum items will be on a percent complete basis as established in the Contract Documents.
- C. Unit Price Items: For each unit price bid item, the Contractor shall provide a schedule of values per Subpart 1.5 of this Section. The schedule of values shall include a breakdown of major cost items included within the unit price in sufficient detail to document the specific costs of all items included in the unit price bid item. The schedule of values shall be provided prior to initiation of the Work. Where items are specified to be measured on a unit basis, measurement will be of each particular unit as specified.
1. Volumetric Basis - Where solid or semi-solid items (e.g. sludge and sediment) are specified to be measured on a volumetric basis, the volume will be determined on an in-place basis (prior to excavation for excavation or after placement and compaction for imported fill). It shall be the difference between the existing and final ground surfaces as measured by land surveys. If no tolerance is specified, the tolerance shall be interpreted to be 0.00 foot. The surveys, limits of excavation and volume calculation shall be reviewed and approved by the Engineer or the Department. Where liquid items are specified to be measured on a volumetric basis, the volume will be determined by direct readings obtained from a graduated container containing the liquid or from a calibrated meter designed to measure the quantity of liquid passing an established point or boundary (e.g. flow meter).
 2. Areal Basis - Where items are specified to be measured on an areal basis, the area will be measured as the actual surface area within the specified limits. The actual number of square feet paid for shall be determined by calculating the areal extent of the feature, as measured by a land survey and determined using an electronic computer program to quantify earthwork. If a specified width of an item is indicated, the area will be determined by the actual length along the centerline multiplied by the specified width. No adjustments will be made for the overlap of materials. The surveys, limits, and extents in the calculations shall be reviewed and approved by the Engineer or the Department.
 3. Length Basis - Where items are specified to be measured on a length basis, the length will be measured as the actual length along the centerline within specified limits. No adjustments will be made for the overlap of materials
 4. Weight Basis - Where items (e.g. soil, debris, sludge) are specified to be measured on a weight basis, the weight will be measured based on certified weigh scale tickets obtained from a weigh scale certified by the County Office of Weights and Measures and

approved by the Engineer and the Department. The weights shall be taken in the presence of the Engineer or a Department representative. When the weight is for material delivered or transported by truck, trucks shall be weighed prior to loading and after loading. The weight for payment will be the difference between the prior-to and post-loading measured truck weights. Printed weigh tickets for all readings and all loads shall be submitted to the Engineer and Department for approval.

- D. Measurement and payment will be made only for Work that has been acceptably performed within the limits shown on the Contract Documents and in conformance with the Contract Documents.

1.7 DESCRIPTION OF BID ITEMS

A. Bid Item LS-1–Mobilization

1. Measurement and Payment: The bid lump sum price for Bid Item LS-1 - Mobilization shall be the amount paid to the CONTRACTOR to mobilize to the Site in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item LS-1 – Mobilization will be made upon the completion of:

- a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the Department and the Engineer, all project support facilities, including:
 - i. Temporary utilities
 - ii. Stabilized construction entrances
 - iii. Access roads
 - iv. Decontamination pads
 - v. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs
 - vi. Stockpile and staging areas,
 - vii. Pre-construction soil sampling,
 - viii. Field offices and support areas
 - ix. Project signs
 - x. Erosion controls
 - xi. Sediment control fencing, check dams, Lagoon bank turbidity curtain, inlet protection, erosion and surface water controls necessary to implement the CONTRACTOR's Storm Water Pollution Prevention Plan
 - xii. Other environmental control measures
 - xiii. Meteorological station
 - xiv. Temporary site fencing and gates
 - xv. Sanitary facilities
 - xvi. On-site and off-site traffic controls
 - xvii. Protection of the public
 - xviii. Truck Scale
- b. Completion, including approval by the Engineer and the

Department, of the CONTRACTOR's required plans for the project, including, the Project Plan, all site- and process-specific Work Plans, construction schedule, Schedule of Values, Health and Safety Plan, Community Air Monitoring Plan, Initial survey, Establishment of benchmarks, Spill Prevention Control and Countermeasures Plan and Storm Water Pollution Prevention Plan.

- c. Provision of Bonds and Insurance in accordance with the requirements of the Contract Documents at the time specified.
- d. Other work not specifically included in other identified items including, but not limited to, acquisition of permits or completion of permit-equivalency, compliance with applicable regulatory requirements, site verification testing, quality control, and preconstruction period planning, scheduling, submittals, reporting, administration and documentation.

B. Bid Item LS-2-Demolition

- 1. Measurement and Payment: The bid lump sum price for Bid Item LS-2– Demolition shall be the amount paid to the CONTRACTOR to conduct all of the demolition at the Site, including, but not limited to, demolition in the Vat Area, MGP Area, Lower Raceway, and near the Axton Cross Building, including removal of the Vats and appurtenances, storage tanks, fencing, Gas Holder Foundations, asphalt and other facilities in accordance with the requirements of the Contract Documents. Demolition shall include temporary or permanent sheeting, shoring and protection of structures and utilities in the Vat Area. Payments for 25% of the amount of Bid Item LS-2 – Demolition will be made upon the completion of demolition of the MGP Area Gas Holder Foundations, 50% of the amount of Bid Item LS-2 - Demolition will be made upon the completion of demolition of the Vats and their appurtenances, and 25% of the amount of Bid Item LS-2 – Demolition will be made upon the completion of all other demolition activities in accordance with the requirements of the Contract Documents.

C. Bid Item LS-3–Provide Fencing and Gates

- 1. Measurement and Payment: The bid lump sum price for Bid Item LS-3 – Provide Fencing and Gates shall be the amount paid to the CONTRACTOR to provide all permanent fencing and access gates and appurtenances in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item LS-3 – Provide Fencing and Gates will be made following complete installation of all permanent fencing and gates at the Site in accordance with the requirements of the Contract Documents.

D. Bid Item LS-4–Regrade the MGP Area

- 1. Measurement and Payment: The bid lump sum price for Bid Item LS-4 – Regrade the MGP Area shall be the amount paid to the CONTRACTOR to regrade the soil in the MGP Area to the subgrade shown in accordance with the requirements of the Contract Documents. One payment for 100% of the amount of Bid Item LS-4 – Regrade the MGP Area will be made following completion of all regrading as documented by a land survey

using an electronic computer program to quantify earthwork. The surveys, limits, and extents in the calculations shall be reviewed and approved by the Engineer or the Department.

E. Bid Item LS-5–Demobilization

1. Measurement and Payment: The bid lump sum price for Bid Item LS-5 - Demobilization shall be the amount paid to the CONTRACTOR to demobilize from the Site in accordance with the requirements of the Contract Documents. Cleaning the culvert is included in this Bid Item. One payment for 100% of the amount of Bid Item LS-5 - Demobilization will be made following the complete demobilization of personnel, materials, project facilities and equipment, and complete restoration of the Site in accordance with the requirements of the Contract Documents.

F. Bid Item UP-1–Temporary Services

1. Payment: The bid unit price for Bid Item UP-1 – Temporary Services shall be the amount paid each day for the CONTRACTOR to provide Temporary Services to the Site in accordance with the requirements of the Contract Documents. These temporary services include, but are not limited to:
 - a. Maintaining construction entrances
 - b. Site security
 - c. Maintaining and operating field offices and support areas
 - d. Maintaining project signs
 - e. Maintaining sanitary facilities
 - f. Conducting on-site and off-site traffic control
 - g. Access road maintenance
 - h. Fencing and gate maintenance
 - i. Disposal of project-related solid waste
 - j. Operation of the meteorological station
 - k. Maintaining compliance with permit-equivalency requirements
 - l. Conducting project meetings
 - m. Maintaining project records
 - n. Site superintendence
 - o. Staging and stockpile area maintenance
 - p. Temporary utilities
 - q. Implementing the Project Plan
 - r. Maintaining an updated construction schedule
 - s. Implementing the Spill Prevention Control and Countermeasures Plan
 - t. Providing other services not specifically listed, but required by the Contract Documents
2. Measurement for payment: The bid unit price for Bid Item UP-1 – Temporary Services will be paid in full for each day that all temporary services are provided by the CONTRACTOR beginning after the completion of mobilization, as defined in Bid Item LS-1 - Mobilization and ending at substantial completion or at the end of the Contract Time specified in Section VI Article 6.1, whichever is sooner.

G. Bid Item UP-2– Implement the Storm Water Pollution Prevention Plan

1. Payment: The bid unit price for Bid Item UP-2 – Implement the Storm Water Pollution Prevention Plan shall be the amount paid each day for the CONTRACTOR to conduct the activities necessary to implement the Storm Water Pollution Prevention Plan at the Site in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-2 – Implement the Storm Water Pollution Prevention Plan will be paid in full for each day that:
 - a. All of the controls associated with storm water pollution prevention are in place, and
 - b. The CONTRACTOR conducts the activities necessary to manage storm water in accordance with the Storm Water Pollution Prevention Plan.

The period of potential payment for Bid Item UP-2 - Implement the Storm Water Pollution Prevention Plan will begin after the satisfactory installation of storm water controls at the Site, and end at substantial completion or at the end of the Contract Time specified in Section VI Article 6.1, whichever is sooner.

H. Bid Item UP-3–Implement the Health and Safety Plan

1. Payment: The bid unit price for Bid Item UP-3 – Implement the Health and Safety Plan shall be the amount paid each day for the CONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-3 – Implement the Health and Safety Plan will be paid in full for each day that:
 - a. All of the elements of the CONTRACTOR’s Health and Safety Plan are in place, and
 - b. The CONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.

The period of potential payment for Bid Item UP-3 - Implement the Health and Safety Plan will begin after the satisfactory establishment of the required exclusion zone or zones and shall be considered complete when there is no longer an exclusion zone on the Site or at the end of the Contract Time specified in Section VI, Article 6.1, whichever is sooner. A 100 % reduction in the payment for this item will occur for each day that the Contractor fails to adhere (in the opinion of the Department or the Engineer) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays specified in Section XIII if no Work occurs in the exclusion zone.

I. Bid Item UP-4–Clearing

1. Payment: The bid unit price for Bid Item UP-4 – Clearing shall be the amount paid for each acre of the Site cleared by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-4 – Clearing will be paid in full for each acre cleared by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of acres paid for shall be determined by calculating the area of clearing provided, as measured by a land survey and determined using an electronic computer program. The surveys, limits of clearing and calculations shall be reviewed and approved by the Engineer or the Department.

J. Bid Item UP-5–Load, Transport and Dispose Non-Hazardous Solid Waste

1. Payment: The bid unit price for Bid Item UP-5 – Load, Transport and Dispose Non-Hazardous Solid Waste shall be the amount paid for each ton of non-hazardous solid waste, including but not limited to, soil, debris, refuse and organic vegetation, which is loaded into transport vehicles, transported from the Site, and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-5 – Load, Transport and Dispose Non-Hazardous Solid Waste will be paid in full for each ton of non-hazardous solid waste loaded, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the non-hazardous solid waste in the transport vehicles obtained in accordance with Paragraph 1.6. C. 4 of this Section.

K. Bid Item UP-6–Load, Transport and Dispose Non-Hazardous Solid Waste Classified as ACM

1. Payment: The bid unit price for Bid Item UP-6 – Load, Transport and Dispose Non-Hazardous Solid Waste Classified as ACM shall be the amount paid for each ton of non-hazardous solid waste which is classified as ACM which is loaded into transport vehicles, transported from the Site, and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-6 – Load, Transport and Dispose Non-Hazardous Solid Waste Classified as ACM will be paid in full for each ton of solid non-hazardous waste classified as ACM that is loaded, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the non-hazardous solid waste classified as ACM in the transport vehicles obtained in accordance with Paragraph 1.6. C. 4 of this Section.

L. Bid Item UP-7– Load, Transport and Dispose Hazardous Solid Waste

1. Payment: The bid unit price for Bid Item UP-7 – Load, Transport and Dispose Hazardous Solid Waste shall be the amount paid for each ton of hazardous solid waste, including but not limited to, soil, debris and other materials, which is loaded into transport

vehicles, transported from the Site, and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents.

2. Measurement for payment: The bid unit price for Bid Item UP-7 – Load, Transport and Dispose Hazardous Solid Waste will be paid in full for each ton of solid hazardous waste loaded, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous solid waste in the transport vehicles obtained in accordance with Paragraph 1.6. C. 4 of this Section.

M. Bid Item UP-8–Remove, Transport and Dispose Hazardous Liquids

1. Payment: The bid unit price for Bid Item UP-8 – Remove, Transport and Dispose Hazardous Liquids shall be the amount paid for each gallon of hazardous liquid which is removed from the Site, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-8 – Remove, Transport and Dispose Hazardous Liquids will be paid in full for each gallon of hazardous liquid that is removed from the Site, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of gallons paid for shall be the cumulative total which is shown on a properly working, calibrated flow meter installed on the transfer hose when loading hazardous liquid into the transport vehicle obtained in accordance with Paragraph 1.6. C. 1 of this Section.

N. Bid Item UP-9–Remove, Transport and Dispose Hazardous Sludge

1. Payment: The bid unit price for Bid Item UP-9 – Remove, Transport and Dispose Hazardous Sludge shall be the amount paid for each ton of hazardous sludge which is removed from the Site, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-9 – Remove, Transport and Dispose Hazardous Sludge will be paid in full for each ton of hazardous sludge that is removed from the Site, transported and disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of tons paid for shall be the cumulative weight of the hazardous sludge in the transport vehicles obtained in accordance with Paragraph 1.6. C. 4 of this Section.

O. Bid Item UP-10–Remove and Dewater Material from the Lagoon

1. Payment: The bid unit price for Bid Item UP-10 – Remove and Dewater Material from the Lagoon shall be the amount paid for each cubic yard of material which is removed from the lagoon, transported to the temporary dewatering facility and dewatered by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-10 – Remove and Dewater Material from the Lagoon will be paid in full for each cubic yard of material which is removed from the Three Star Lagoon, transported to the temporary dewatering

facility and dewatered by the CONTRACTOR in accordance with the requirements of the Contract Documents. All costs associated with dewatering and treating or disposing of the dewatering water and any precipitation or contact water associated with the dewatering and treatment facilities, as well as for construction, operation and removal of the dewatering and treatment facilities, if used, and any ancillary utilities and facilities, including sediment removal perimeter turbidity curtains and the outlet cofferdam shall be included in the bid unit price for Bid Item UP-10 - Remove and Dewater Material from the Lagoon. Shoring, sheeting and protection of the stone retaining walls and the Axton Cross Building foundation during sediment removal are also included in this Bid Item. The actual number of cubic yards paid for shall be determined by comparing a bathymetric survey obtained of the pre-removal grade to a bathymetric survey of the post-excavated grade within the Limit of Sediment Removal in the Lagoon using an electronic computer program to quantify earthwork in accordance with Paragraph 1.6. C. 1 of this Section.

P. Bid Item UP-11–Collect, Treat and Discharge Water

1. Payment: The bid unit price for Bid Item UP-11 – Collect, Treat and Discharge Water shall be the amount paid for each gallon of liquid not associated with the sediment removal from the Lagoon or precipitation and contact water associated with the dewatering and treatment facilities, which is collected during the Work, treated in the temporary water treatment facility and discharged to surface water or disposed off-site by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-11 – Collect, Treat and Discharge Water will be paid in full for each gallon of water not associated with the sediment removal from the Lagoon or precipitation and contact water associated with the dewatering and treatment facilities, which is collected during the Work treated in the temporary water treatment facility and discharged to surface water or disposed by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of gallons paid for shall be the cumulative total which is shown on a properly working, calibrated flow meter installed on the pipelines or hoses discharging to the temporary water treatment facility or the off-site transport vehicles in accordance with Paragraph 1.6. C. 1 of this Section.

Q. Bid Item UP-12–Excavation

1. Payment: The bid unit price for Bid Item UP-12 – Excavation shall be the amount paid for each cubic yard of material which is excavated by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-12 – Excavation will be paid in full for each cubic yard of material within the indicated excavation limits, which is excavated by the CONTRACTOR in accordance with the requirements of the Contract Documents. Excavation shall include temporary or permanent sheeting, shoring and protection of structures and utilities, including, but not limited to, the Axton Cross Building. The actual number of cubic yards paid for shall be determined by comparing a land survey obtained of the pre-removal grade to a land survey of the post-excavated grade within the excavation limits of payment using an electronic computer program to

quantify earthwork in accordance with Paragraph 1.6. C. 1 of this Section.

R. Bid Item UP-13–Provide General Fill

1. Payment: The bid unit price for Bid Item UP-13 – Provide General Fill shall be the amount paid for each cubic yard of general fill which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-13 – Provide General Fill will be paid in full for each cubic yard of general fill which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents. Separation fabric provided as demarcation of the actual horizontal and vertical limits of excavation is also included in this Bid Item. The actual number of cubic yards paid for shall be determined by comparing a land survey obtained of the pre-placement grade to a land survey of the post-backfill grade within the excavation limits of payment using an electronic computer program to quantify earthwork in accordance with Paragraph 1.6. C. 1 of this Section.

S. Bid Item UP-14–Provide Select Fill NYSDOT Type 4

1. Payment: The bid unit price for Bid Item UP-14 – Provide Select Fill NYSDOT Type 4 shall be the amount paid for each cubic yard of material which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-14 – Provide Select Fill NYSDOT Type 4 will be paid in full for each cubic yard of material which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of cubic yards paid for this Bid Item associated with the backfill of the Lagoon shall be determined by comparing a bathymetric survey obtained of the pre-placement grade to a bathymetric survey of the post-backfill grade within the limits of sediment removal using an electronic computer program to quantify earthwork in accordance with Paragraph 1.6. C. 1 of this Section. The actual number of cubic yards paid for this Bid Item associated with all other non-Lagoon backfill shall be determined by comparing a land survey obtained of the pre-placement grade to a land survey of the post-backfill grade within the excavation limits of payment using an electronic computer program to quantify earthwork in accordance with Paragraph 1.6. C. 1 of this Section.

T. Bid Item UP-15–Provide Soil Cover System

1. Payment: The bid unit price for Bid Item UP-15 – Provide Soil Cover System shall be the amount paid for each square foot of cover system, consisting of six inches of topsoil and surface seeding, which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-15 – Provide Soil Cover System will be paid in full for each square foot of cover system which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of square feet paid for shall be determined by calculating the area of the cover system provided, as measured by a land survey, and determined using an electronic

computer program to quantify earthwork in accordance with Paragraph 1.6. C. 2 of this Section.

