



Division of Environmental Remediation

Site Name: Former Kenco Chemical Company, Inc.

Site Number: 447039

Contract Number: D012803

Location: Town of Glenville, Schenectady County, New York

Contract Documents

Ramboll Americas Engineering Solutions, Inc.

NYS Professional Engineer #

Date

Signature

April 2023

New York State Department of Environmental Conservation
The Honorable Kathy Hochul, *Governor* Basil Seggos, *Commissioner*

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CONTRACT DRAWINGS BOUND SEPARATELY

SECTION I

Advertisement and Notice to Bidders

New York State Department of Environmental Conservation Division of Environmental Remediation

Project Name: Former Kenco Chemical Company, Inc.
OU-02 In Situ Thermal Remediation
Site No. 447039

Sealed bids for the Former Kenco Chemical Company, Inc. project will be received by the New York State Department of Environmental Conservation (NYSDEC), Division of Management and Budget Services, Bureau of Expenditures [625 Broadway, 10th Floor, Albany, New York, 12233-5027], until the time of 1:00 PM, Eastern Standard Time, on the date of Thursday, June 15, 2023. The bids will be opened and read aloud at the above time and date. Telegraphic or other electronically transferred bids will not be accepted.

The project involves the implementation of remedial activities at the Former Kenco Chemical Company site, located at 107 Freemans Bridge Road, Glenville NY. These activities include, but are not necessarily limited to; 1) Mobilization/demobilization; 2) Removal of existing site features and site grading; 3) Installation of Electrical service, both on-site and connecting to a National Grid built supply; 4) Installation of a hydraulic control barrier around the 2.2 acre treatment zone; 5) Construction of in situ thermal remediation system to treat approximately 150,000 cubic yards of soil; 6) Construction of a Stormwater management area; 7) Collection and analysis of Confirmatory soil and Groundwater samples until treatment goals have been met, as specified in the Contract Documents; 8) In situ well field decommissioning, including but not limited to, offsite disposal of vapor mitigation cap, cutting and disposing of at least the top 10 ft of the heating wells; and 9) Site restoration, including restoration of a wetland, as shown on the Contract Drawings and as specified in Contract Documents;

The estimated range for this work is: Over \$15,000,000

Contract Documents are available in electronic format at no charge. Electronic copies of non-biddable Contract Document drawings, specifications, proposal forms, addenda, and a separate Limited Site Data Document may be downloaded from the Department website <http://www.dec.ny.gov/chemical/59233.html>. Hard copies (fees apply) and/or FTP link to biddable Contract Documents are available upon request from the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7017, Attn: Elyse DuBois at (518) 402-0031 or Elyse.DuBois@dec.ny.gov.

Proposals will be accepted only from bidders who attend the Pre-Bid Conference. All proposals must be made on the official proposal form(s) and returned to the Department as specified in Contract Documents. Each proposal must be accompanied by a deposit

or a bid bond in the amount of five percent (5%) of Proposers bid amount. All Bidders must attend the Pre-Bid Conference to receive special requirements and/or instruction for the Contract. The Pre-Bid Conference will be held on Wednesday, May 10, 2023 at the Site, located at 107 Freemans Bridge Road Glenville NY, starting at 11:00 AM Eastern Standard Time.

ATTENDANCE IS MANDATORY AS A CONDITION OF BIDDING.

Minority-, Women-, and Service-Disabled Veteran-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, Andrew Guglielmi, 12th Floor, 625 Broadway, Albany, New York, 12233-7011, shall be the Department's Designated Representative. Any questions, however, shall be directed to Elyse DuBois, the Department's Project Manager and Designated Contact, at (518) 402-0031 or Elyse.DuBois@dec.ny.gov.

Bidders may receive announcements of procurement opportunities by signing up for the NYSDEC – DER electronic mailing list (“listserv”) at – <https://public.govdelivery.com/accounts/NYSDEC/subscriber/new>

Basil Seggos, 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 forms 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, corrections, or the provision of additional information.

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 Section VI - 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.

As-Built Documents - documents conforming to the requirements outlined in Section VIII - General Conditions, Article 5.19.

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

Bidder - The person, partnership, corporation, joint venture or other authorized combination thereof, who has submitted a Bid. Bidder may also be referred to as “Offerer” or “Proposer” throughout the Bidding Documents and Contract Documents.

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 – The Commissioner of the New York State Department of Environmental Conservation.