U. Bid Item UP-16–Provide Asphalt Pavement System

1. Payment: The bid unit price for Bid Item UP-16 – Provide Asphalt Pavement System shall be the amount paid for each square foot of asphalt paving system, consisting of stabilization fabric, subbase material, 3-inch binder course, and 1-inch top course, which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item UP-16 – Provide Asphalt Pavement System will be paid in full for each square foot of asphalt pavement system which is provided by the CONTRACTOR in accordance with the requirements of the Contract Documents. The actual number of square feet paid for shall be determined by calculating the area of the asphalt pavement system provided, as measured by a land survey, and determined using an electronic computer program to quantify earthwork in accordance with Paragraph 1.6. C. 2 of this Section.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

Not Applicable

END OF SECTION

SECTION XIII

Wage Rates and Associated Contract Requirements



Andrew M. Cuomo, Governor

Peter M. Rivera, Commissioner

NYSDEC

David Hiss, Senior Engineer
ARCADIS
855 Route 146
Suite 210
Clifton Park NY 12065

Schedule Year 2012 through 2013
Date Requested 01/07/2013
PRC# 2013000176

Location Market Street Industrial Park
Project ID# D008793
Project Type Environmental remediation of soil and water at a NYSDEC-Listed inactive hazardous waste site.

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Wage Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2012 through June 2013. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.state.ny.us. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission; a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion [online](#).

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

There are very few exceptions to this rule. Complete information regarding these exceptions is available on the "[4 Day / 10 Hour Work Schedule](#)" form (PW 30R).

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.state.ny.us.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.state.ny.us.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.state.ny.us.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three (3) years from the project's date of completion. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provided, and Daily and weekly number of hours worked in each classification.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, but are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "[Public Work Project](#)" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex 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 (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.



Andrew M. Cuomo, Governor

Peter M. Rivera, Commissioner

NYSDEC

David Hiss, Senior Engineer
ARCADIS
855 Route 146
Suite 210
Clifton Park NY 12065

Schedule Year 2012 through 2013
Date Requested 01/07/2013
PRC# 2013000176

Location Market Street Industrial Park
Project ID# D008793
Project Type Environmental remediation of soil and water at a NYSDEC-Listed inactive hazardous waste site.

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

IMPORTANT NOTICE

FOR

CONTRACTORS & CONTRACTING AGENCIES

Social Security Numbers on Certified Payrolls

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concerns with regard to inclusion of this information on payrolls if another identifier will suffice.

For these reasons, ***the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor.***

NOTE: This change does not affect the Department's ability to request and receive the entire social security number from employers during the course of its public work / prevailing wage investigations.

**To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12240

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.

Construction Industry Fair Play Act

Required Posting For Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site.

Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense.

The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, www.labor.ny.gov.

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.state.ny.us .



New York State Department of Labor
Required Notice under Article 25-B of the Labor Law

**ATTENTION ALL EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS:
YOU ARE COVERED BY THE
CONSTRUCTION INDUSTRY FAIR PLAY ACT**

The law says that you are an employee unless:

- You are free from direction and control in performing your job AND
- You perform work that is not part of the usual work done by the business that hired you AND
- You have an independently established business

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

**IT IS AGAINST THE LAW FOR AN EMPLOYER TO MISCLASSIFY EMPLOYEES AS
INDEPENDENT CONTRACTORS OR PAY EMPLOYEES OFF-THE-BOOKS.**

Employee rights. If you are an employee:

- You are entitled to state and federal worker protections such as
 - unemployment benefits, if unemployed through no fault of your own, able to work, and otherwise qualified
 - workers' compensation benefits for on-the-job injuries
 - payment for wages earned, minimum wage, and overtime (under certain conditions)
 - prevailing wages on public work projects
 - the provisions of the National Labor Relations Act and
 - a safe work environment
- It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor:

- You must pay all taxes required by New York State and Federal Law.

Penalties for paying off-the-books or improperly treating employees as independent contractors:

- **Civil Penalty** First Offense: up to \$2,500 per employee.
Subsequent Offense(s): up to \$5,000 per employee.
- **Criminal Penalty** First Offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing Public Work for up to one year.
Subsequent Offense(s): Misdemeanor - up to 60 days in jail, up to a \$50,000 fine and debarment from performing Public Work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at 1(866)435-1499 or send an email to dol.misclassified@labor.state.ny.us. All complaints of fraud and violations are taken seriously and you can remain anonymous.

Employer Name:

WORKER NOTIFICATION

(Labor Law §220, paragraph a of subdivision 3-a)

Effective February 24, 2008

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her particular job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.state.ny.us or made available upon request by contacting the Bureau of Public Work at 518-457-5589.

* In the event that the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.



New York State Department of Labor
Bureau of Public Work

Attention Employees

THIS IS A: **PUBLIC WORK PROJECT**

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Chapter 629 of
the Labor Laws
of 2007:

**These wages are set by law and must be posted
at the work site. They can also be found at:**
www.labor.ny.gov

If you feel that you have not received proper wages or benefits,
please call our nearest office.*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 775-3568	White Plains	(914) 997-9507
Newburgh	(845) 568-5287		

* For New York City government agency construction projects, please
contact the Office of the NYC Comptroller at (212) 669-4443, or
www.comptroller.nyc.gov – click on Bureau of Labor Law.

Contractor Name: _____

Project Location: _____

OSHA 10-hour Construction Safety and Health Course – S1537-A

Effective July 18, 2008

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, section 220-h. It requires that on all public work projects of at least \$250,000.00, all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course. It further requires that the advertised bids and contracts for every public work contract of at least \$250,000.00, contain a provision of this requirement.

NOTE: The OSHA 10 Legislation only applies to workers on a public work project that are required, under Article 8, to receive the prevailing wage.

Where to find OSHA 10-hour Construction Course

1. NYS Department of Labor website for scheduled outreach training at:

www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_ONSITE_CONSULTATION.shtm

2. OSHA Training Institute Education Centers:

Rochester Institute of Technology OSHA Education Center

Rochester, NY

Donna Winter

Fax (585) 475-6292

e-mail: dlwtpo@rit.edu

(866) 385-7470 Ext. 2919

www.rit.edu/~outreach/course.php3?CourseID=54

Atlantic OSHA Training Center

UMDNJ – School of Public Health

Piscataway, NJ

Janet Crooks

Fax (732) 235-9460

e-mail: crooksje@umdnj.edu

(732) 235-9455

<https://ophs.umdnj.edu/wconnect/ShowSchedule.awp?~~GROUP~AOTCON~10~>

Atlantic OSHA Training Center

University at Buffalo

Buffalo, New York

Joe Syracuse

Fax (716) 829-2806

e-mail: mailto:japs@buffalo.edu

(716) 829-2125

http://www.smbs.buffalo.edu/CENTERS/trc/schedule_OSHA.php

Keene State College

Manchester, NH

Leslie Singleton

e-mail: lsingletin@keene.edu

(800) 449-6742

www.keene.edu/courses/print/courses_oshacfm

3. List of trainers and training schedules for OSHA outreach training at:

www.OutreachTrainers.org

Requirements for OSHA 10 Compliance

Chapter 282 of the Laws of 2007, codified as Labor Law 220-h took effect on July 18, 2008. The statute provides as follows:

The advertised specifications for every contract for public work of \$250,000.00 or more must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training “prior to the performing any work on the project.”

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.*)
- Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

******A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-485-5696.

WICKS Reform 2008

(For all contracts advertised or solicited for bid on or after 7/1/08)

- Raises the threshold for public work projects subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work. The total project's threshold would increase from \$50,000 to: \$3 million in Bronx, Kings, New York, Queens and Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.
- For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical work and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or use of a Project Labor Agreement (PLA), and must be open to public inspection.
- Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.
- The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.
- Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.
- Reduces from 15 to 7 days the period in which contractors must pay subcontractors.

IMPORTANT INFORMATION

Regarding Use of Form PW30R

“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

To use the ‘4 Day / 10 Hour Work Schedule’:

There **MUST** be a *Dispensation of Hours (PW30)* in place on the project

AND

You **MUST** register your intent to work 4 / 10 hour days, by completing the PW30R Form.

REMEMBER...

The ‘4 Day / 10 Hour Work Schedule’ applies **ONLY** to Job Classifications and Counties listed on the PW30R Form.

Do not write in any additional Classifications or Counties.

(Please note : For each Job Classification check the individual wage schedule for specific details regarding their 4/10 hour day posting.)

Instructions for Completing Form PW30R

“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

Before completing Form PW30R check to be sure ...

- There is a *Dispensation of Hours* in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Instructions (Type or Print legibly):

Contractor Information:

- Enter the Legal Name of the business, FEIN, Street Address, City, State, Zip Code; the Company's Phone and Fax numbers; and the Company's email address (if applicable)
- Enter the Name of a Contact Person for the Company along with their Phone and Fax numbers, and the personal email address (if applicable)

Project Information:

- Enter the Prevailing Rate Case number (PRC#) assigned to this project
- Enter the Project Name / Type (i.e. Smithtown CSD – Replacement of HS Roof)
- Enter the Exact Location of Project (i.e. Smithtown HS, 143 County Route #2, Smithtown, NY; Bldgs. 1 & 2)
- If you are a Subcontractor, enter the name of the Prime Contractor for which you work
- On the Checklist of Job Classifications -
 - Go to pages 2 and 3 of the form
 - Place a checkmark in the box to the right of the Job Classification you are choosing
 - Mark all Job Classifications that apply

****Do not write in any additional Classifications or Counties.****

Requestor Information:

- Enter the name of the person submitting the registration, their title with the company, and the date the registration is filled out

Return Completed Form:

- **Mail** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work, SOBC – Bldg.12 – Rm.130, Albany, NY 12240 **-OR-**
- **Fax** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work at (518)485-1870



New York State Department of Labor
Bureau of Public Work
W. Averell Harriman State Office Campus
Building 12 - Room 130
Albany, New York 12240
Phone - (518) 457-5589 Fax - (518) 485-1870

Employer Registration for Use of 4 Day / 10 Hour Work Schedule

Before completing Form PW30R check to be sure ...

There is a *Dispensation of Hours* in place on the project.

The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.

The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Please Type or Print the Requested Information

When completed ...

Mail to NYSDOL Bureau of Public Work, SOBC, Bldg. 12, Rm.130, Albany, NY 12240

-or-

Fax to NYSDOL Bureau of Public Work at (518) 485-1870

Contractor Information

Company Name: _____ FEIN: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number _____ Fax Number: _____ Email Address: _____

Contact Person: _____

Phone No: _____ Fax No: _____ Email: _____

Project Information

Project PRC#: _____ Project Name/Type: _____

Exact Location
of Project: _____ County: _____

(If you are Subcontractor)

Prime Contractor Name: _____

Job Classification(s) to Work 4/10 Schedule: (Choose all that apply on Job Classification Checklist - Pages 2 & 3)
*** Do not write in any additional Classifications or Counties***

Requestor Information

Name: _____

Title: _____ Date : _____

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

Job Classification	Tag #	Applicable Counties	Check Box
Carpenter - Building	1042	Clinton, Essex, Franklin	<input type="checkbox"/>
Carpenter - Building	370	Albany, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie	<input type="checkbox"/>
Carpenter - Building	370Z2	Hamilton, Warren, Washington	<input type="checkbox"/>
Carpenter - Building	370Z3	Saratoga	<input type="checkbox"/>
Carpenter - Heavy&Highway	370Saratoga	Saratoga	<input type="checkbox"/>
Carpenter - Heavy&Highway	370/1042H/H	Clinton, Essex, Franklin, Hamilton	<input type="checkbox"/>
Carpenter - Heavy&Highway	370H/H	Albany, Fulton, Montgomery, Rensselaer, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Carpenter - Building	85	Livingston, Monroe, Ontario, Wayne, Wyoming	<input type="checkbox"/>
Carpenter - Building	281B	Cayuga, Seneca, Yates	<input type="checkbox"/>
Carpenter - Heavy/Highway	281HH	Cayuga, Seneca, Yates	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	280	Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	9	Erie, Cattaraugus	<input type="checkbox"/>
Carpenter - Heavy&Highway	66h	Allegany, Chautauqua, Cattaraugus	<input type="checkbox"/>
Carpenter - Building	66	Allegany, Chautauqua, Cattaraugus	<input type="checkbox"/>
Carpenter - Building	277 CST	Cortland, Schuyler, Tompkins	<input type="checkbox"/>
Carpenter - Building	277 JLS	Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Carpenter - Building	277 omh	Herkimer, Madison, Oneida	<input type="checkbox"/>
Carpenter - Building	277 On	Onondaga	<input type="checkbox"/>
Carpenter - Building	277 Os	Oswego	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h CST	Cortland, Schuyler, Tompkins	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h JLS	Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h On	Onondaga	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	277CDO	Chenango, Delaware, Otsego	<input type="checkbox"/>
Carpenter - Heavy/Highway	277oneidah	Herkimer, Madison, Oneida	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h Os	Oswego	<input type="checkbox"/>
Electrician	25m	Nassau, Suffolk	<input type="checkbox"/>
Electrician	43	Cayuga, Chenango, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego, Otsego, Tompkins, Wayne	<input type="checkbox"/>
Electrician	840Teledata and 840 Z1	Cayuga, Onondaga, Ontario, Seneca, Wayne, Yates	<input type="checkbox"/>

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

Job Classification	Tag #	Applicable Counties	Check Box
Electrician	86	Genesee, Livingston, Monroe, Ontario, Orleans, Wayne, Wyoming	<input type="checkbox"/>
Electrician	910	Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Electrician Lineman	1049Line/Gas	Nassau, Suffolk	<input type="checkbox"/>
Electrician Lineman	1249a	Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates	<input type="checkbox"/>
Elevator Constructor	138	Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester	<input type="checkbox"/>
Elevator Constructor	14	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Elevator Constructor	27	Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates	<input type="checkbox"/>
Elevator Constructor	35	Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Oneida, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Elevator Constructor	62.1	Broome, Cayuga, Chenango, Cortland, Delaware, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tioga, Tompkins	<input type="checkbox"/>
Glazier	660	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Glazier	660r	<u>Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming</u>	<input type="checkbox"/>
Glazier	677.1	Jefferson, Lewis, Livingston, Monroe, Ontario, Seneca, St. Lawrence, Wayne, Yates	<input type="checkbox"/>
Glazier	667.Z-2	Cayuga, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego	<input type="checkbox"/>
Glazier	677z3	Broome, Chemung, Chenango, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins	<input type="checkbox"/>
Glazier	667r.2	Cayuga, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego	<input type="checkbox"/>
Insulator - Heat & Frost	30-Syracuse	Broome, Cayuga, Chemung, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Tioga, Tompkins	<input type="checkbox"/>

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

Job Classification	Tag #	Applicable Counties	Check Box
Laborers - Residential Deconstruction, Demolition	601	Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Essex, Franklin, Genesee, Jefferson, Lewis, Livingston, Monroe, Onondaga, Ontario, Orleans, Oswego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Wayne, Wyoming, Yates	<input type="checkbox"/>
Laborer - Building	621b	Allegany, Cattaraugus, Chautauqua	<input type="checkbox"/>
Laborer - Residential	621r	Allegany, Cattaraugus, Chautauqua	<input type="checkbox"/>
Mason - Building/Heavy&Highway	780	Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk	<input type="checkbox"/>
Operating Engineer - Heavy& Highway	832H	Allegany, Chemung, Genesee, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates	<input type="checkbox"/>
Operating Engineer - Heavy/Highway	137H/H	Putnam, Westchester	<input type="checkbox"/>
Painter	178 B	Broome, Chenango, Tioga	<input type="checkbox"/>
Painter	178 E	Chemung, Schuyler, Steuben	<input type="checkbox"/>
Painter	178 O	Delaware, Otsego	<input type="checkbox"/>
Painter	31	Cayuga, Herkimer, Lewis, Madison, Oneida, Onondaga, Ontario, Oswego, Seneca	<input type="checkbox"/>
Painter	38.O	Oswego	<input type="checkbox"/>
Painter	4-Buf,Nia,Olean	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Niagara, Orleans, Steuben, Wyoming	<input type="checkbox"/>
Painter	4-Jamestown	Cattaraugus, Chautauqua	<input type="checkbox"/>
Painter	150	Livingston, Monroe, Ontario, Wayne, Yates	<input type="checkbox"/>
Sheetmetal Worker	46	Livingston, Monroe, Ontario, Seneca, Wayne, Yates	<input type="checkbox"/>
Teamster - Heavy&Highway	294h/h	Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Teamster - Heavy&Highway	317a.hh	Allegany, Cayuga, Cortland, Seneca, Steuben, Tompkins, Wayne, Yates	<input type="checkbox"/>
Teamster - Heavy&Highway	693.H/H	Broome, Chenango, Delaware, Otsego, Tioga	<input type="checkbox"/>
Teamster - Building/Heavy&Highway	456	Putnam, Westchester	<input type="checkbox"/>

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is for each hour worked, some classifications require the payment or provision of supplements for each hour paid (including paid holidays on which no work is performed) and/or may require supplements to be paid or provided at a premium rate for premium hours worked.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2

Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-775-3568	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4904
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Dutchess County General Construction

Asbestos Worker

01/01/2013

JOB DESCRIPTION Asbestos Worker

DISTRICT 9

ENTIRE COUNTIES

Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster

WAGES

Per hour

7/01/2012

Asbestos Worker:

Removal & Hazardous

Abatement Only

\$ 39.30

Only for the removal of insulation materials from mechanical systems which are not going to be scrapped.

SUPPLEMENTAL BENEFITS

Per hour paid

Journeyman

\$ 17.00

OVERTIME PAY

See (B, E, *Q, **T, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (2, 4, 6, 25) on HOLIDAY PAGE

* Code Q applies to 4,6,& 25.

** Code T applies to 2.

9-12a - Removal Only

Boilermaker

01/01/2013

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:

07/01/2012

Boilermaker

\$ 47.98

Repairs & Renovations

\$ 47.98

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2012

Boilermaker

33% of hourly

Repairs & Renovations

Wage Paid

+ \$22.25

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (8, 16, 23, 24) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 12, 15, 25) on HOLIDAY PAGE

NOTE: *Employee must work in pay week to receive Holiday Pay.