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

Contract Documents - The Agreement, Addenda, 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, Appendix C, Appendix D, 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 allowable 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 the 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 non-defective 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 consisting of 24 hours lasting from midnight to midnight on any two consecutive dates.

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 of the General Conditions.

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

Department - The New York State Department of Environmental Conservation.

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

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

Dispute - A Claim that is not resolved pursuant to Article 8.10 of Section VIII - General Conditions, becomes a Dispute to be resolved under Article VIII – Dispute Resolution of Appendix B – Standard Clauses for All New York State Department of Environmental Conservation Contracts.

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

Notice to Proceed - The Department's written notice of Agreement execution by the Comptroller, stating pertinent information with which Contractor must comply 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 term "Project" means work at the same Site carried out pursuant to one or more sets of 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 an 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 the 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 3.7 of Article 3 of the General Conditions or to emergencies under paragraph 5.23 of Article 5 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(s) - 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 execution by the Comptroller.

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

Request for Interpretation - A document prepared on a form furnished by the Department which is to be used by the Contractor to request interpretation or clarification of the Contract Requirements by the Engineer.

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 horizontal and vertical area requiring Work by Contractor, as bounded by and represented in the Contract Documents.

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 allowable 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, vendor, or other entity providing materials or components for the Project.

Testing, Pre-Operational - All testing, associated trim-out 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(s).

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 Representative(s) for the implementation of this Agreement, or for approval and direction called for therein, shall be the individual(s) 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 – Bid Instruction* 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 Addendum. To be given consideration, all inquiries must be received in writing at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements", at least ten (10) days prior to the date fixed for the opening of Bids, or by the date indicated by Department. Any and all interpretations, and any supplemental instructions will be in the form of written Addendum(s) made available in electronic format. Failure of any Bidder to receive any such Addendum(s) 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 to:

**Attention: Justin Lennox
Bureau of Expenditure Accounting
NYS Department of Environmental Conservation
625 Broadway, 10th Floor
Albany, New York 12233-5027**

The outside of the envelope must bear the name and address of the Bidder, the Site Name, Site Number and Contract Number from the cover of the Contract Documents and 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, may waive any informalities or irregularities in any bid, 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 parties of the joint venture, then the Bid shall be accompanied by evidence of his or her authority to act on behalf of all parties of the joint venture.

The Bidder shall complete that portion of the Bid form requesting a statement of the Addendum(s) which have been received, by Addendum number and date. If no Addendum(s) 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 does not 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, upon request, at the address for notices in Article 1 of this Section.

Department will not accept any Bid which has been transmitted electronically (e.g. via Facsimile, Telephone, Telegraph, email, text) 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 four (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 (2) business days after the day of the Bid opening, and 2.) within three (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, a 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 Department as required in Article 3. The applicable forms and instructions can be found in Section V – Consolidated Bid Form Acknowledgements, Article 1:

Form of Bid (completed and endorsed)

Bid Bond or Certified Check

Offerer Disclosure of Prior Non-Responsibility Determinations (completed and endorsed)

Vendor Assurance of No Conflict of Interest or Detrimental Effect (endorsed)

In the case of a legally constituted joint venture, the bidders must submit a copy of the written joint venture agreement with their bid. Each member can only be part of one (1) joint venture. The agreement shall clearly define the relationship and services to be performed by each member, identify the authorized representative for each member, designate the lead principal participant, provide proof of insurance, identify percent equity share held by each member, and include any other relevant information.

- The Bidder must also submit a statement signed by the Bidder's authorized representative acknowledging that such entities will be required to provide evidence of joint and several liability for the Bidder's obligations under the Contract. If the entity is an LLC, a statement signed by the bidder's authorized representative acknowledging that such entities will be required to provide guarantees of the Bidder's obligations under the Contract.
- If the joint venture has not yet been legally formed, then the Bidder must submit a description of the proposed legal structure and draft copies of the underlying documents, including: a) all significant terms of the joint venture or partnership, including the rules relative to the administration of the joint venture, limited liability company or partnership, including dealing with deadlock situations; b) description of how the joint venture, limited liability company or partnership will operate administratively and technically; and c) a teaming agreement or comparable document setting forth the equity member's agreement to form the organization.