**Boilermaker gets 4 times the hourly wage rate for working on Labor Day.

***Repairs & Renovation see (B,E,Q) on HOLIDAY PAGE

HOLIDAY

REGISTERED APPRENTICES

*REGISTERED APPRENTICES

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

Apprentice(s)	07/01/2012 33% of Hourly Wage Paid plus amount below
---------------	---

1st	2nd	3rd	4th	5th	6th	7th	8th
\$17.41	\$18.10	\$18.79	\$19.48	\$20.17	\$20.86	\$21.55	\$22.25

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Carpenter

01/01/2013

JOB DESCRIPTION Carpenter

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour: 07/01/2012

Marine Construction:

Marine Diver	\$ 58.95
M.D.Tender	42.10

SUPPLEMENTAL BENEFITS

Per Hour Paid:

Journeyman	\$ 42.37
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OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 13, 16, 18, 19) on HOLIDAY PAGE

9-1456MC

Carpenter

01/01/2013

JOB DESCRIPTION Carpenter

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2012

Carpet/Resilient Floor Coverer	\$ 45.34
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INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour paid:

Floor Coverer	\$ 38.58
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour is Percentage of Journeyworkers Wage

(1) year terms:

1st.	2nd.	3rd.	4th.
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices \$ 25.83

9-2287

Carpenter

01/01/2013

JOB DESCRIPTION Carpenter

DISTRICT 9

ENTIRE COUNTIES

Dutchess, Orange

WAGES

Per hour: 07/01/2012

Building:

Millwright \$ 35.11

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 32.80

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

HOLIDAY:

Paid: See (18,19) on HOLIDAY PAGE.

Paid: See (5,6,11,13,16,18,19,25) for 1st & 2nd yr.Apprentices

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th
55%	65%	75%	95%

Supplemental benefits per hour:

APPRENTICES:	1st	2nd	3rd	4th
	\$ 22.49	24.46	26.92	30.38

9-740.2

Carpenter - Building / Heavy&Highway

01/01/2013

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Sullivan, Ulster

WAGES

WAGES:(per hour)

07/01/2012

07/01/2013
Additional

Carpenter	\$ 32.88	\$ 1.52**
Carpenter-Floor Coverer*	32.88	1.52**
Dockbuilder/Piledriver	32.88	1.52**
Diver Tender	32.88	1.52**
Diver(WET)	55.48	1.52**
Diver(DRY)	34.65	1.52**

** To be allocated at a later date

SHIFT DIFFERENTIAL: When mandated by a Government Agency irregular or off shift can be worked. The Carpenter shall receive an additional (15) percent of wage plus applicable benefits.

* Note: Rate DOES NOT apply in Orange or Dutchess County.

On projects for removal and/or abatement of asbestos or any toxic or hazardous material and it is required by the employer or mandated by NYS or Federal Regulation to wear protective equipment an additional two (2) hours pay per day including benefits on all classifications including apprentices. For work on smokestacks, silos, or steeples more than fifty (50) feet high, an additional \$2.00 per hour, payable from the ground up.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker \$ 22.71

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

BUILDING:

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6) on HOLIDAY PAGE.

HEAVY/HIGHWAY:

Paid: See (5, 6, 16) on HOLIDAY PAGE including benefits.

Overtime: See (5, 6, 16) on HOLIDAY PAGE.

REGISTERED APPRENTICES

1 Year terms at the following percentage of journeymans wage.

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

Apprentices

1st term	\$ 15.10
2nd term	15.10
3rd term	15.10
4th term	15.10

11-279.2B/H&H

Electrician

01/01/2013

JOB DESCRIPTION Electrician

DISTRICT 11

ENTIRE COUNTIES

Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Only in the Townships of Andes, Harpersfield, Kortwright, Stamford, Bovina, Roxbury, Middletown and those portions of Colchester and Hancock south of the East Branch of the Delaware River.

Dutchess: All of the county except for the towns of Fishkill, East Fishkill, and Beacon.

Greene: That portion of the county south of a line following the south limits of the city of Catskill in a Westerly direction from the Hudson River to Highway 23A along 23A to the road following the Little Westkill and continuing along this road to Delaware County.

WAGES

Per hour:

07/01/2012

Electrician Wireman/Technician

\$ 37.00**

SHIFT DIFFERENTIAL: On Public Work in New York State when shift work is mandated either in the job specifications or by the contracting agency, the following rates apply:

Shift worked between 4:30pm & 12:30am	\$ 43.06*
Shift worked between 12:30am & 8:30am	\$ 47.99*

**On jobs where employees are required to work from bosun chairs, swinging scaffolds, etc., forty (40) feet or more above the ground, or under compressed air, using Scottair packs, gas masks or in shafts or tunnels, they shall receive an additional \$2.00 per hour above the regular straight time rate.

On jobs where employees are required to have CDL, Asbestos License, Welding Certificate, or Cable Splicing shall receive an additional \$1.00 above the journeyman rate.

SUPPLEMENTAL BENEFITS

Per hour worked: 07/01/2012

Journeyman \$ 22.77 plus
6% of wage

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 13, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(6)month terms at the following percentage of journeyman's wage.*

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
30%	35%	40%	45%	50%	55%	65%	70%	75%	85%

* Denotes average Journeyman Wireman rate of pay of all wage zones.

Supplemental Benefits per hour worked:

07/01/2012

1st & 2nd term	\$ 8.06 plus 6% of wage
3rd & 4th term	10.32 plus 6% of wage
5th & 6th term	12.58 plus 6% of wage
7th & 8th term	15.99 plus 6% of wage
9th & 10th term	19.36 plus 6% of wage

11-363/2

Electrician

01/01/2013

JOB DESCRIPTION Electrician

DISTRICT 11

ENTIRE COUNTIES

Orange, Putnam, Rockland

PARTIAL COUNTIES

Dutchess: Towns of Fishkill, East Fishkill, and Beacon.

WAGES

Per hour:

07/01/2012

Electrician Wireman/Technician \$ 41.00**

*SHIFT DIFFERENTIAL: On Public Work in New York State when shift work is mandated either in the job specifications or by the contracting agency, the following rates apply:

Shift worked between 4:30pm & 12:30am	\$ 47.75*
Shift worked between 12:30am & 8:30am	\$ 53.25*

**On jobs where employees are required to work from boatswain chairs, swinging scaffolds, etc., forty (40) feet or more above the ground, or under compressed air, using Scottair packs, gas masks or in shafts or tunnels, they shall receive an additional \$2.00 per hour above the regular straight time rate.

On jobs where a CDL, Asbestos License, Welding Certificate or Cable Splicing is required an additional \$1.00 above the Journeyman rate is to be paid.

SUPPLEMENTAL BENEFITS

Per hour worked:

07/01/2012

Journeyman \$ 22.77 plus
6% of wage

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 13, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(6)month terms at the following percentage of Journeyman's wage.*

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
30%	35%	40%	45%	50%	55%	65%	70%	75%	85%

* Denotes average Journeyman Wireman rate of all wage zones

Supplemental Benefits per hour worked: 07/01/2012

1st & 2nd term	\$ 8.06 plus 6% of wage
3rd & 4th term	10.32 plus 6% of wage
5th & 6th term	12.58 plus 6% of wage
7th & 8th term	15.99 plus 6% of wage
9th & 10th term	19.36 plus 6% of wage

11-363/1

Elevator Constructor

01/01/2013

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Putnam, Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Towns of Andes, Bovina, Colchester, Davenport, Delhi, Harpersfield, Hemdon, Kortright, Meredith, Middletown, Roxbury, Hancock & Stamford

Rockland: Only the Township of Stony Point.

Westchester: Only the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per Hour	07/01/2012	01/01/2013	01/01/2014	01/01/2015
Mechanic	\$ 50.11	\$ 50.68	\$ 51.55	\$ 52.51
Helper	70% of Mechanic Wage Rate			

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked	07/01/2012	01/01/2013	01/01/2014	01/01/2015
Journeyman/Helper	\$ 23.535*	\$ 25.185*	\$ 26.785*	\$ 28.385*

(*)Plus 6% of gross wages if less than 5 years service

(*)Plus 8% of gross wages if more than 5 years service

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

0-6 mo	6-12 mo	2nd yr	3rd yr	4th yr
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50 % 55 % 65 % 70 % 80 %

Supplemental Benefits per hour worked

Same as Journeyman/Helper

1-138

Glazier	01/01/2013
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JOB DESCRIPTION Glazier

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:	07/01/2012	11/01/2012	05/01/2013 Additional
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Glazier	\$ 47.75	\$ 48.60	\$ 1.50*
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Scaffolding	\$ 48.75	\$ 49.60	\$ 1.50*
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Repair & Maintenance:

Glazier **	\$ 26.50	\$ 26.50	\$ 1.50*
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* To be allocated at a future date

Repair & Maintenance- All repair & maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$100,000.00.

SUPPLEMENTAL BENEFITS

Per hour paid:	07/01/2012	11/01/2012	05/01/2013
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Journeyworker...	\$ 25.34	\$ 25.34	\$ 26.60
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Repair & Maintenance:

Glazier **	\$ 15.14	\$ 15.14	\$ 15.64
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OVERTIME PAY

OVERTIME: See (C*,D* E2, O) on OVERTIME PAGE.

* If an optional 8th hour is required to complete the entire project, the same shall be paid at the regular rate of pay. If a 9th hour is worked, then both hours or more (8th & 9th or more) will be paid at double time rate of pay.

** For Repair & Maintenance see (B,F, P) on overtime page.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 16, 25) on HOLIDAY PAGE

The Following are paid holidays for the Repair & Maintenance Class:

New Years day, Presidents day, Memorial day, Independents day, Labor day, Thanksgiving day, Day after Thanksgiving, and Christmas day.

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

	07/01/2012	11/01/2012	05/01/2013 Additional
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1st term	\$ 16.00	\$ 16.35	\$.60*
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2nd term	\$ 23.81	\$ 24.24	\$.75*
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3rd term	\$ 28.59	\$ 29.10	\$.90*
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4th term	\$ 38.17	\$ 38.85	\$ 1.20*
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* To be allocated at a future date

Supplemental Benefits:

(Per hour worked)

1st term	\$ 12.07
2nd term	\$ 17.28
3rd term	\$ 18.54
4th term	\$ 18.89

9-1281 (DC9 NYC)

Insulator - Heat & Frost**01/01/2013**

JOB DESCRIPTION Insulator - Heat & Frost**DISTRICT** 8**ENTIRE COUNTIES**

Dutchess, Orange, Putnam, Rockland, Westchester

WAGES

Per hour:	07/01/2012	03/27/2013
Insulator	\$ 46.26	+Additional** \$1.52
Fire Stop Work*	\$ 24.11	+Additional** \$0.79

* Applies on all exclusive Fire Stop Work (When contract is for Fire Stop work only). No apprentices on these contracts only.

**Increase to be allocated at a later date.

Note: Additional \$0.50 per hour for work 30 feet or more above floor or ground level.

Note: On the last working day preceding Christmas and New Years day, workers shall work no later than 12:00 noon and shall receive 8 hrs pay.

SUPPLEMENTAL BENEFITS

(per hour paid)

Journeyworker	\$ 29.59
Fire Stop Work:	
Journeyworker	\$ 15.13

OVERTIME PAY

OVERTIME: See (B ,E, Q, T*, V) on OVERTIME PAGE.

HOLIDAY

HOLIDAY:

Paid:	See (1) on HOLIDAY PAGE.
Overtime:	See (2*, 4, 6, 16, 25) on HOLIDAY PAGE.
	*Note: Labor Day triple time if worked.

REGISTERED APPRENTICES

(1) year terms.

MEMBERS PRIOR TO MAY 28, 2012

1st	2nd	3rd	4th
\$ 28.53	\$ 30.75	\$ 32.97	\$ 37.40

MEMBERS INDENTURED AFTER MAY 28, 2012

1st	2nd	3rd	4th
\$ 21.03	\$ 25.12	\$ 32.97	\$ 37.40

Supplemental Benefits paid per hour paid:

Apprentices:	
1st term	\$ 18.02

2nd term	19.47
3rd term	20.91
4th term	23.81

8-91

Ironworker**01/01/2013**

JOB DESCRIPTION Ironworker**DISTRICT** 11**ENTIRE COUNTIES**

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster

WAGES

Per hour:

07/01/2012

Structural	\$ 42.20
Reinforcing*	42.20
Ornamental	42.20
Chain Link Fence	42.20

Shift Work: any irregular or off shift shall be paid 8 hours for 7 hours work.

*NOTE: For Reinforcing classification ONLY, Ironworker 4-46Reinf rates apply in Rockland county's southern section (south of Convent Road and east of Blue Hills Road).

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 30.15

OVERTIME PAY

OVERTIME:.....See (B*, E**, Q, V) on OVERTIME PAGE.

*Note: Double Time after 10 hours Monday thru Friday.

**Note: On Saturdays, double time after 8 hours.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(1) year terms at the following wage.

1st	2nd	3rd	4th
\$ 21.10	\$ 25.32	\$ 29.54	\$ 33.76

Supplemental Benefits per hour worked:

1st year	\$ 25.93
2nd year	26.77
3rd year	27.62
4th year	28.46

11-417

Laborer - Building**01/01/2013**

JOB DESCRIPTION Laborer - Building**DISTRICT** 11**ENTIRE COUNTIES**

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Greenport, Claverack, Philmont, Clermont, Germantown, Livingston, Hillsdale, Gallatin, Copake, Ancram, Taghkanic and the City of Hudson.

WAGES

ALL WORK RELATED WITH TOXIC OR ANY ASBESTOS OR HAZARDOUS MATERIAL

WAGES: (per hour)

07/01/2012

06/01/2013

Additional

Premium \$ 35.50

\$ 1.80*

* To be allocated at a later date

Shift Differential: On all Governmental mandated irregular or off shift work, an additional 25% of wage is required.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Double time paid after the eighth hour on Saturday

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

11-17tox

Laborer - Building	01/01/2013
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JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake, Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

GROUP # 1:

All Laborers except those listed in Group 2

GROUP # 2:

Blaster, Laser Beam Oper., Asphalt Rakers, & Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power

WAGES per hour

	07/01/2012	06/01/2013 Additional	06/01/2014 Additional
GROUP # 1	\$ 28.60	\$ 1.60*	\$ 1.60*
GROUP # 2	30.95		

Note: Any job requiring Hazwopper Certification will pay \$1.00 above job classification wage rate.

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.30

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

	07/01/2012	06/01/2013 Additional	06/01/2014 Additional
1000 Hour terms			
1st term	\$ 16.00	\$ 1.60*	\$ 1.60*
2nd term	18.65		
3rd term	21.30		
4th term	24.45		

Note: Any job requiring Hazwopper Certification will pay \$1.00 above job classification wage rate.

(*)To be allocated at a later date.

Supplemental Benefits per hour worked

Apprentices \$ 12.60

1-1000

Laborer - Heavy&Highway

01/01/2013

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake, Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

GROUP # 1:

Flagperson, Placing & maintenance of all flares, cones, lights, signs, barricades, traffic patterns and all reflective type materials for traffic control, custodial work, traffic directors, temporary heat or light tenders, tool room.

GROUP # 2:

All Other Classifications not listed in Group # 1 or Group # 3

GROUP # 3:

Asphalt Raker, Asphalt Screedman, Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Laser Beam Operator, Metal Form Setters/Aligners (sidewalk), Blaster,

WAGES per hour

	07/01/2012	05/01/2013 An Additional
Group # 1	\$ 25.60	\$ 1.40*
Group # 2	29.36	1.40*
Group # 3	30.36	1.40*

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour worked & paid Holidays

Journeyman \$ 22.35

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

Note: Whenever a holidays falls on Sunday, it will be observed on the following Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour year terms

1st Term	\$ 15.55
2nd Term	18.25
3rd Term	21.00
4th Term	24.20

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

Supplemental Benefits per hour worked & paid Holidays

Apprentices \$ 12.65

1-1000h

Laborer - Heavy&Highway**01/01/2013**

JOB DESCRIPTION Laborer - Heavy&Highway**DISTRICT** 11**ENTIRE COUNTIES**

Dutchess

PARTIAL COUNTIES

Columbia: Only the Townships of Greenport, Philmont, Germantown,Livingston, Hillsdale, Taghkanic, Gallatin, Copake, Ancram, City of Hudson.

WAGES

ALL WORK RELATED WITH TOXIC OR ANY ASBESTOS OR HAZARDOUS MATERIAL(Five feet or more outside of building foundation line)

WAGES:(per hour)

07/01/2012

Protective Gear Not Required (Class 2)
\$ 33.70Protective Gear Required (Class 3)
\$ 37.60

SHIFT DIFFERENTIAL: On all NYS D.O.T. or other Governmental mandated irregular or off shift work, an additional 15% of wage on straight time pay.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman

\$ 21.30

OVERTIME PAY

See (B, E, Q, *S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 13, 15, 25) on HOLIDAY PAGE

Overtime: See (*1) on HOLIDAY PAGE

*NOTE: If Saturday Holiday is worked, Code S applies.

REGISTERED APPRENTICES

Wages per hour

1000 hour year terms

Pre 2011 shall include all apprentices enrolled before January 1 2011

1st term	\$ 18.60
2nd term	22.26
3rd term	25.91
4th term	29.56

Post 2011 shall include all apprentices enrolled on or after January 1 2011

1st term	\$16.92
2nd term	19.99
3rd term	23.07
4th term	26.14

Supplemental Benefits per hour paid:

Apprentice \$ 15.60

11-17tox

Laborer - Tunnel**01/01/2013**

JOB DESCRIPTION Laborer - Tunnel**DISTRICT** 1**ENTIRE COUNTIES**

Dutchess, Putnam

PARTIAL COUNTIES

Columbia: Only the Townships of Ancram, Claverack, Clermont, Copake,Gallatin, Germantown, Greenport, Hillsdale, Hudson, Livingston, Philmont and Taconic.

WAGES

Tunnel Group #1 All clearing, tempoary and permanent roadsand parking areas, landscaping, erosion controll, traffic maintenance, flagging, dump area,and tempoary lighting above the tunnel operations.

Tunnel Group #2 All laborers involed in tunnel operations, including but not limited to subways, sewer, water, vehicular and utility tunnels, and shafts, manholes and access way in connection therewith.

WAGES per hour	07/01/2012	05/01/2013 Additional
Group #1	\$ 29.36	\$ 1.40*
Group #2	38.96	1.66*

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

(*) To be allocated at a later date

SUPPLEMENTAL BENEFITS

Per hour worked & paid Holidays

Journeyman \$22.05

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

Note: Whenever a holidays falls on Sunday, it will be observed on the following Monday.