Sexual Harassment Prevention Certificate (see Article 26 below)

Certificate Under Executive Order No. 16, Prohibiting State Agencies and Authorities from Contracting Businesses Conducting Business in Russia (see Article 27 below)

- b) The following items shall be submitted to the Project Manager within five (5) days of notification that the Bidder is the apparent low Bidder. The applicable forms and

instructions can be found in Section V – Consolidated Bid Form Acknowledgements, Article 2:

Off-site permitted facility to receive material along with a copy of the facilities permit

Plan of Operations (Work Plan) and Progress Schedule, Health and Safety Plan, Sampling Plan, and QA/QC Plan

Statement of Surety's intent, complete and signed by a duly authorized surety company licensed to do business in the State of New York

A description of projects completed by Bidder documenting its experience in this type of work, including previous experience (including applicable experience in New York State and evaluations from other clients for whom the bidder has provided goods and/or services); the abilities and experience of the personnel to be assigned to the work and the ability to provide any needed advanced techniques such as modeling; and overall, information which demonstrates the bidder's skill, judgment and business integrity. This should include the Bidder's approach proposed in meeting the requirements of the scope of work and the need to purchase the goods from and/or subcontract performance of services to others, outlining any cost or schedule impacts to the Bidder's overall performance of the Work.

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. In the case of a joint venture, each member will be required to complete and submit a NYS Vendor Responsibility Questionnaire or an affidavit of no change (if appropriate). (Must be bound separately if submitting a paper copy of the Vendor Responsibility Questionnaire.)

The Contractor agrees to submit an MWBE Utilization Plan and Work Force Utilization Plan either prior to or at the time of the execution of the contract. The Contractor agrees to use such MWBE Utilization Plan for the performance of MWBE's on the Contract Pursuant to the prescribed MWBE goals.

An Authorizing Resolution stating that a certain individual has the authority to sign the Contract on behalf of the firm.

Endorsed Executive Order No. 177 Certification (Anti-Discriminatory Policies and Practices)

Any other information that demonstrates the Bidder's ability to perform the work described herein

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. The applicable forms and instructions can be found in Section V – Consolidated Bid Form Acknowledgements, Article 3:

Executed Agreement (four (4) endorsed originals)

Performance Bond with Power of Attorney & Surety Financial Statement (original and three copies)

Labor & Materials Bond with Power of Attorney & Surety Financial Statement (original and three copies)

Bid Breakdown of Items (original) (see Article 12 below)

Certificates of Insurance (original)

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.

Service-Disabled Veteran-Owned Business (SDVOB) Utilization Plan (original) as detailed in Appendix D

ARTICLE 6 - Bid Security and Bonds

Bid Security shall be made payable to Department in an amount not less than five (5) 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 Department or 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 at or over \$10,000, unless otherwise agreed to by the Department, 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.

In the case of a joint venture, each member must meet the experience requirements as amended above. A bid cannot be submitted by a Bidder, including a joint venture, where the Bidder or one of the members of a joint venture has less than three (3) years satisfactory experience in construction of the work to be performed, unless the Bidder or member of a joint venture is a successor in interest to a pre-existing company which meets the required minimum of three (3) years satisfactory experience in construction of the work to be performed.

All on-site personnel are required to have 40-hour Occupational Safety and Health Administration (OSHA) training plus a current eight-hour refresher, baseline medical monitoring, plus a current yearly physical, and training and current fit testing for respirator use if applicable.

Additionally, the successful Contractor must be compliant with Section X – Standard Specifications, SPEC 01 35 29 – Contractor's Health and Safety and the OSHA Standards and Regulations contained in Title 29, Code of Federal Regulations, Part 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 Occupational Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

ARTICLE 11 - Preliminary Progress Schedule

The Preliminary Progress Schedule shall consist of three (3) copies of a narrative description and a time-scaled critical path method diagram or bar chart diagram as specified in Section X – Standard Specifications, SPEC 01 32 16 – Progress Schedule. 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.

Similarly, data concerning leachate were obtained with reasonable care and recorded in good faith. The location and concentrations of leachate may vary considerably according

to the prevailing climate, rainfall and other factors, including the passage of time. Bidders may rely upon accuracy of the subsurface technical data as to where (location) and when (exact time) data was obtained; but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof.

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 or as being in the best interest of Department.

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 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. This experience must include, but not be limited to, the excavation, transportations, and handling of hazardous waste and contaminated soil/sediment. Experience must also include the handling and treatment of contaminated water generated from hazardous waste operations. For work to be deemed satisfactory, the work must have been performed with required oversight from United States Environmental Protection Agency (USEPA), Department, or an equivalent state environmental regulatory agency (i.e., New Jersey DEP, Pennsylvania DER, etc). Brownfield cleanup work qualifies for the experience requirement. The bidder cannot meet the minimum experience requirements through the use of subcontractor(s).