REGISTERED APPRENTICES

1000 hour year terms

1st Term	\$ 15.55
2nd Term	18.25
3rd Term	21.00
4th Term	24.20

Note: All employees working on a project that requires Hazwopper Certification will receive \$1.00 per hour over job classification rate of pay. All employees who work an irregular work day that starts after 9:00 AM on a governmental mandated schedule shall be paid an additional 15% per hour.

Supplemental benefits per hour worked & paid Holidays

Apprentices \$12.65

1-1000TW

Lineman Electrician

01/01/2013

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within Ten feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (14.01.01)

	07/01/2012
Lineman /Techician	\$ 42.72
Welder/Cable Splicer	42.72
Digging Machine Operator	38.45
Tractor Trailer Driver	36.31
Groundman/Truck Driver	34.18
Mechanic 1st Class	34.18
Flagman	25.63

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (14.02.01A)

Lineman/Technician	\$ 42.72
Cable Splicer pipe type cable	46.99
Certified Welder pipe type	44.86
Digging Machine Operator	38.45
Tractor Trailer Driver	36.31
Mechanic 1st Class	34.18
Groundman/Truck Driver	34.18
Flagman	25.63

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maint, third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (14.02.01B)

Lineman/Technician/Welder	\$ 44.01
Digging Machine Operator	39.61
Tractor Trailer Driver	37.41
Groundman/Truck Driver	35.21
Mech. 1st Class	35.21
Flagman	26.41
Certified WelderPipe Type Cable	46.21
Cable Splicer pipe type cable	48.41

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (14.03.01)

Lineman/Tech./Welder	\$ 45.23
Cable splicer	45.23
Digging Machine Operator	40.71
Tractor Trailer Driver	38.45
Groundman/Truck Driver	36.18
Mechanic 1st Class	36.18
Flagman	27.14

Additional \$1.00 per hour for entire crew when a helicopter is used.

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked including holidays listed below:

The following SUPPLEMENTAL benefits apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

\$ 18.25
*plus 7.5% of
hourly wage paid

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st shift	8:00 AM to 4:30 PM REGULAR RATE
2nd shift	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %

3rd shift 12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

HOLIDAY

Paid See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Gov. of NYS Election Day.
Overtime See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Gov. of NYS Election Day.

SUPPLEMENTS for holidays paid at straight time

REGISTERED APPRENTICES

(1000) hr terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked:

The following SUPPLEMENTAL benefits apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

\$ 18.25
*plus 7.5% of
hourly wage paid

*NOTE: The 7.5% is based on the hourly wage paid, straight time rate or premium rate.

6-1249a

Lineman Electrician - Teledata

01/01/2013

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

FOR WORK OUTSIDE BUILDING PROPERTY LINES.

	07/01/2012	01/01/2013	01/01/2014
Cable Splicer	\$ 27.99	\$ 28.55	\$ 29.12
Installer/Repairman	26.57	27.10	27.64
Teledata Lineman	26.57	27.10	27.64
Technician/Equip Oper	26.57	27.10	27.64
Groundman	14.09	14.37	14.66

NOTE: EXCLUDES Teledata work within ten feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SUPPLEMENTAL BENEFITS

Per hour worked:

\$ 4.43 *plus 3% of hourly wage paid	\$ 4.43 *plus 3% of hourly wage paid	\$ 4.43 *plus 3% of hourly wage paid
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*NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal Lighting

01/01/2013

JOB DESCRIPTION Lineman Electrician - Traffic Signal Lighting

DISTRICT 6

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Putnam, Rockland, Ulster

WAGES

Per hour:

For all Lighting and Traffic Signal Systems.

07/01/2012

Lineman/Technician	\$ 39.50
Certified Welder	41.48
Digging Machine	35.55
Tractor Trailer driver	33.58
Groundman Truck Driver	31.60
Mechanic 1st Class	31.60
Flagman	23.70

Above rates applicable on all Lighting and Traffic Signal Systems and the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

SUPPLEMENTAL BENEFITS

Per hour worked:

All classifications	\$ 18.25
	*plus 7% of
	hourly wage paid

*NOTE: The 7% is based on the hourly wage paid, straight time rate or premium rate.
Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM REGULAR RATE PLUS 31.4%

HOLIDAY

HOLIDAY:

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Gov of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Gov of NYS Election Day.

REGISTERED APPRENTICES

WAGES: (1000) hr terms at the following percentage of Journeyman Lineman/Technician wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS: Same as Journeyman/Technician.

6-1249aReg8LT

Lineman Electrician - Tree Trimmer

01/01/2013

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2012

Tree Trimmer	\$ 22.08
Equip Operator	19.48
Mechanic	19.48
Truck Driver	16.46
Groundman	13.51
Flag person	9.62

SUPPLEMENTAL BENEFITS

Per hour worked:

\$ 7.88
*plus 3% of
hourly wage paid

Supplements paid at STRAIGHT TIME rate for holidays.

*NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

6-1249TT

Mason - Building

01/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

WAGES

Per hour:	07/01/2012	12/01/2012	06/01/2013
Building		Additional	Additional

Tile, Marble, & Terrazzo Finisher	\$ 38.28	\$ 1.15	\$ 1.25
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SUPPLEMENTAL BENEFITS

Journeyman: 07/01/2012

Per Hour.	\$ 21.48
Overtime*	30.61*
Overtime**	39.23**

* Applies to work done on Weekdays and Saturdays

** Applies to work done on Sundays, Holidays, and more 10 on Saturdays.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 10, 11, 15, 16) on HOLIDAY PAGE

9-7/88B-tf

Mason - Building

01/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

WAGES

Per hour:	07/01/2012	12/01/2012	06/01/2013
		Additional	Additional

Building:
Tile, Marble, &

Terrazzo Mechanic/Setter	\$ 43.27	\$ 1.50*	\$ 1.50*
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* To be allocated at a future date

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyman:	\$ 25.79
Overtime*	35.17
Overtime**	44.54

* Applies to work done on Weekdays & Saturday

** Applies to work done on Sunday & Holidays, & over 10 hours on Saturdays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

(750 hour) terms at the following wages:

1st	2nd	3rd	4th	5th	6th	7th	8th
\$21.63	\$25.05	\$27.70	\$30.36	\$32.73	\$35.16	\$37.95	\$42.22

Supplemental Benefits (per Hour):

1st	2nd	3rd	4th	5th	6th	7th	8th
\$12.90	\$12.93	\$13.74	\$14.53	\$15.61	\$16.64	\$20.75	\$23.39

9-7/52B

Mason - Building

01/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

PARTIAL COUNTIES

Orange: Entire county except the Township of Tuxedo.

WAGES

Per hour:

07/01/2012	06/01/2013
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Bricklayer	\$ 37.53	\$ 37.57
Cement Mason Bldg	37.53	37.57
Plasterer/Stone Mason	37.53	37.57
Pointer/Caulker	37.53	37.57

Additional \$1.00 per hour for power saw work

Additional \$0.50 per hour for swing scaffold or staging work

SHIFT DIFFERENTIAL: When shift work is mandated or required by state, federal, county, local or other governmental agency contracts, the following rates apply.

Second shift an additional 15% of wage plus benefits to be paid

Third shift an additional 25% of wage plus benefits to be paid

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.20	\$ 28.13
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OVERTIME PAY

Cement Mason	See (D, E2, O) on OVERTIME PAGE.
All Others	See (B, E, E2, Q) on OVERTIME PAGE.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Supplemental Benefits per hour paid

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before September 1, 2009 receive full journeyman benefits

11-5du-b

Mason - Heavy&Highway

01/01/2013

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

PARTIAL COUNTIES

Orange: Entire county except the Township of Tuxedo.

WAGES

Per hour:

07/01/2012

06/01/2013

Bricklayer	\$ 38.03	\$ 38.07
Cement Mason	38.03	38.07
Marble/Stone Mason	38.03	38.07
Plasterer	38.03	38.07
Pointer/Caulker	38.03	38.07

Additional \$1.00 per hour for power saw work

Additional \$0.50 per hour for swing scaffold or staging work

SHIFT DIFFERENTIAL: When shift work is mandated or required by state, federal, county, local or other governmental contracts, the following rates apply.

Second shift an additional 15% of wage plus benefits to be paid

Third shift an additional 25% of wage plus benefits to be paid

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.20	\$ 28.13
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OVERTIME PAY

See (B, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Supplemental Benefits per hour paid

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before September 1, 2009 receive full journeyman benefits

Operating Engineer - Building

01/01/2013

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 8

ENTIRE COUNTIES

Putnam, Westchester

PARTIAL COUNTIES

Dutchess: Defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

WAGES

GROUP I:

Cranes(All Types up to 49 tons), Boom Trucks, Cherry Pickers, Clamshell Crane, Derrick, Dragline, Franki Pile Rig or similar, High Lift (Lull or similar) with crane attachment and winch used for hoisting or lifting, Pile Drivers, Potain and similar.

Cranes (All types 50-99 tons), Conventional and Hydraulic.

Cranes (All types 100 tons and over), Tower, Climbing, Conventional, Hydraulic.

GROUP I-A: Barber Green Loader-Euclid Loader, Bulldozer, Carrier-Trailer Horse, Concrete Cleaning Decontamination Machine Operator, Concrete-Portable Hoist, Conway or Similar Mucking Machines, Elevator & Cage, Excavators all types, Front End Loaders, Gradall, Shovel, Backhoe, etc.(Crawler or Truck), Heavy Equipment Robotics Operator/Mechanic, Hoist Engineer-Material, Hoist Portable Mobile Unit, Hoist-Single, Double or Triple Drum, Horizontal Directional Drill Locator, Horizontal Directional Drill Operator, and Jersey Spreader, Letourneau or Tournapull(Scrapers over 20 yards Struck), Lift Slab Console, etc., Lull HiLift or Similar, Maintenance Engineer, Master Environmental Maintenance Mechanics, Mucking Machines Operator/Mechanic or Similar Type, Overhead Crane, Pavement Breaker(Air Ram), Paver(Concrete), Post Hole Digger, Power House Plant, Road Boring Machine, Road Mix Machine, Ross Carrier and Similar Machines, Rubber tire double end backhoes and similar machines, Scoopmobile-Tractor-Shovel Over 1.5 yards, Shovel (Tunnels Side Boom, Spreader (Asphalt Telephies(Cableway), Tractor Type Demolition Equipment, Trenching Machines-Vermeer Concrete Saw Trencher and Similar, Ultra High Pressure Waterjet Cutting Tool System, Vacuum Blasting Machine operator/mechanic, Winch Truck A Frame).

GROUP I-B: Compressor (Steel Erection), Mechanic (Outside All Types, Negative Air Machine (Asbestos Removal), Pulse Meter, Push Button (Buzz Box), Elevator, Welder.

GROUP II: Bulldozer D6 and Under, Compactor Self-Propelled, Grader, Machines Pulling Sheep's Foot Roller, Roller 4 ton and over, Scrapers-20 yards Struck and Under, Vibratory Rollers, etc.

GROUP III-A: Asphalt Plant, Boiler (High Pressure), Concrete Mixing Plants, Concrete Pump, Fireman, Forklift, Forklift (Electric) Joy Drill or similar Tractor Drilling Machine, Loader-1 1/2 yards and under, Locomotive (All Sizes), Mixer-Concrete-21E and over, Portable Asphalt Plant, Portable Batch Plant, Portable Crusher, Quarry Master, StoneCrusher, Well Drilling Machine, Well Point System, Concrete Buggy, One Yard and Up Ride on Dumper, Benford or Similar,Bobcat.

GROUP III-B: Compressor Over 125 cu.Feet, Conveyor Belt Machine Regardless of Size, Compressor Plant, Ladder Hoist, Lighting Unit (Portable & Generator), Stud Machine, Welding Machine (Steel Erection & Excavation).

GROUP IV-A: Air Tractor Drill, Batch Plant, Bending Machine, Concrete Breaker, Concrete Spreader, Curb Cutter Machine, Farm Tractor (all types), Finishing Machine-Concrete, Material Hopper-sand stone-cement, Mixer-Concrete-Under 21E, Mulching Grass Spreader, Pump-Gypsum etc, Fine Grading Machine, Roller under 4 Ton Hepa Vac Clean Air Machine, Spreading

and Fine Grading Machine, Steel Cutting Machine, Siphon Pump-air-steam, Tar Joint Machine, Turbo Jet Burner or Similar Equipment, Vibrator (1 to 5), Fine Grading Machine, Roof Hoist (Tugger Hoist), Television Cameras for Water, Sewer, Gas etc. Pump-Plaster-Grout-Fireproofing.

GROUP IV-B: Compressor to 125 feet, Dust Collector, Heater all types, Pump, Pump Station (Water and Sewer), Steam Jenny, Sweeper, Chipper, Mulcher.

GROUP V-A: Concrete Saw, Oiler Fuel Truck, Oiler Grease Truck.

GROUP V-B: Mechanics Helper, Oiler, Stock Attendant, Paint Compressor, Welder's Helper, Motorized Roller (walk behind).

GROUP VI-A: Master Mechanic, Assistant Master Mechanic, Helicopter Hoist Operator, Helicopter Pilot, Helicopter Signal Man, Welder Certified.

GROUP VI-B: Utility Man, Warehouse Man, Second Engineer, Cable Splicer.

WAGES: (per hour)

	07/01/2012	07/01/2013	07/01/2014
GROUP I			
Cranes- up to 49 tons	\$ 53.65	\$ 55.10	\$ 56.58
Cranes- 50-99 tons	55.65	57.10	58.58
Cranes- 100 tons and over	63.64	65.30	67.01
GROUP I-A	46.92	48.17	49.42
GROUP I-B	43.21	44.35	45.47
GROUP II	45.26	46.45	47.65
GROUP III-A	43.58	44.73	45.87
GROUP III-B	41.47	42.55	43.62
GROUP IV-A	43.14	44.27	45.40
GROUP IV-B	36.16	37.09	37.99
GROUP V-A	41.22	42.30	43.37
GROUP V-B	39.04	40.06	41.05
GROUP VI-A			
Master Mechanic	49.00	50.32	51.65
Asst.Master Mechanic	41.80	42.90	43.99
Helicopter Hoist Oper	47.48	48.75	50.03
Helicopter Pilot	54.17	55.64	57.14
Helicopter Signal Man	42.46	43.58	44.69
Welder Certified	45.81	47.03	48.25
GROUP VI-B			
Utility Man	37.00	37.96	38.89
Warehouse Man	38.82	39.83	40.82
Second Engineer	38.89	39.91	40.09
Cable Splicer	42.60	43.73	44.84

An additional 20% to wage when required to wear protective equipment on hazardous/toxic waste projects.

Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour. Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour.

Loader operators over 5 cubic yard capacity additional .50 per hour.

Shovel operators over 4 cubic yard capacity additional \$1.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

	07/01/2012	07/01/2013	07/01/2014
Journeyworker	\$ 17.45	\$ 18.08	\$ 18.93
	Per hour paid	Per hour paid	Per hour paid
	+\$7.69	+\$7.79	+\$8.02
	Per hour worked	Per hour worked	Per hour worked

OVERTIME PAY

OVERTIME:..... See (B, E, U*, V) on OVERTIME PAGE.

HOLIDAY

HOLIDAY:

Paid:..... See (5, 6, 10, 11, 12, 15) on HOLIDAY PAGE.

Overtime:..... See (5, 6, 10, 11, 12, 15) on HOLIDAY PAGE.

* Note: For Holiday codes 5 & 6, code T applies.

Note: If employees are required to work on Easter Sunday
they shall be paid at the rate of triple time.

8-137B

Operating Engineer - Building

01/01/2013

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks, whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vac truck.

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, belcrete power pack (belcrete system), seeding, and mulching machines, pumps.

* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour	07/01/2012	07/01/2013	07/01/2014
Class # A1	\$ 35.20	\$ 36.55	\$ 37.90
Class # A	34.76	36.11	37.46
Class # B	33.85	35.20	36.55
Class # C	31.28	32.63	33.98

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.00 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.00 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.00 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 22.37	\$ 23.12	\$ 23.87
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.
Employees who work a Saturday holiday shall be paid double time plus the holiday pay.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2012	07/01/2013	07/01/2014
All terms	\$ 17.80	\$ 18.55	\$ 19.30

1-158 Alb

Operating Engineer - Heavy&Highway

01/01/2013

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Putnam, Westchester

PARTIAL COUNTIES

Dutchess: South of the North city line of Poughkeepsie

WAGES

NOTE: Also covers Feasibility and Preliminary Design surveying, Line and Grade surveying for Inspection or Supervision of Construction when preformed under a Consulting Engineer Agreement.

Party Chief - One who directs a survey party

Instrument Man - One who runs the instrument and assists Party Chief

Rodman - One who holds the rod and in general, assists the Survey Crew

Catogories cover GPS & Underground Suveying

Per Hour:	07/01/2012	07/01/2013 Additional*
Party Chief	\$ 58.04	\$ 3.14*
Instrument Man	42.50	2.55*
Rodman	35.49	2.33*

* To be allocated at a future date

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2012
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All Catogories

Straight Time:	\$ 29.78
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Premium:

Time & 1/2	\$ 38.47
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Double Time	\$ 53.16
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OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* Doubletime paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

9-15Dh

Operating Engineer - Heavy&Highway

01/01/2013

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Putnam, Westchester

PARTIAL COUNTIES

Dutchess: Defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

WAGES

GROUP I: Boom Truck, Cherry Picker, Clamshell, Crane, (Crawler, Truck),
Dragline, Rough Terrain Crane.

GROUP I-A: Auger, Auto Grader, Dynahoe and Dual purpose and similar machines, Barber Green Loader-Euclid Loader or similar type machine, boat captain, boring machine(all types), Bulldozer-All Sizes, Central Mix Plant Operator, Cherry Picker(Cableway)-Hydraulic, chipper (all types), close circuit t.v., Compactor with Blade, Concrete Portable Hoist, C.M.I. or Similar, Conway or Similar Mucking Machines, Gradall, Shovel Backhoe, etc. Grader, Derrick (Stone-Steel) Elevator & Cage, Front End Loaders over 1 1/2yds Hoist Single, Double, Triple Drum, Hoist Portable Mobile Unit, Hoist Engineer Concrete(Crane-Derrick-Mine Hoist), Hoist Engineer-Material, Hydraulic Boom, Letourneau or Tournapull (Scrapers over 20 yds struck), Mucking Machines, Overhead Crane, Paver (concrete) Pulsemeter, Push Button (Buss Box) Elevator, Road Mix Machines, Ross Carrier and similar, Shovels (Tunnels), SideBoom, Spreader (asphalt), Scoopmobile-Tractor-Shovel over 1 1/2 yards, Trenching Machines, Telephies-Vermeer Concrete Saw Trencher and/or Similar, Tractor type Demolition Equipment, Whirly,P-811 Track Renewal Machine-Similar, certified Welder, Excavator (and all attachments).

GROUP I-B: Road Paver-Asphalt.

GROUP II-A: Balast regulators, Compactor Self Propelled, Cow Tracks, Fusion Machine, Rail Anchor Machines, Scrapers-20 yds truck and under, Switchtampers, Vibrator Roller, etc., Roller 4 ton and over, Welder.

GROUP II-B: Mechanic-All Types.

GROUP III: Air Tractor Drill, Asphalt Plant, Batch Plant, Boiler (High Pressure), Concrete Breaker, Concrete Pump, Concrete Spreader, Curb Cutter Machine, Farm Tractor (All Types), Finishing Machine (Concrete) Fine Grading Machine, Fireman, Forklift, Forklift (Electric) John Henry drill or similar, Joy Drill or similar Tractor Drilling Machine, Loader 1 1/2 yards and under, Locomotive(All Sizes), Maintenance Engineer, Machine Pulling Sheep's Foot Roller, Material Hopper, Mixer Concrete-21E and over, Mulching Grass Spreader, Portable Plant, Portable Batch Plant, Portable Crusher, Powerhouse Plant, Quarry Master, Roller under 4 ton, Spreading and Fine Grading Machine, Steel Cutting Machine, Stone Crusher, Sweeper, Turbo JetBurner or Similar, Well Drilling Machine, Winch Truck, "A" Frame Truck, Skid Steer/Bobcat.

GROUP IV-A: Service Man (Fuel Truck), Service Man (Grease Truck).

GROUP IV-B: Compressor-Compressor Plant-Paint Compressor-Steel Erection, ConveyorBelt Machine, Lighting Unit (Portable & Generator), Pilot/Assistant Engineer/2 seated, Pumps-Pump Station-Water-Sewer-Gypsum-Plaster, etc., Pump Truck(Sewer Jet or Similar), Roller-Motorized (Walk Behind), Welding Machine Steel Erection Excavation), Well Point System, Welder's Helper, Mechanic's Helper, Bending Machine, Dust Collector, Mixer Concrete under 21-E, Heater all types, Steam Jenny, Stock Room Attendant, Siphon Pump-Air-Steam, Tar Joint Machine, Vibrator (1 to 5), Compressor Truck mounted (2-6).

GROUP V-A: Engineer-All Tower Cranes-All Climbing Cranes and all cranes of 100 ton capacity or greater(3900 Manitowac or similar), Hoist Engineer(Steel), Engineer-Pile Driver, Welder-Certified, Jersey Spreader, Pavement Breaker(Air Ram), Post Hole Digger.

WAGES: (per hour)

	07/01/2012	07/01/2013
Group I	\$ 52.23	\$ 53.38
Group I-A	46.17	47.17
Group I-B	48.19	49.65
Group II-A	44.26	45.21
Group II-B	45.61	46.60
Group III	43.50	44.44
Group IV-A	39.64	40.48
Group IV-B	34.19	34.89
Group V-A		
Engineer All Tower, Climbing and Cranes of 100 Tons	59.02	60.34
Hoist Engineer(Steel)	53.17	54.73
Engineer(Pile Driver)	56.68	58.30
Jersey Spreader, Pavement Breaker. (Air Ram) Post Hole Digger	44.85	46.24

Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour over the rate listed in the Wage Schedule. Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour over the rate listed in the Wage Schedule. Loader and Excavator Operators: over 5 cubic yards capacity \$0.50 per hour over the rate listed in the Wage Schedule. Shovel Operators: over 4 cubic yards capacity \$1.00 per hour over the rate listed in the Wage Schedule.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

(per hour)

Journeyman:	07/01/2012	03/04/2013
	\$16.37 on all hours paid PLUS \$7.65 limited to first 40 hours worked. PLUS \$1.00 per hour on all hours worked.	\$16.80 on all hours paid PLUS \$8.00 limited to first 40 hours worked. PLUS \$1.00 per hour on all hours worked.

OVERTIME PAY

See (B, E, E2, Q, *U) on OVERTIME PAGE

HOLIDAY

HOLIDAY:

Paid:..... See (5, 6, 7, 8, 11, 12) on HOLIDAY PAGE.

Overtime:..... See (5, 6, 7, 8, 11, 12) on HOLIDAY PAGE.

* Note: For Holiday codes 5 & 6, code U applies.

Note: If employees are required to work on Easter Sunday they shall be paid at the rate of triple time.

REGISTERED APPRENTICES

(1)year terms at the following rate.

	07/01/2012	03/04/2013
1st term	\$ 21.75	\$ 22.22
2nd term	26.10	26.66
3rd term	30.45	31.11
4th term	34.80	35.55

Supplemental Benefits per hour:

Apprentices:	07/01/2012	03/04/2013
	\$ 16.37 on all hours paid. PLUS \$1.00 per hour on all hours worked.	\$16.80 on all hours paid. PLUS \$1.00 per hour on all hours worked.

8-137HH

Operating Engineer - Heavy&Highway

01/01/2013

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoharie, Tioga, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Asphalt Paver, Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Cherry Picker (5 tons capacity and under), Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vac Truck, Vermeer saw (ride on, any size or type), Welder

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), oiler (used in conjunction with production), Bituminous Heater (self-propelled), oat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunit Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro -Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2012	07/01/2013	07/01/2014
Master Mechanic	\$ 36.32	\$ 37.67	\$ 39.02
Class A*	34.71	36.06	37.41
Class B	33.80	35.15	36.50
Class C	31.23	32.58	33.93

Additional \$2.00 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.
- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.
- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 22.60	\$ 23.35	\$ 24.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2012	07/01/2013	07/01/2014
All Terms	\$ 18.00	\$ 18.75	\$ 19.50

1-158H/H Alb

Operating Engineer - Heavy&Highway - Tunnel

01/01/2013

JOB DESCRIPTION Operating Engineer - Heavy&Highway - Tunnel

DISTRICT 8

ENTIRE COUNTIES

Putnam, Westchester

PARTIAL COUNTIES

Dutchess: Defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

WAGES

GROUP I: Boom Truck, Cherry Picker, Clamshell, Crane(Crawler, Truck), Dragline, Rough Terrain Crane.

GROUP I-A: Auger, Auto Grader, Dynahoe & Dual purpose & similar machines, Barber Green Loader-Euclid Loader or similar type machine, Boat Captain, Boring Machine(all types), Bull Dozer-all types, Central Mix Plant Operator, Cherry Picker(Cableway or hydraulic), Chipper-all types, Close Circuit T.V., Compactor with Blade, Concrete Portable Hoist, C.M.I. or similar, Conway or similar Mucking Machine, Crane(Crawler or Truck) dragline, Gradall, Shovel Backhoe, etc. Grader, Derrick(Stone-Steel), Elevator & Cage(materials or passengers), Front End Loaders over 1 1/2 yards, Hoist Single, Double, Triple Drum, Hoist Portable Mobile Unit, Hoist Engineer-Concrete(Crane-Derrick-Mine Hoist), Hoist Engineer-Material, Hydraulic Boom, Letourneau or Tournapull(Scrapers over 20 yards struck), Log Skidder, Moveable Concrete Barrier Transfer & Transport Vehicle, Mucking Machines. Overhead Crane, Paver(concrete), Pulsemeter, Push Button(Buzz Box)Elevator, Raise Boring Machine, Road Mix Machines. Robot Hammer(Brock or similar), Ross Carrier and similar machines, Shovels(Tunnels), Side Boom, Slip Form Machine, Spreader(Asphalt), Scoopmobile-Tractor-Shovel over 1 1/2 yards, Trenching Machines, Telephies-Vermeer Concrete Saw Trencher and/or similar, Tractor type demolition equipment, Whirly.

GROUP I-B: Road Paver(Asphalt).

GROUP II-A: Balast Regulators, Compactor Self-propelled, Cow Tracks, Fusion Machine, Rail Anchor Machines, Roller 4 ton and over, Scrapers (20 yard struck and under), Switch Tampers, Vibratory Roller, etc., Welder.

GROUP II-B: Mechanic(outside) all types, Shop Mechanic.

GROUP III: Air Tractor Drill, Asphalt Plant, Batch Plant, Boiler (High Pressure), Concrete Breaker, Concrete Pump, Concrete Spreader, Curb Cutter Machine, Farm Tractor(all types), Finishing Machine(Concrete) Fine Grading Machine, Firemen, Forklift, Forklift(Electric), John Henry Drill or similar, Joy Drill or similar Tractor Drilling Machine, Loader 1 1/2 yards and under, Locomotive(all sizes), Maintenance Engineer, Machine Pulling Sheeps Foot Roller, Material Hopper, Mixer Concrete(21-E & over), Mulching Grass Spreader, Portable Asphalt Plant, Portable Batch Plant, Portable Crusher, Powerhouse Plant, Quarry Master, Roller under 4 ton, Spreading and Fine Grading Machine, Steel Cutting Machine, Stone Crusher, Sweeper, Turbo Jet Burner or similar, Well Drilling Machine, Winch Truck "A" Frame.

GROUP IV-A: Service Man(Fuel Truck), Service Man(Grease Truck).

GROUP IV-B: Bending Machine, Compressor-Compressor Plant-Paint, Compressor-Steel Erection, Compressor Truck Mounted(2-6), Conveyor Belt Machine, Dust Collector, Heater(all types), Lighting Unit(portable & generator), Mixer Concrete under 21-E, Pilot/Assistant Engineer/2 seated, Pumps-Pump Station-Water-Sewer-Gypsum-Plaster, etc., Pump Truck(Sewer Jet or similar), Roller Motorized(Walk behind), Steam Jenny, Stock Room Attendant, Syphon Pump-Air-Stream, Tar Joint Machine, Vibrator(1 to 5), Welding Machine, Welders Helper.

GROUP V-A: Engineer(Pile Driver), Engineer(all Tower Cranes, all Climbing Cranes & all cranes of 100 ton capacity or greater), Helicopter Hoist Operator, Helicopter Pilot, Helicopter Signalman, Hoist Engineer(Steel-Sub Structure), Engineer-Pile Driver, Jersey-Spreader, Pavement breaker(Air Ram), Master Mechanic, Asst. Master Mechanic, Post Hole Digger, Welder-Certified.

WAGES: (per hour)

	07/01/2012	03/04/2013
GROUP I	\$ 52.23	\$ 53.38
GROUP I-A	46.17	47.17
GROUP I-B	48.19	49.65
GROUP II-A	44.26	45.21
GROUP II-B	45.61	46.60
GROUP III	43.50	44.44
GROUP IV-A	39.64	40.48
GROUP IV-B	34.19	34.89
GROUP V-A		
Engineer-Pile Driver	56.68	58.30
Engineer-Cranes	59.02	60.34
Hoist Engineer	53.17	54.73
Jersey Spreader, Pavement Breaker (Air Ram), Post Hole Digger	44.85	46.24

An additional 20% to wage when required to wear protective equipment on hazardous/toxic waste projects. Operators required to use two buckets pouring concrete on other than road pavement shall receive \$0.50 per hour over scale. Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour. Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour. Operators of shovels with a capacity over (4) cubic yards shall be paid an additional \$1.00 per hour. Operators of loaders with a capacity over (5) cubic yards shall be paid an additional \$0.50 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker:

07/01/2012	03/04/2013
\$ 16.37 all hours paid	\$ 16.80 all hours paid
+\$7.65 first 40 hours worked	+\$8.00 first 40 hours worked
+\$1.00 for all hours worked	+\$1.00 for all hours worked

OVERTIME PAY

See (D, O, *U, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 8, 11, 12) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 8, 11, 12) on HOLIDAY PAGE

* Note: For Holiday codes 5 & 6, code U applies.

Note: If employees are required to work on Easter Sunday, they shall be paid at the rate of triple time.

REGISTERED APPRENTICES

(1)year terms at the following rates.

07/01/2012	03/04/2013
1st year \$ 21.75 per hr.	1st year \$ 22.22 per hr.
2nd year \$ 26.10 per hr.	2nd year \$ 26.66 per hr.
3rd year \$ 30.45 per hr.	3rd year \$ 31.11 per hr.
4th year \$ 34.80 per hr.	4th year \$ 35.55 per hr.

Supplemental Benefits per hour:

Apprentices:	07/01/2012	03/04/2013
	\$ 16.37 all	\$ 16.00 all

hours paid
+\$1.00 for all
hours worked

hours paid
+\$1.00 for all
hours worked

8-137Tun

Operating Engineer - Marine Construction

01/01/2013

JOB DESCRIPTION Operating Engineer - Marine Construction

DISTRICT 4

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per Hour:

DREDGING OPERATIONS 07/01/2012

CLASS A

Operator, Leverman, \$ 32.89

Lead Dredgeman

CLASS A1

Dozer, Front Loader

Operator

To conform to Operating Engineer
Prevailing Wage in locality where work
is being performed including benefits.

CLASS B

Spider/Spill Barge Operator, \$ 28.49

Tug Operator(over1000hp),

OperatorII, Fill Placer,

Derrick Operator, Engineer,

Chief Mate, Electrician,

Chief Welder,

Maintenance Engineer

Certified Welder, \$ 26.84

Boat Operator(licensed)

CLASS C

Drag Barge Operator, \$ 26.14

Steward, Mate,

Assistant Fill Placer,

Welder (please add)\$ 0.06

Boat Operator \$ 25.29

CLASS D

Shoreman, Deckhand, \$ 21.09

Rodman, Scowman, Cook,

Messman, Porter/Janitor

Oiler(please add)\$ 0.09

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B
07/01/2012
\$ 8.45 plus 7%
of straight time
wage overtime hours
add \$ 0.63

All Class C
\$ 8.10 plus 8%
of straight time
wage overtime hours
add \$ 0.48

All Class D \$ 7.85 plus 8%
 of straight time
 wage overtime hours
 add \$ 0.33

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Survey Crew

01/01/2013

JOB DESCRIPTION Operating Engineer - Survey Crew

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: : The Northern portion of the county from the Northern boundry line of the City of Poughkeepsie North.

Genesee: Only that portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia

WAGES

Per hour:

SURVEY CLASSIFICATIONS: Party Chief- One who directs a survey party. Instrument person- One who runs the instrument and assists the Party Chief. Rod person- One who holds the rods and, in general, assists the survey party.

07/01/2012

Survey Rates:

Party Chief \$ 32.62

Instrument/Rod person 29.85

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 21.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: (1 yr. or 1000 hrs.) terms at the following wage rates.

1st year 60% \$ 17.91

2nd year 70% 20.89

3rd year 80% 23.88

SUPPLEMENTAL BENEFITS:

\$ 21.75

6-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer

01/01/2013

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundry line of the City of Poughkeepsie north.

Genesee: Entire county except that portion of the county that lies west of a line down the center of Route 98 excluding that area that lies within the City of Batavia.

WAGES

Per hour:

Feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

SURVEY CLASSIFICATIONS: Party Chief- One who directs a survey party.

Instrument Man- One who runs the instrument and assists the Party Chief.

Rodman- One who holds the rods and in general, assists the survey party.

07/01/2012

Survey Rates:

Party Chief \$ 32.62

Instrument/Rodperson 29.85

Additional \$3.00 per hr. for work in a Tunnel.

Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work

SUPPLEMENTAL BENEFITS

Per hour worked:

\$ 21.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

6-545 DCE

Operating Engineer - Tunnel

01/01/2013

JOB DESCRIPTION Operating Engineer - Tunnel

DISTRICT 5

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess to the northern boundary line of the City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Rte. 343 then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to Connecticut.

Genesee: Only that portion of the county that lies east of a linedrawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

Crane 1: All cranes, including self erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all other cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton nad below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

MASTER MECHANIC/CHIEF TUNNEL ENG.:

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor-mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (Automated); Cableway; Caisson Auger; Central Mix Concrete Plant (Automated); Concrete Curb Machine (Self-propelled slipform) Concrete Pump (8" or over); Dredge; Dual Drum Paver; Any Mechanical Shaft Drill; Excavator (all purpose-hydraulic-Gradall or Similar); Fork Lift (factory rated 15 ft and over); Front End Loader (4 c.y. & over); Gradall; Head Tower (Sauerman or Equal), Hoist Shaft; Hoist (two or three Drum); Mine Hoist; Maintenance Engineer (Shaft and Tunnel) ; Mine Hoist; Mucking Machine or Mole, Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Mach.; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, he shall be an Oiler); Tractor Drawn Belt Type Loader; Tripper/Maintenance Eng.(Shaft & Tunnel); Truck or Trailer Mounted Log Chipper (self-feeding); Tug Operator (Manned rented equip. excluded); Tunnel Shovel; Mining Machine(Mole and Similar Types).

CLASS B: Automated Central Mix Concrete Plant; Backhoe Trac-Mtd, Rubber Tired); Backhoe (topside); Bitum. Spred. & Mixer, Blacktop Plant non-automated); Blast or Rotary Drill (Truck or Tractor Mounted); Boring Machine; Cage Hoist; Central Mix Plant(NonAutomated) and All Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (Tractor Mounted); Front End Loader (under 4 c.y.); Grayco Epoxy Machine; Hoist (One Drum); Hoist 2 or 3 Drum (Topside); Kolman Plant Loader & Similar Type Loaders (if Employer requires another person to clean the screen or to maintain the equipment, he shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maint. Eng. (Topside); Grease Man; Welder; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Eng.; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Mach.; Shovel (Topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Winch and Winch Cat.

CLASS C: A Frame Truck; Ballast Regulator (ride-on); Compressors (4 under 2,000 cfm combined capacity; or 3 or less with more than 1200 cfm. but not to exceed 2,000 cfm); Compressors (any size but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-4 of any type or combination); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill well; Elec Pump Used in Conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; ForkLift (under 15 ft); Grout Pump (over (5) cu. ft.; Gunite Machine; Hammers (hydraulic- self propel.); Hydra-Spiker-Ride on; Hydra-Blaster; Hydra Blaster (water); Motorized Form Carrier; Post Hole Digger & Post Driver; Power Sweep; Roller grade & fill); Scarifer (Ride on); Span-Saw (Ride-on); Submersible Electric Pump (when used in lieu of well point system); Tamper (Ride-on); Tie-Extractor, Tie Handler, Tie Inserter, Tie Spacer and Track Liner (Ride-on); Tractor (with towed accessories); Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors(3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors any size, but subject to other provisions for compressors-Dust Collectors, Generators, Pumps, Welding Machines, Light Plants-3 or less-any type or combination); Concrete Saw (self propelled); Fireman; Form Tamper; Hydraulic Pump (jacking system); Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broome towed; Power Heaterman; Revinius Widener; Shell Winder; Steam Cleaner and Tractor; Greaseman; Junior Engineer.