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 of this Section. 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 of 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.ny.newnycontracts.com . 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 (855) ESD-4MWBE or (855) 373-4692. 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) 402-9240.

Pursuant to New York State Executive Law Article 15-A, and the attending rules and regulations, an approvable M/WBE Utilization Plan and Work Force Utilization Plan shall be required prior to or at the time of the execution of 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 of 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 Section VII of Appendix B 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 – Participation Requirements for New York State Certified Service-Disabled Veteran-Owned Businesses

Article 17-B of the New York State Executive Law provides for more meaningful participation in public procurement by certified Service-Disabled Veteran-Owned Businesses (SDVOBs), thereby further integrating such businesses into New York State's economy. The Department recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Department contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Bidders are strongly encouraged and expected to consider SDVOBs in the fulfillment of the requirements of the Contract. Such participation may be as subcontractors or suppliers, as protégés, or in other partnering or supporting roles. To obtain more information regarding the utilization of SDVOBs including how to find and contact them, please use the contact information below or go to the Division of Service Disabled Veteran's Business Development (DSDVBD) website at: <https://ogs.ny.gov/Veterans/default.asp>.

The contractor must make good faith efforts to subcontract a goal of six (6) percent (%) of the contract amount to New York State Certified Service-Disabled Veteran-Owned Businesses (SDVOBs), for purposes of providing meaningful participation by SDVOBs. Appendix D further defines the SDVOB provisions required by Executive Law, Article 17B.

ARTICLE 22 - 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 offerer(s)¹ 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 a 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;

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).

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 offerer(s);
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.

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 (FAQ's) and answers adopted by the council have been posted. A copy of the new Procurement Lobbying Law is also available on this website.

ARTICLE 23 – Diesel Emissions Reduction Act 2006

In 2007, New York State passed legislation establishing the Diesel Emissions Reduction Act 2006 (DERA). This Act amended the Environmental Conservation Law (ECL) by adding Section 19-0323 which requires the use of best available retrofit technology (BART) and ultra-low sulfur diesel fuel (ULSD) for heavy duty vehicles owned or operated by, including on behalf of, state agencies and state or regional public authorities. The Department has promulgated regulations (6 NYCRR Part 248) to provide guidance on provisions of the law. The regulations may be found on the Department's website at <http://www.dec.ny.gov/regs/2492.html>.

The Contractor must comply with the specifications and provisions of ECL Section 19-0323 and 6 NYCRR Part 248, which require the use of Best Available Retrofit Technology (BART) and Ultra Low Sulfur Diesel (ULSD), unless specifically waived by the Department. Qualifications for a waiver under this law will be the responsibility of the Contractor.

ARTICLE 24 – Environmental Protection Fund Acknowledgment

If applicable, in recognition of a portion of the Department funds utilized for any work completed under this Contract, the Contractor agrees to acknowledge in any communication to the public, that such funding was provided from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.

Article 25 – Executive Order 177

Executive Order No. 177, Prohibiting State Contracts with Entities that Support Discrimination, orders that New York State's government will not do business with entities that promote or tolerate discrimination or infringement on the civil rights and liberties of New Yorkers. New York State is dedicated to ensuring that all individuals are treated equally, regardless of their age, race, creed, color, national origin, sexual orientation, gender identity, military status, sex, marital status, disability, or other protected basis. To that end, New York has enacted numerous laws, regulations, and policies, and will

continue to aggressively enforce its strong protections against discrimination to the maximum extent allowable by law.

In order to comply with this order, the Contractor is required to complete the Executive Order No. 177 Certification which certifies that it does not have institutional policies or practices that fail to address the harassment and discrimination of individuals on the basis of their age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status under the Human Rights Law.

ARTICLE 26 - Sexual Harassment Prevention Certification

State Finance Law §139-I requires bidders on state procurements to certify that they have a written policy addressing sexual harassment prevention in the workplace and provide annual sexual harassment training (that meets the minimum requirements of section two hundred one-g of the NYS Labor Law and Department of Labor's model policy and training standards) to all its employees.

Where competitive bidding is required pursuant to statute, rule or regulation, every bid made to the state or any public department or agency of the state must contain the following statement:

"By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of section two hundred one-g of the labor law."

Bids that do not contain the certification will not be considered for award; provided however, that if the bidder cannot make the certification, the bidder shall provide a signed statement with their bid detailing the reasons why the certification cannot be made. After review and consideration of such statement, the Department may reject the bid or may decide that there are sufficient reasons to accept the bid without such certification.