Per hour:	07/01/2012	07/01/2013	07/01/2014
Crane 1	\$ 41.28	\$ 42.48	\$ 43.68
Crane 2	40.28	41.48	42.68
Crane 3	39.28	40.48	41.68
Master Mechanic	39.41	40.61	41.81
CLASS A	37.28	38.48	39.68
CLASS B	36.06	37.26	38.46
CLASS C	33.27	34.47	35.67
CLASS D	30.26	31.46	32.66

SUPPLEMENTAL BENEFITS

Per hour paid:			
Journeyman	\$ 22.75	\$ 23.65	\$ 24.55

OVERTIME PAY

See (B, B2, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1000) hours terms at the following percentages.

1st term	60% of Class D
2nd term	65% of Class C
3rd term	70% of Class B
4th term	75% of Class A

Supplemental Benefits per hour paid:

\$ 22.75	\$ 23.65	\$ 24.55
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5-832TL.

JOB DESCRIPTION Painter

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Sullivan, Ulster

WAGES

Per hour

07/01/2012

05/01/2013
An Additional

Brush/Paper Hanger	\$ 28.69	\$ 2.25*
Dry Wall Finisher	28.69	2.25*
Lead Abatement	28.69	2.25*
Sandblaster-Painter	28.69	2.25*
Spray Rate	29.69	2.25*

(*) To be allocated at a later date

See Bridge Painting rates for the following work:

Structural Steel (defined as any steel where a man works without the support of solid scaffolding or mechanical lifts excluding bridges), all work performed on tanks (100,000 gallons or over twenty feet high), ALL BRIDGES, towers, smoke stacks, flag poles. Rate shall apply to all of said areas from the ground up.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 17.29

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Six (6) month terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th
40%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

1st term \$ 8.39
All others 17.29

1-155

Painter - Bridge & Structural Steel

01/01/2013

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 9

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour Worked:

07/01/2012

10/1/2012

STEEL:

Bridge Painting \$ 51.23 \$ 52.23

Power Tool/Spray Additional \$6.00 per hour above hourly rate, whether straight time or overtime

Note: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

Per Hour Worked:

07/01/2012

10/1/2012

Journeyworker	\$ 26.80* \$ 31.04**	\$ 27.05
Hourly Rate after 40 hours from May 1st to Nov. 15th	\$ 6.75 only	
Hourly Rate after 50 hours from Nov. 16th to April 30th	\$ 6.75 only	

*For the period of May 1st to November 15th:

This rate shall be paid up to maximum of forty (40) hours worked per week. For all hours exceeding 40, the hourly rate shall drop to the hourly rate shown above by date.
EXCEPT for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

**For the period of November 16th to April 30th:

This rate shall be paid up to a maximum of fifty (50) hours worked per week. For all hours exceeding 50, the hourly rate shall drop to the hourly rate shown above by date.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

NOTE: Calculate overtime rate as follows: Bridge Painting and Power Tool/Spray titles subtract \$4.98 from the hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(Wage per hour Worked):

Apprentices: (1) year terms

	1st	2nd	3rd
07/01/2012	\$ 20.55	\$ 30.78	\$ 41.00
10/01/2012	\$ 20.95	\$ 31.38	\$ 41.80

Supplemental Benefits per hour worked:

07/01/2012	\$ 8.35	\$ 19.00	\$ 22.90
10/01/2012	\$ 8.70	\$ 19.15	\$ 23.10

9-DC-9/806/155-BrSS

Painter - Line Striping

01/01/2013

JOB DESCRIPTION Painter - Line Striping

DISTRICT 9

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2012
Striping-Machine Operator*	\$26.61 plus an additional \$0.50**
Linerman Thermoplastic	\$31.87 plus an additional \$0.50**

** To be allocated at a future date

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

SUPPLEMENTAL BENEFITS

Per hour paid: 07/01/2012
Journeyworker:

Striping-Machine operator	\$ 14.18
Linerman Thermoplastic	\$ 14.55

OVERTIME PAY

See (*B, **B2, E, E2, P, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

9-8A/28A-LS

Painter - Metal Polisher

01/01/2013

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 9

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

07/01/2012

Metal Polisher	\$ 26.11
Metal Polisher**	\$ 27.02
Metal Polisher***	\$ 29.61

**Note: Applies on New Construction & complete renovation

*** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2012

Journeyworker:

All classification \$ 12.92

OVERTIME PAY

See (B, E, Q, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

1st	2nd	3rd
\$13.50	\$15.00	\$18.00

Supplemental benefits:

Per hour paid:

1st	2nd	3rd
\$10.27	\$10.39	\$10.63

9-8A/28A-MP

Plumber

01/01/2013

JOB DESCRIPTION Plumber

DISTRICT 8

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Delaware: Only the Townships of Middletown and Roxbury.

Ulster: Entire county (including Wallkill and Shawangunk Prisons in Town of Shawangunk) EXCEPT for remainder of Town of Shawangunk, and Towns of Plattekill, Marlboro, and Wawarsing.

WAGES

(per hour)

07/01/2012

Plumber & Steamfitter	\$ 44.54
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SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 24.19 per hour paid
+ 2.73 per hour worked**

**Not Subject to Overtime

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* Note: Time & 1/2 for 1st. 8 on Sat.- all additional hours double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1)year terms at the following rates.

1st year	\$ 16.78
2nd year	23.40
3rd year	27.19
4th year	32.76
5th year	37.91

Supplemental Benefits per hour:

Apprentices

1st year \$ 10.62 per hour paid
+ 1.16 per hour worked

2nd year 13.43 per hour paid
+ 1.30 per hour worked

3rd year 15.47 per hour paid
+ 1.60 per hour worked

4th year 17.13 per hour paid
+ 2.36 per hour worked

5th year 18.82 per hour paid
+ 2.36 per hour worked

8-21.2-SF

Plumber - HVAC / Service

01/01/2013

JOB DESCRIPTION Plumber - HVAC / Service

DISTRICT 8

ENTIRE COUNTIES

Dutchess, Putnam, Westchester

PARTIAL COUNTIES

Delaware: Only the townships of Middletown and Roxbury

Ulster: Entire County(including Wallkill and Shawangunk Prisons) except for remainder of Town of Shawangunk and Towns of Plattekill, Marlboro, and Wawarsing.

WAGES

Per hour: 07/01/2012

HVAC Service \$ 37.54

Jobbing & Alteration*
(Dutchess and Ulster County Only) \$ 34.89

*Repairs, replacements and alteration work is any repair or replacement of a present plumbing system that does not change existing roughing or water supply lines.

SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

SUPPLEMENTAL BENEFITS

Per hour worked:

07/01/2012

Journeyworker HVAC Service

\$ 17.00 per hour paid
+ 1.10 per hour worked**

Journeyworker Jobbing Alterations

\$ 19.63 per hour paid
+ 2.73 per hour worked**

** Not subject to overtime

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Note: Time and one half for the first eight hours on Saturdays.

Additional hours on Saturday to be paid at double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

HVAC SERVICE

REGISTERED APPRENTICES

(1)year terms at the following wages.

	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
07/01/2012	\$ 17.54	\$ 20.46	\$ 25.67	\$ 31.43	\$33.73

Supplemental Benefits per hour worked:

Apprentices	07/01/2012
1st term	\$ 14.75 per hour paid + 1.10 per hour worked
2nd term	\$ 15.12 per hour paid + 1.10 per hour worked
3rd term	\$ 15.64 per hour paid + 1.10 per hour worked
4th term	\$ 16.18 per hour paid + 1.10 per hour worked
5th term	\$ 16.60 per hour paid + 1.10 per hour worked

JOBGING & ALTERATIONS

REGISTERED APPRENTICES

(1)year terms at the following wages.

	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
07/01/2012	\$ 14.08	\$ 18.53	\$ 22.13	\$ 25.80	\$ 29.69

Supplemental Benefits per hour worked:

Apprentices	07/01/2012
1st term	\$ 8.27 per hour paid + 0.50 per hour worked
2nd term	\$ 10.80 per hour paid + 0.93 per hour worked
3rd term	\$ 11.94 per hour paid

	+ 1.05 per hour worked
4th term	\$ 14.49 per hour paid + 1.46 per hour worked
5th term	\$ 15.52 per hour paid + 1.90 per hour worked

8-21.1&2-SF/Re/AC

Roofer**01/01/2013**

JOB DESCRIPTION Roofer**DISTRICT** 9**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2012

Roofer/Waterproofer \$ 39.00

SUPPLEMENTAL BENEFITS

Journeyworker \$ 27.92

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following percentage of Journeyworkers hourly wage.

1st	2nd	3rd	4th
35%	50%	60%	75%

Supplements per hour paid at the following rates:

Apprentice:	1st	2nd	3rd	4th
	\$ 4.24	\$ 14.13	\$ 16.88	\$ 21.03

9-8R

Sheetmetal Worker**01/01/2013**

JOB DESCRIPTION Sheetmetal Worker**DISTRICT** 8**ENTIRE COUNTIES**

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

WAGES07/01/2012
SheetMetal Worker \$ 41.81**SHIFT WORK**

For all NYS D.O.T. and other Governmental mandated off-shift work:

10% increase for additional shifts for a minimum of five (5) days

SUPPLEMENTAL BENEFITS

Journeyworker \$ 31.85

OVERTIME PAY

OVERTIME:.. See (B, E, Q,) on OVERTIME PAGE.

*Note: For Sundays or Holidays worked, HOURLY WAGE is double the total of the hourly wage plus the hourly benefit paid all in wages. (Benefits are included in the wages).

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 13, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

1st	2nd	3rd	4th	5th	6th	7th	8th
\$15.43	\$17.35	\$ 19.28	\$ 21.21	\$ 23.13	\$ 25.07	\$ 27.27	\$ 29.70

Supplemental Benefits per hour:

Apprentices

1st term	\$ 14.03
2nd term	15.80
3rd term	17.55
4th term	19.31
5th term	21.07
6th term	22.81
7th term	24.29
8th term	25.55

8-38

Sprinkler Fitter

01/01/2013

JOB DESCRIPTION Sprinkler Fitter

DISTRICT 1

ENTIRE COUNTIES

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

WAGES

Per hour

	07/01/2012	01/01/2013
Sprinkler Fitter	\$ 39.08	\$ 39.08

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.65	\$ 20.80
------------	----------	----------

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED PRIOR TO 04/01/2010:

One Half Year terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 19.70	\$ 19.70	\$ 21.35	\$ 23.32	\$ 25.29	\$ 27.26	\$ 29.23	\$ 31.20	\$ 33.17	\$ 35.14

Supplemental Benefits per hour worked

	07/01/2012	01/01/2013
1st & 2nd Terms	\$ 8.74	\$ 8.74
3rd Term	14.87	15.02
4th Term	14.93	15.08
5th Term	20.24	20.39
6th Term	20.30	20.45
7th Term	20.36	20.51
8th Term	20.41	20.56
9th Term	20.47	20.62
10th Term	20.53	20.68

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 17.73	\$ 19.70	\$ 21.35	\$ 23.32	\$ 25.29	\$ 27.26	\$ 29.23	\$ 31.20	\$ 33.17	\$ 35.14

Supplemental Benefits per hour worked

	07/01/2012	01/01/2013
1st Term	\$ 8.68	\$ 8.68
2nd Term	8.74	8.74
3rd Term	14.87	15.02
4th Term	14.93	15.08
5th Term	15.49	15.64
6th Term	15.55	15.70
7th Term	15.61	15.76
8th Term	15.66	15.81
9th Term	15.72	15.87
10th Term	15.78	15.93

1-669.2

Survey Crew Consulting**01/01/2013**

JOB DESCRIPTION Survey Crew Consulting

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: Only the portion south of the north city line in Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer agreement.

Categories cover GPS & underground surveying.

WAGES: (per hour)

07/01/2012

Survey Rates:

Party Chief.....	\$ 33.70
Instrument Man..	\$ 28.38
Rodman.....	\$ 25.02

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 11.70

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Doubletime paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Teamster - Building / Heavy&Highway**01/01/2013**

JOB DESCRIPTION Teamster - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Orange, Rockland, Sullivan, Ulster

WAGES

GROUP 1: LeTourneau Tractors, Double Barrel Euclids, Athney Wagons and similar equipment (except when hooked to scrapers), Low Beds, I-Beam and Pole Trailers, Tire Trucks and Tractor and Trailers with 5 axles and over, Articulated Back Dumps and Road Oil Distributors, Articulated Water Trucks and Fuel Trucks.

GROUP 1A: Drivers on detachable Gooseneck Low Bed Trailers rated over 35 tons.

GROUP 2: All equipment 25 yards and up to and including 30 yard bodies and cable Dump Trailers and Powder and Dynamite Trucks.

GROUP 3: All Equipment up to and including 24-yard bodies, Mixer Trucks, Dump Crete Trucks and similar types of equipment, Fuel Trucks and Batch Trucks and all other Tractor Trailers.

GROUP 4: Tri-Axles, Ten Wheelers, Grease Trucks, Tillerman, Pattern Trucks, Intinuator Trucks. Water Trucks.

GROUP 5: Straight Trucks.

GROUP 6: Pick-up Trucks for hauling materials, parts, and Escort Man over-the-road.

WAGES: (per hour)	07/01/2012	05/01/2013
GROUP 1	\$ 30.35	\$ 30.75
GROUP 1A	31.49	31.89
GROUP 2	29.79	30.19
GROUP 3	29.57	29.97
GROUP 4	29.46	29.86
GROUP 5	29.34	29.74
GROUP 6	29.34	29.74

NOTE: additional 20% premium above the hourly wage for hazardous and toxic waste removal. This applies to all groups.

Shift Work: A shift premium of 10% on 2ND Shift and 15% on 3RD Shift will be paid for off-shift or irregular shift work when mandated by the NYS DOT or other governmental agency contracts.

SUPPLEMENTAL BENEFITS

Per hour paid:

First 40 hours	\$ 26.25	\$ 27.30
Over 40 hours	20.95	22.00

OVERTIME PAY

OVERTIME:.... See (B, E, P,T*,U**) on OVERTIME PAGE.

HOLIDAY

HOLIDAY:

Paid:..... See (5, 6, 13, 15, 25) on HOLIDAY PAGE.

Overtime:.. See (5, 6, 13, 15, 25) on HOLIDAY PAGE.

NOTE: Holidays worked Monday to Friday receive straight time wage for working, plus Holiday Pay.

*Holidays worked on Saturday, code T applies.

**Holidays worked on Sunday, code U applies.

11-445B/HH

Welder

01/01/2013

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2012

Welder (To be paid the same rate of the mechanic performing the work)

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

- (A) Time and one half of the hourly rate after 7 hours per day
- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday Double the hourly rate all additional Saturday hours
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays, if worked
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays, if worked

- (U) Four times the hourly rate for Holidays, if worked
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.

NOTE: BENEFITS are PER HOUR WORKED, for each hour worked, unless otherwise noted

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day



New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12240

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

This Form Must Be Typed

Submitted By:

(Check Only One)

☐

Contracting Agency

☐

Architect or Engineering Firm

☐

Public Work District Office

Date:

A. Public Work Contract to be let by: (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone: ()

Fax: ()

E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University
Construction Fund

☐ 05 Mental Hygiene
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State
(Describe)

3. SEND REPLY TO ☐ (check if new or change)
Name and complete address:

Telephone:()

Fax: ()

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR
THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title _____

Description of Work _____

Contract Identification Number _____

Note: For NYS units, the OSC Contract No. _____

6. Location of Project:
Location on Site _____

Route No/Street Address _____

Village or City _____

Town _____

County _____

7. Nature of Project - Check One:

- ☐ 1. New Building
☐ 2. Addition to Existing Structure
☐ 3. Heavy and Highway Construction (New and Repair)
☐ 4. New Sewer or Waterline
☐ 5. Other New Construction (Explain)
☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
☐ 7. Demolition
☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

- ☐ Construction (Building, Heavy Highway/Sewer/Water)
☐ Tunnel
☐ Residential
☐ Landscape Maintenance
☐ Elevator maintenance
☐ Exterminators, Fumigators
☐ Fire Safety Director, NYC Only
- ☐ Guards, Watchmen
☐ Janitors, Porters, Cleaners, Elevator Operators
☐ Moving furniture and equipment
☐ Trash and refuse removal
☐ Window cleaners
☐ Other (Describe)

9. Has this project been reviewed for compliance with the Wicks Law involving separate bidding?

YES ☐ NO ☐

10. Name and Title of Requester

Signature



NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements

NOTE: The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = NYS Dept. of Labor; NYC = New York City Comptroller's Office; AG = NYS Attorney General's Office; DA = County District Attorney's Office.

A list of those barred from bidding, or being awarded, any public work contract or subcontract with the State, under section 141-b of the Workers' Compensation Law, may be obtained at the following link, on the NYS DOL Website:

<https://dbr.labor.state.ny.us/EDList/searchPage.do>

NYSDOL Bureau of Public Work Debarment List 12/26/2012
Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	NYC		A & T IRON WORKS INC		25 CLIFF STREET NEW ROCHELLE NY 10801	12/21/2009	12/21/2014
DOL	DOL	*****0711	A ULIANO & SON LTD		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL		A ULIANO CONSTRUCTION		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	NYC	*****5804	AAR/CO ELECTRIC INC		5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	NYC	*****4486	ABBEY PAINTING CORP		21107 28TH AVENUE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL	*****9095	ABDO TILE CO		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	*****9095	ABDO TILE COMPANY		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	*****0635	ABOVE ALL PUMP REPAIR CORP		360 KNICKERBOCKER AVENUE BATAVIA NY 11716	10/20/2008	10/20/2013
DOL	NYC	*****5022	ACE DRYWALL SYSTEMS INC.		194 ASHLAND PLACE BROOKLYN NY 11217	03/06/2008	03/06/2013
DOL	AG	*****8219	ACTIVE CABLING INC		C/O FRANK DECAPITE 7 SYCAMORE ROAD DRWOODBURY NY 11797	10/02/2008	10/01/2013
DOL	DOL		ADAM A CEMERYS		2718 CURRY ROAD SCHENECTADY NY 12303	07/08/2010	07/08/2015
DOL	DOL	*****7584	ADAM'S FLOOR COVERING LLC		2718 CURRY ROAD SCHENECTADY NY 12303	07/08/2010	02/15/2017
DOL	DOL		AFFORDABLE PAINTING PLUS		367 GREEVES ROAD NEW HAMPTON NY 10958	10/01/2010	10/01/2015
DOL	DOL		ALBERT CASEY		43-28 54TH STREET WOODSIDE NY 11377	07/01/2011	07/01/2016
DOL	DOL		ALL TOWNS MECHANICAL	BARRY MORRIS	18 EAST SUNRISE HIGHWAY FREEPORT NY 11758	01/21/2008	01/21/2013
DOL	DOL	*****8740	ALLSTATE ENVIRONMENTAL CORP		C/O JOSE MONTAS 27 BUTLER PLACEYONKERS NY 10710	03/18/2011	03/15/2017
DOL	DOL	*****8534	ALPHA INTERIORS INC		513 ACORN STREET/ SUITE C DEER PARK NY 11729	05/27/2010	05/27/2015
DOL	DOL	*****8291	AMIR'S VISION INC		230 PRATT STREET BUFFALO NY 14204	09/17/2008	09/17/2013
DOL	NYC		ANDERSON LOPEZ		670 SOUTHERN BLVD BRONX NY 10455	06/14/2011	06/14/2016
DOL	DOL	*****0860	ANDREA STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	AG		ANTHONY BRANCA		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DA		ANTHONY CARDINALE		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/16/2017
DOL	DOL		ANTHONY POSELLA		30 GLEN HOLLOW ROCHESTER NY 14622	10/19/2009	10/19/2014
DOL	DOL		ANTHONY TAORMINA		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	DOL		ANTHONY ULIANO		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL	*****3020	APCO CONTRACTING CORP		24 SOUTH MARYLAND AVENUE PORT WASHINGTON NY 11050	09/24/2012	09/24/2017
DOL	DOL	*****8688	ARC MECHANICAL CORP		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	DOL	*****8482	ARGO CONTRACTING CORP		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	NYC		ARIE BAR		5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	DOL		ARTHUR C OSUORAH		PO BOX 1295 BUFFALO NY 14215	02/15/2008	02/15/2013
DOL	DOL	*****8027	ARTHUR DESIGN ENGINEERS & ASSOCIATES		PO BOX 1295 BUFFALO NY 14215	02/15/2008	02/15/2013
DOL	DOL	*****9336	ARTIERI SPECIALTIES LLC	SWITZER SALES	107 STEVENS STREET LOCKPORT NY 14094	11/04/2009	11/04/2014
DOL	DOL	*****2993	AST DRYWALL & ACOUSTICS INC		46 JOHN STREET - STE 711 NEW YORK NY 10038	12/16/2008	12/16/2013
DOL	DOL	*****2534	B & B CONCRETE CONTRACTORS INC		55 OLD TURNPIKE ROAD SUITE 612NANUET NY 10954	02/04/2011	02/04/2016
DOL	NYC		BASIL ROMEO		243-03 137TH AVENUE ROSEDALE NY 11422	03/25/2010	03/25/2015

NYSDOL Bureau of Public Work Debarment List 12/26/2012
Article 8

DOL	DOL		BEATRICE ORTEGA		764 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL	*****2294	BEDELL CONTRACTING CORP		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL		BENNY VIGLIOTTI		C/O LUVIN CONSTRUCTION CO P O BOX 357CARLE PLACE NY 11514	03/15/2010	03/15/2015
DOL	NYC		BERNARD COHNEN		193 HARWOOD PLACE PARAMUS NJ 07652	05/14/2008	05/14/2013
DOL	DOL	*****6999	BEST ROOFING OF NEW JERSEY LLC		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL	*****9890	BETTY JOE FRAZIER	NOBLE CONSTRUCTI ON GROUP	23960 WHITE ROAD WATERTOWN NY 13601	02/14/2008	02/14/2013
DOL	DOL		BIAGIO CANTISANI		200 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****0818	BLASTEC INC	MILLER SANDBLASTIN G & PAINTING	121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL	*****8501	BLOCKHEAD CONCRETE & PAVING INC		P O BOX 71 CHEEKTOWAGA NY 14225	09/03/2008	09/03/2013
DOL	NYC	*****8377	BOSPHORUS CONSTRUCTION CORPORATION		3817 KINGS HIGHWAY-STE 1D BROOKLYN NY 11234	06/30/2010	06/30/2015
DOL	DOL		BRIAN HOXIE		2219 VALLEY DRIVE SYRACUSE NY 13207	12/04/2009	12/04/2014
DOL	DOL	*****4311	C & F SHEET METAL CORP		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/24/2014
DOL	DOL		CANTISANI & ASSOCIATES LTD		442 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL		CANTISANI HOLDING LLC		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL	*****1143	CARMODY BUILDING CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	05/04/2012	05/04/2017
DOL	DOL	*****3368	CARMODY CONCRETE CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL		CARMODY CONTRACTING CORP		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL	*****6215	CARMODY CONTRACTING INC		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL		CARMODY ENTERPRISES LTD		220 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY INDUSTRIES INC		442 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL		CARMODY MAINTENANCE CORP		105 KISCO AVENUE MOUNT KISCO NY 10549	05/04/2012	05/04/2017
DOL	DOL	*****0324	CARMODY MASONRY CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY"2" INC		220 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****9721	CATENARY CONSTRUCTION CORP		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	10/20/2014
DOL	DOL	*****1683	CATONE CONSTRUCTION COMPANY INC		294 ALPINE ROAD ROCHESTER NY 14423	03/09/2012	03/09/2017
DOL	DOL		CATONE ENTERPRISES INC		225 DAKOTA STREET ROCHESTER NY 14423	03/09/2012	03/09/2017
DOL	DOL	*****7924	CBI CONTRACTING INCORPORATED		2081 JACKSON AVENUE COPIAGUE NY 11726	06/03/2010	06/03/2015
DOL	DOL		CHARLES MURDOUGH		203 KELLY DRIVE EAST AURORA NY 14052	03/26/2008	03/26/2013
DOL	DOL		CHARLES OKRASKI		67 WARD ROAD SALT POINT NY 12578	01/21/2011	01/21/2016
DOL	DOL		CHARLES RIBAUDO		513 ACORN ST - SUITE C DEER PARK NY 11729	05/27/2010	05/27/2015
DOL	DOL	*****1416	CHEROMINO CONTROL GROUP LLC		61 WILLET ST - SUITE 14 PASSAIC NJ 07055	12/03/2009	02/23/2017
DOL	DOL		CHESTER A BEDELL		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DOL		CHRIS SAVOURY		44 THIELLS-MT IVY ROAD POMONA NY 10970	10/14/2011	10/14/2016
DOL	DOL		CHRIST R PAPAS		C/O TRAC CONSTRUCTION INC 9091 ERIE ROADANGOLA NY 14006	02/03/2011	02/03/2016

NYSDOL Bureau of Public Work Debarment List 12/26/2012
Article 8

DOL	DOL		CHRISTOF PREZBYL		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL		CITY GENERAL BUILDERS INC		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****7086	CITY GENERAL IRON WORKS INC		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****5329	CNY MECHANICAL ASSOCIATES INC		P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	NYC	*****1768	COFIRE PAVING CORPORATION		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL	*****8342	CONKLIN PORTFOLIO LLC		60 COLONIAL ROAD STILLWATER NY 12170	02/15/2011	02/15/2016
DOL	DOL	*****5740	CORTLAND GLASS COMPANY INC		336 TOMPKINS STREET CORTLAND NY 13045	10/21/2010	07/15/2016
DOL	NYC	*****8777	CROSSLAND ELECTRICAL SYSTEMS INC		846 EAST 52ND STREET BROOKLYN NY 11203	12/19/2008	12/29/2013
DOL	DOL	*****0115	CROW AND SUTTON ASSOCIATES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL	*****4266	CRYSTAL INTERIOR CONTRACTING INC		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL	*****1804	CUSTOM GARDEN LANDSCAPING INC		283 NORTH MIDDLETOWN ROAD PEARL RIVER NY 10965	09/28/2009	09/28/2014
DOL	DOL	*****9453	D & D MASON CONTRACTORS INC		158-11 96TH STREET HOWARD BEACH NY 11414	06/25/2009	06/25/2014
DOL	DOL	*****0810	D & G PAINTING & DECORATING INC		53 LITTLE COLLABAR ROAD MONTGOMERY NY 12549	04/19/2012	04/19/2017
DOL	DOL		D JAMES SUTTON		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		DANIEL CELLUCCI ELECTRIC		17 SALISBURY STREET GRAFTON MA 01519	06/02/2010	06/02/2015
DOL	DOL	*****7129	DANIEL T CELLUCCI	DANIEL CELLUCCI ELECTRIC	17 SALISBURY STREET GRAFTON MA 01519	06/02/2010	06/02/2015
DOL	DOL		DARIN ANDERSON		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		DARREN MAYDWELL		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL		DEANNA J REED		5900 MUD MILL RD-BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****2311	DELCON CONSTRUCTION CORP		220 WHITE PLAINS ROAD TARRYTOWN NY 10591	08/27/2009	08/27/2014
DOL	DOL	*****3538	DELTA CONTRACTING PAINTING AND DESIGN INC		75 MCCULLOCH DRIVE DIX HILLS NY 11746	10/19/2010	10/19/2015
DOL	DOL		DEMETRIOS KOUTSOURAS		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	DOL		DESMOND CHARLES		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL		DIANE DEAYER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	06/25/2017
DOL	DOL		DIMITEIUS KASSIMIS		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL		DONALD NOWAK		10 GABY LANE CHEEKTOWAGA NY 14227	10/15/2009	10/15/2014
DOL	DOL		DORIS SKODA		C/O APCO CONTRACTING CORP 24 SOUTH MARYLAND AVENUEPORT WASHINGTON NY 11050	09/24/2012	09/24/2017
DOL	DOL	*****6148	DOT CONSTRUCTION OF NY INC		765 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL		DOUGLAS MCEWEN		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL		DRAGOLJUB RADOJEVIC	61 WILLET ST - SUITE 14	PASSAIC NJ 07055	12/03/2009	07/09/2015
DOL	NYC	*****6176	E N E L ELECTRICAL CORP		1107 MCDONALD AVENUE BROOKLYN NY 11230	07/30/2010	07/30/2015
DOL	NYC	*****8074	ECONOMY IRON WORKS INC		670 SOUTHERN BLVD BRONX NY 10455	06/14/2011	06/14/2016
DOL	DOL		EDWARD L GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVEKENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL		EDWARD SUBEH		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	NYC	*****6260	EL TREBOL SPECIAL CLEANING INC		95-26 76TH STREET OZONE PARK NY 11416	10/12/2011	10/12/2016

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DOL	DOL	*****3554	ELITE BUILDING ENTERPRISES INC		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/21/2013
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL	*****6101	ENHANCED DATA COM INC		75 SHERBROOK ROAD NORTH BABYLON NY 11704	07/01/2010	07/01/2015
DOL	DOL		ERROL L ALLEN		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		ESCO INSTALLERS LLC		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	DOL		EVELIO ELLEDIAS		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****0329	FAULKS PLUMBING HEATING & AIR CONDITIONING INC		3 UPTON STREET HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		FERNANDO GOMEZ		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/25/2014
DOL	DOL	*****0768	FISHER CONCRETE INC		741 WELSH ROAD JAVA CENTER NY 14082	04/08/2009	04/08/2014
DOL	DOL	*****5867	FJM-FERRO INC		6820 14TH AVENUE BROOKLYN NY 11219	10/27/2011	10/27/2016
DOL	DOL	*****8067	FORTH SPORT FLOORS INC		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL	*****0115	FOXCROFT NURSERIES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		FRANCIS (FRANK) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK (FRANCIS) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK ACOCELLA		68 GAYLORD ROAD SCARSDALE NY 10583	02/10/2011	02/10/2016
DOL	NYC		FRANK BAKER		24 EDNA DRIVE SYOSSET NY 11791	05/14/2008	05/14/2013
DOL	DOL		FRANK J MERCANDO	C/O MERCANDO CONTRACTIN G CO INC	134 MURRAY AVENUE YONKERS NY 10704	11/22/2008	11/22/2013
DOL	DOL		FRANK J MERCANDO		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL		FRANK ORTIZ		75 SHERBROOK ROAD NORTH BABYLON NY 11704	07/01/2010	07/01/2015
DOL	DOL		FRED ABDO	ABDO TILE COMPANY AKA ABDO TILE CO	6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	NYC		FREDERICK LEE		89 WALKER STREET NEW YORK NY 10013	01/04/2008	01/04/2013
DOL	DOL	*****9202	G & M PAINTING ENTERPRISES INC		13915 VILLAGE LANE RIVERVIEW MI 48192	02/05/2010	02/05/2015
DOL	DOL	*****7088	GBA CONTRACTING CORP		4015 21ST AVENUE ASTORIA NY 11105	01/11/2008	01/11/2013
DOL	DOL	*****6826	GBE CONTRACTING CORPORATION		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	NYC		GELSOMINA TASSONE		25 CLIFF STREET NEW ROCHELLE NY 10801	06/15/2010	06/15/2015
DOL	DOL		GEORGE A PATTI III		P O BOX 772 JAMESTOWN NY 14701	08/13/2010	08/13/2015
DOL	NYC		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL		GEORGE SHINAS		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	DOL		GERALD A POLLOCK		336 TOMPKINS STREET CORTLAND NY 13045	06/29/2010	07/15/2016
DOL	DOL		GERALD F POLUCH JR		2085 BRIGHTON HENRIETTA TOWN LINE ROADROCHESTER NY 14623	11/04/2010	11/04/2015
DOL	AG		GERARD IPPOLITO		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	DOL	*****4013	GR GRATES CONSTRUCTION CORPORATION		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/14/2015
DOL	DOL		GRATES MERCHANT NANNA INC		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/15/2015
DOL	DOL		GREGG G GRATES		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/14/2015
DOL	DOL		GRETCHEN SULLIVAN		P O BOX 130 CRETE IL 60417	11/10/2011	11/10/2016
DOL	DOL		GRIOGORIOS BELLOS		4015 21ST AVENUE ASTORIA NY 11105	01/11/2008	01/11/2013

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DOL	DOL	*****985	GROUND LEVEL CONSTRUCTION		10 GABY LANE CHEEKTOWAGA NY 14227	10/15/2009	10/15/2014
DOL	DOL	*****7735	GRYF CONSTRUCTION INC		394 SPOTSWOOD-ENGLISH RD MONROE NJ 08831	08/08/2011	08/08/2016
DOL	DOL		GUS PAPASTEFANOU		C/O D & G PAINTING & DECO 53 LITTLE COLLABAR ROADMONTGOMERY NY 12549	04/19/2012	04/19/2017
DOL	DOL	*****8904	HALLOCKS CONSTRUCTION CORP	P O BOX 278	YORKTOWN HEIGHTS NY 10598	12/01/2008	12/01/2013
DOL	DOL		HARALAMBOS KARAS		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	10/22/2013
DOL	DOL	*****5405	HARD LINE CONTRACTING INC		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL	*****0080	HI-AMP ELECTRICAL CONTRACTING CORP		265-12 HILLSIDE AVENUE FLORAL PARK NY 11004	02/15/2008	02/15/2013
DOL	DOL		HI-TECH CONTRACTING CORP		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****4331	HIDDEN VALALEY EXCAVATING INC		225 SEYMOUR STREET FREDONIA NY 14063	02/08/2011	02/08/2016
DOL	DOL	*****9893	HOXIE'S PAINTING CO INC		2219 VALLEY DRIVE SYRACUSE NY 13207	12/04/2009	12/04/2014
DOL	DOL	*****6429	IDM ENTERPRISES INC		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014
DOL	DOL	*****8426	IMPERIAL MASONRY RESTORATION INC		141 ARGONNE DRIVE KENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL	*****7561	INDUS GENERAL CONSTRUCTION		33-04 91ST STREET JACKSON HEIGHTS NY 11372	04/28/2010	04/28/2015
DOL	DOL	*****0488	INTERWORKS SYSTEMS, INC.		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DA	*****1958	IRON HORSE ONE INC		10 ROSWELL AVENUE OCEANSIDE NY 11572	09/30/2010	09/30/2015
DOL	DOL		ISRAEL MONTESINOS		517 MILES SQUARE ROAD YONKERS NY 10701	02/15/2008	02/15/2013
DOL	DOL		IVAN D MARKOVSKI		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014
DOL	DOL		IVAN TORRES		11 PLYMOUTH ROAD DIX HILLS NY 11746	02/15/2008	02/15/2013
DOL	DOL	*****0579	J & I CONSTRUCTION CORP		110 FOURTH STREET NEW ROCHELLE NY 10801	02/15/2008	02/15/2013
DOL	DOL		J & N LEASING AND BUILDING MATERIALS		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/11/2009	08/11/2014
DOL	DOL	*****1584	J M TRI STATE TRUCKING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	*****9368	J TECH CONSTRUCTION		PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		J THE HANDYMAN			09/24/2012	09/24/2017
DOL	DOL		JAMES SICKAU		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	12/30/2016
DOL	DOL		JAMES WALSH		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL		JEFFREY A NANNA		502 WOODBURN DRIVE UTICA NY 13502	06/14/2010	06/14/2015
DOL	DOL		JEFFREY ARTIERI		107 STEVENS STREET LOCKPORT NY 14094	11/04/2009	11/04/2014
DOL	DOL		JOHN B DUGAN		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL		JOHN BUONADONNA		283 NORTH MIDDLETOWN ROAD PEARL RIVER NY 10965	09/28/2009	09/28/2014
DOL	DOL		JOHN CATONE		C/O CATONE CONSTRUCTION 294 ALPINE ROADROCHESTER NY 14612	03/09/2012	03/09/2017
DOL	NYC		JOHN DITURI		1107 MCDONALD AVENUE BROOKLYN NY 11230	07/30/2010	07/30/2015
DOL	NYC		JOHN FICARELLI		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL		JOHN JIULIANNI		222 GAINSBORG AVENUE E WEST HARRISON NY 10604	05/10/2010	05/10/2015
DOL	NYC		JOHN MARI JR		278 ROBINSON AVENUE NEW YORK NY 10312	04/06/2008	04/06/2013
DOL	NYC		JOHN O'SHEA		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013

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DOL	DOL	*****5970	JOHN PREVETE FRAMING AND JOHN PREVETE FRAMING INC	JOHN PREVETE	320 RIDGE ROAD WEST MILFORD NJ 07480	03/26/2008	03/26/2013
DOL	DOL	*****2701	JOHN SMYKLA	AFFORDABLE PAINTING PLUS	367 GREEVES ROAD NEW HAMPTON NY 10958	10/01/2010	10/01/2015
DOL	DOL	*****9368	JORGE I DELEON	J TECH CONSTRUCTI ON	PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		JORGE OUVINA		344 SOUNDVIEW LANE COLLEGE POINT NY 11356	11/22/2011	11/22/2016
DOL	DOL		JOSE DOS SANTOS JR		85-08 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	DOL		JOSE MONTAS		27 BUTLER PLACE YONKERS NY 10710	03/18/2011	03/15/2017
DOL	DOL		JOSEPH CASUCCI		6820 14TH AVENUE BROOKLYN NY 11219	10/27/2011	10/27/2016
DOL	DOL		JOSEPH MONETTE		C/O JOHN MONETTE 140 ARMSTRONG AVENUESYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	*****1763	JR RESTORATION & ROOFING INC		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL	*****9422	JUNKYARD CONSTRUCTION CORP.		2068 ANTHONY AVENUE BRONX NY 10457	12/26/2007	12/26/2012
DOL	DOL		K NELSON SACKOOR		16 JOY DRIVE NEW HYDE PARK NY 11040	01/05/2010	01/05/2015
DOL	NYC		KAMIL OZTURK		3715 KINGS HWY - STE 1D BROOKLYN NY 11234	06/30/2010	06/30/2015
DOL	NYC		KAZIMIERZ KONOPSKI		194 ASHLAND PLACE BROOKLYN NY 11217	03/06/2008	03/06/2013
DOL	NYC	*****4923	KELLY'S SHEET METAL, INC.		1426 ATLANTIC AVENUE BROOKLYN NY 11216	12/28/2007	01/14/2013
DOL	DOL		KEMPTON MCINTOSH		8531 AVENUE B BROOKLYN NY 11236	12/16/2008	12/16/2013
DOL	DOL		KEN DEAVER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	06/25/2017
DOL	DOL	*****5941	KINGSVIEW ENTERPRISES INC		7 W FIRST STREET P O BOX 2LAKEWOOD NY 14750	01/14/2011	01/14/2016
DOL	DOL		KRZYSZTOF PRXYBYL		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL	*****6033	KUSNIR CONSTRUCTION		2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DOL	*****0526	LAGUARDIA CONSTRUCTION CORP		47-40 48TH STREET WOODSIDE NY 11377	07/01/2011	07/01/2016
DOL	NYC	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	*****9628	LANCET ARCH INC		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	10/19/2014
DOL	DOL		LANCET SPECIALTY CONTRACTING CORP		C/O CATENARY CONSTRUCTION 112 HUDSON AVENUEROCHESTER NY 14605	10/19/2009	10/19/2014
DOL	DOL		LARRY DOMINGUEZ		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL		LARRY FRANGOS		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	DOL		LAURA A. GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVEKENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL	*****0597	LEED INDUSTRIES CORP	HI-TECH CONTRACTIN G CORP	114 PEART STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****7907	LEEMA EXCAVATING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	AG	*****5102	LIBERTY TREE SERVICE, INC.		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	DOL	*****8453	LINPHILL ELECTRICAL CONTRACTORS INC		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	01/07/2016
DOL	DOL		LINVAL BROWN		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	01/07/2016
DOL	DOL	*****5171	LUVIN CONSTRUCTION CORP		P O BOX 357 CARLE PLACE NY 11514	03/15/2010	03/15/2015

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DOL	DOL		MANUEL ESTEVES		55 OLD TURNPIKE ROAD SUITE 612NANUET NY 10954	02/04/2011	02/04/2016
DOL	NYC		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	NYC		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL		MARGARET FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL		MARIO LUIS		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	DOL		MARIO R ECHEVERRIA JR		588 MEACHAM AVE-SUITE 103 ELMONT NY 11003	08/24/2010	08/24/2015
DOL	DOL		MARK LINDSLEY		355 COUNTY ROUTE 8 FULTON NY 13069	08/08/2009	08/14/2014
DOL	NYC	*****4314	MASCON RESTORATION INC		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	NYC	*****4314	MASCON RESTORATION LLC		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	DOL	*****0845	MASONRY CONSTRUCTION INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3333	MASONRY INDUSTRIES INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****6826	MATSOS CONTRACTING CORPORATION		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	AG	*****9970	MAY CONSTRUCTION CO INC		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DOL	*****9857	MBL CONTRACTING CORPORATION		2620 ST RAYMOND AVENUE BRONX NY 10461	08/30/2011	08/30/2016
DOL	DOL		MCI CONSTRUCTION INC		975 OLD MEDFORD AVENUE FARMINGDALE NY 11738	08/24/2009	08/24/2014
DOL	DOL	*****5936	MCSI ADVANCED AV SOLUTIONS LLC		2085 BRIGHTON HENRIETTA TOWN LINE ROADROCHESTER NY 14623	11/04/2010	11/04/2015
DOL	DOL	*****4259	MERCANDO CONTRACTING CO INC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL	*****0327	MERCANDO INDUSTRIES LLC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL	*****6033	MICHAEL KUSNIR	KUSNIR CONSTRUCTI ON	2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DOL		MICHAEL STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	DOL	*****0860	MICHAEL STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	DOL	*****2635	MIDLAND CONSTRUCTION OF CEDAR LAKE INC		13216 CALUMET AVENUE CEDAR LAKE IL 46303	11/10/2011	11/10/2016
DOL	DOL	*****5517	MILLENNIUM PAINTING INC		67 WARD ROAD SALT POINT NY 12578	01/21/2011	01/21/2016
DOL	DOL	*****0818	MILLER SANDBLASTING AND PAINTING		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	NYC		MOHAMMAD SELIM		73-12 35TH AVE - APT F63 JACKSON HEIGHTS NY 11372	03/04/2010	03/04/2015
DOL	DA		MOHAMMED SALEEM		768 LYDIG AVENUE BRONX NY 10462	08/18/2009	05/25/2015
DOL	NYC	*****2690	MONDOL CONSTRUCTION INC		11-27 30TH DRIVE LONG ISLAND CITY NY 11102	05/25/2011	05/25/2016
DOL	DOL		MORTON LEVITIN		3506 BAYFIELD BOULEVARD OCEANSIDE NY 11572	08/30/2011	08/30/2016
DOL	DOL	*****2737	MOUNTAIN'S AIR INC		2471 OCEAN AVENUE- STE 7A BROOKLYN NY 11229	09/24/2012	09/24/2017
DOL	NYC		MUHAMMAD ZULFIQAR		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	DOL	*****2357	MUNICIPAL MILLING & MIX-IN- PLACE		9091 ERIE ROAD ANGOLA NY 14006	02/03/2011	02/03/2016
DOL	DOL	*****2251	MURDOUGH DEVELOPMENT CO., INC.		203 KELLY DRIVE EAST AURORA NY 14052	03/26/2008	03/26/2013
DOL	DOL		MURRAY FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DA	*****9642	MUTUAL OF AMERICAL GENERAL CONSTRUCTION & MANAGEMENT CORP		768 LYDIG AVENUE BRONX NY 10462	08/18/2009	05/25/2015
DOL	DOL		N PICCO AND SONS CONTRACTING INC		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/11/2009	08/11/2014

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DOL	DOL	*****4133	NASDA ELECTRICAL ENTERPRISES INC		134-25 166 PLACE - #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL	*****9445	NASDA ENTERPRISES INC		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		NAT PICCO		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/22/2009	08/22/2014
DOL	DA	*****6988	NEW YORK INSULATION INC		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/16/2017
DOL	DOL		NICOLE SPELLMAN		2081 JACKSON AVENUE COPIAGUE NY 11726	06/03/2010	06/03/2015
DOL	DOL		NIKOLAS PSAREAS		656 N WELLWOOD AVE/STE C LINDENHURST NY 11757	09/01/2011	09/01/2016
DOL	DOL	*****9890	NOBLE CONSTRUCTION		23960 WHITE ROAD WATERTOWN NY 13601	02/14/2008	02/14/2013
DOL	DOL	*****7041	NYCOM SERVICES CORP		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	11/22/2013
DOL	DOL	*****0797	O GLOBO CONSTRUCTION CORP		85-06 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	DOL		OKBY ELSAYED		1541 EAST 56TH STREET BROOKLYN NY 11234	05/04/2012	05/04/2017
DOL	NYC		OLIVER HOLGUIN		95-26 76TH STREET OZONE PARK NY 11416	10/12/2011	10/12/2016
DOL	NYC	*****3855	OT & T INC		36-28 23RD STREET LONG ISLAND CITY NY 11106	01/15/2008	05/14/2013
DOL	DOL	*****5226	PASCARELLA & SONS		459 EVERDALE AVENUE WEST ISLIP NY 11759	01/10/2010	01/10/2015
DOL	DOL		PATRICK BURNS		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL		PATRICK SHAUGHNESSY		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	DOL		PEDRO RINCON		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****9569	PERFORM CONCRETE INC		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	DOL		PETER J LANDI		249 MAIN STREET EASTCHESTER NY 10709	10/05/2009	10/05/2014
DOL	DOL	*****7229	PETER J LANDI INC		249 MAIN STREET EASTCHESTER NY 10709	10/05/2009	10/05/2014
DOL	DOL	*****1136	PHOENIX ELECTRICIANS COMPANY INC		540 BROADWAY P O BOX 22222ALBANY NY 12201	03/09/2010	03/09/2015
DOL	DOL	*****5419	PINE VALLEY LANDSCAPE CORP		RR 1, BOX 285-B BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		PRECISION DEVELOPMENT CORP		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL	*****7914	PRECISION SITE DEVELOPMENT INC		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL	*****9359	PRECISION STEEL ERECTORS INC		P O BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****6895	PROLINE CONCRETE OF WNY INC		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	12/30/2016
DOL	DOL	*****2326	PUTMAN CONSTRUCTION COMPANY OF WESTERN NY		29 PHYLLIS AVENUE BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DOL		RAMON BONILLA		938 E 232ND STREET #2 BRONX NY 10466	05/25/2010	05/25/2015
DOL	DOL	*****7294	REDWOOD FLOORING, INC.		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	NYC	*****6978	RISINGTECH INC		243-03 137TH AVENUE ROSEDALE NY 11422	03/25/2010	03/25/2015
DOL	DOL		ROBBYE BISSEAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROBERT DIMARSICO		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	NYC		ROBERT FICARELLI		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL	*****1721	ROBERTS CONSTRUCTION OF UPSTATE NEW YORK INC		5 SANGER AVENUE NEW HARTFORD NY 13413	01/28/2009	01/28/2014
DOL	DOL		ROCCO ESPOSITO		C/O ROCMAR CONTRACTING CO 620 COMMERCE STREETTHORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL		ROCMAR CONSTRUCTION CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL	*****7083	ROCMAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017

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DOL	DOL	*****9025	ROJO MECHANICAL LLC		938 E 232ND STREET #2 BRONX NY 10466	05/25/2010	05/25/2015
DOL	DOL		RONALD R SAVOY	C/O CNY MECHANICAL ASSOCIATES INC	P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	DOL	*****5905	ROSE PAINTING CORP		222 GAINSBORG AVENUE EAST WEST HARRISON NY 10604	05/10/2010	05/10/2015
DOL	DOL		ROSEANNE CANTISANI		11 TATAMUCK ROAD POUND RIDGE NY 10576	05/04/2012	05/04/2017
DOL	NYC		ROSS J HOLLAND		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL		RUTH H SUTTON		939 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		S & M CONTRACTING LLC		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL	*****2585	S B WATERPROOFING INC		SUITE #3R 2167 CONEY ISLAND AVENUEBROOKLYN NY 11223	11/04/2009	11/04/2014
DOL	DOL	*****9066	SAMAR PAINTING & DECORATING INC		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	DOL	*****4923	SCHENLEY CONSTRUCTION INC		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	06/25/2017
DOL	NYC	*****0987	SCHWARTZ ELECTRIC CONTRACTORS INC		89 WALKER STREET NEW YORK NY 10013	01/04/2008	01/04/2013
DOL	NYC	*****4020	SERVI-TEK ELEVATOR CORP		2546 EAST TREMONT AVENUE BRONX NY 10461	06/04/2009	06/04/2014
DOL	NYC		SHAFIQU L ISLAM		11-27 30TH DRIVE LONG ISLAND CITY NY 11102	05/25/2011	05/25/2016
DOL	NYC		SHAHZAD ALAM		21107 28TH AVE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL		SHAIKF YOUSUF		C/O INDUS GENERAL CONST 33-04 91ST STREETJACKSON HEIGHTS NY 11372	04/28/2010	04/28/2015
DOL	DOL	*****0256	SIERRA ERECTORS INC		79 MADISON AVE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL	*****0415	SIGNAL CONSTRUCTION LLC		199 GRIDER STREET BUFFALO NY 14215	11/14/2006	02/25/2015
DOL	DOL	*****8469	SIGNATURE PAVING AND SEALCOATING		P O BOX 772 JAMESTOWN NY 14701	08/13/2010	08/13/2015
DOL	DOL	*****8469	SIGNATURE SEALCOATING AND STRIPING SERVICE		345 LIVINGSTON AVENUE P O BOX 772JAMESTOWN NY 14702	04/04/2007	08/13/2015
DOL	DOL	*****0667	SNEEM CONSTRUCTION INC		43-22 42ND STREET SUNNYSIDE NY 11104	07/01/2011	07/01/2016
DOL	DOL		SPASOJE DOBRIC		61 WILLET STREET - SUITE PASSAIC NJ 07055	07/09/2010	02/23/2017
DOL	DOL	*****3539	SPOTLESS CONTRACTING	IMPACT INDUSTRIAL SERVICES INC	44 THIELLS-MT IVY ROAD POMONA NY 10970	10/14/2011	10/14/2016
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	NYC	*****6650	START ELEVATOR CONSTRUCTION, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****3896	START ELEVATOR MAINTENANCE, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****1216	START ELEVATOR REPAIR, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****2101	START ELEVATOR, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	DOL		STEFANIE MCKENNA		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL		STEPHEN BALZER		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/01/2013
DOL	DOL		STEVEN CONKLIN		60 COLONIAL ROAD STILLWATER NY 12170	02/15/2011	02/15/2016
DOL	DOL	*****4081	STS CONSTRUCTION OF WNY		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL	*****4293	THE J OUVINA GROUP LLC		344 SOUNDVIEW LANE COLLEGE POINT NY 11356	11/22/2011	11/22/2016
DOL	DOL		THEODORE F FAULKS		18 FIREWEED TRAIL HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		THOMAS ASCHMONEIT		79 MADISON AVENUE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL		THOMAS DEMARTINO		158-11 96TH STREET HOWARD BEACH NY 11414	06/25/2009	06/25/2014

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DOL	DOL		THOMAS TERRANOVA		13 NEW ROAD/SUITE 1 NEWBURGH NY 12550	11/15/2010	11/15/2015
DOL	NYC		TIMOTHY O'SULLIVAN		C/O SNEEM CONSTRUCTION 4322 42ND STREETSUNNYSIDE NY 11104	07/01/2011	07/01/2016
DOL	DOL		TIMOTHY P SUCH		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL		TNT DEMOLITION AND ENVIRONMENTAL INC		355 COUNTY ROUTE 8 FULTON NY 13069	08/08/2009	08/19/2014
DOL	DOL	*****3315	TOTAL DOOR SUPPLY & INSTALLATION INC		16 JOY DRIVE NEW HYDE PPARK NY 11040	01/05/2010	01/05/2015
DOL	DOL	*****3315	TOTAL DOOR SUPPLY & INSTALLATION INC		16 JOY DRIVE NEW HYDE PPARK NY 11040	01/05/2010	01/05/2015
DOL	DOL	*****8176	TOURO CONTRACTING CORP		1541 EAST 56TH STREET BROOKLYN NY 11234	05/04/2012	05/04/2017
DOL	DOL	*****2357	TRAC CONSTRUCTION INC	MUNICIPAL MILLING & MIX -IN- PLACE	9091 ERIE ROAD ANGOLA NY 14006	02/03/2011	02/03/2016
DOL	DOL		TRI STATE TRUCKING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	*****5213	TRIAD PAINTING CO INC		656 N WELLWOOD AVE/STE C LINDENHURST NY 11757	09/01/2011	09/01/2016
DOL	DOL	*****4294	TWT CONSTRUCTION COMPANY INC		13 NEW ROAD/SUITE 1 NEWBURGH NY 12550	11/15/2010	11/15/2015
DOL	DOL		ULIANO AND SONS INC		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL	*****0854	VANESSA CONSTRUCTION INC		588 MEACHAM AVE/STE 103 ELMONT NY 11003	08/24/2010	08/24/2015
DOL	DOL	*****3270	VEZANDIO CONTRACTING CORP		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	DOL		VIRGINIA L CAPONE		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	NYC	*****9936	VISHAL CONSTRUCTION INC		73-12 35TH AVE - APT F63 JACKSON HEIGHTS NY 11272	03/04/2010	03/04/2015
DOL	DOL	*****0329	WET PAINT CO. OF OSWEGO, INC		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL	*****7617	WHITE PLAINS CARPENTRY CORP		P O BOX 309 WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL		WILLIAM PUTNAM		50 RIDGE ROAD BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DOL		WILLIAM SCRIVENS		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL		WILLIAM W FARMER JR		112 HUDSON AVENUE ROCHESTER NY 14605	10/19/2009	10/19/2014
DOL	NYC	*****5498	XAVIER CONTRACTING LLC		68 GAYLORD ROAD SCARSDALE NY 10583	02/10/2011	02/10/2016
DOL	AG		YULY ARONSON		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DOL		YURIY IVANIN		C/O MOUNTAIN'S AIR INC 2471 OCEAN AVENUE-STE 7ABROOKLYN NY 11229	09/24/2012	09/24/2017
DOL	DOL		ZEPHENIAH DAVIS		2068 ANTHONY AVENUE BRONX NY 10457	12/26/2007	12/26/2012