Bidders are required to sign and submit the Sexual Harassment Prevention Certification form included in Section V, Article 1(g). If the bidder cannot make the certification then a signed statement must be submitted with the bid detailing the reasons why the certification cannot be made.

Article 27 - Executive Order No. 16

Executive Order No. 16 provides that "all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia." The complete text of Executive Order No. 16 can be found at <https://www.governor.ny.gov/executive-order/no-16-prohibiting-state->

agencies-and-authorities-contracting-businesses-conducting. The Executive Order remains in effect while sanctions against Russia imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations. As defined in Executive Order No. 16, an “entity conducting business operations in Russia” means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership. Vendors responding to this solicitation are required to complete and submit the form entitled “Certification Under Executive Order No. 16 Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia”.

SECTION IV

Supplementary Bidding Information and Requirements

ARTICLE 1 - Location and Description of Project

The Site Number of this project is 447039. The Project is located at 107 Freemans Bridge Road, Glenville, Schenectady County, NY 12010. Access to the site is from Freeman's Bridge Road. The site can also be accessed from Lowe's Drive to the south of the site area.

The project includes the implementation of remedial activities at the Former Kenco Chemical Company, Inc. (site), located at 107 Freemans Bridge Road, Town of Glenville, Schenectady County, New York. The remedial activities include, but are not necessarily limited to; 1) Mobilization/demobilization; 2) Removal of existing site features and site grading; 3) Installation of Electrical service, both on-site and connecting to a National Grid built supply; 4) Installation of a hydraulic control barrier around the 2.2 acre treatment zone; 5) Construction of in situ thermal remediation system to treat approximately 150,000 cubic yards of soil; 6) Construction of a Stormwater management area; 7) Collection and analysis of Confirmatory soil and Groundwater samples until treatment goals have been met, as specified in the Contract Documents; 8) In situ well field decommissioning, including but not limited to, offsite disposal of vapor mitigation cap, cutting and disposing of at least the top 10 ft of the heating wells; and 9) Site restoration, including restoration of a wetland, as shown on the Contract Drawings and as specified in Contract Documents;

ARTICLE 2 - Department Representatives

Andrew Guglieimi
Designated Representative
Andrew.Guglieimi@dec.ny.gov

Division of Environmental Remediation,
625 Broadway, 12th Floor
Albany, NY 12233-7017

Benjamin Rung
Section Chief
Benjamin.Rung@dec.ny.gov

Section A, Remedial Bureau E,
Division of Environmental Remediation,
625 Broadway, 12th Floor
Albany, NY 12233-7017

Elyse DuBois
Project Manager
Elyse.DuBois@dec.ny.gov

Section A, Remedial Bureau E,
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7017

Kristopher Keenan
Project Field Representative
Kristopher.Keenan@dec.ny.gov

Section A, Remedial Bureau E,
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7017

Jeffery Levesque
Engineer designated representative
Jeffery.Levesque@ramboll.com

Ramboll
333 West Washington Street
Syracuse NY, 13202

ARTICLE 3 - Pre-Bid Conference

A pre-Bid conference will be held on May 10, 2023, at the project site located at 107 Freemans Bridge Road, Glenville NY, at the time of 11:00 AM Eastern Standard Time 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, 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 the Pre-Bid Conference, attendance is mandatory as a condition of Bid.**

ARTICLE 4 - Additional Bid Submittals

Experience in performance of the Scope of Work (SOW) and in accordance with Section III, Article 17, Paragraph 4 (also refer to the experience requirements described below in this article), shall be demonstrated in writing and presented to the Department within five (5) days of Department's Notice of Apparent Low Bid per Section III, Article 5, (b).

Section III – Article 17 outlines the requirements for contractor experience in performance of the Scope of Work (SOW). For this contract, that experience shall be modified as follows:

The Bidder must have a minimum of five (5) years satisfactory experience in construction of the work to be performed. This experience must include the successful implementation of in-situ thermal remediation (ISTR) for projects with similar types of contaminants, in similar geology and using similar drilling techniques, and at similar scale(s) to the proposed work. The Bidder's experience should also demonstrate the ability to achieve the ISTR treatment objectives as specified in these Contract Documents. The bidder cannot meet the minimum experience requirements through the use of subcontractor(s). The SOW for this contract does include the excavation, transportation, and handling of contaminated soil on a limited scale; experience for this work can be met through the use of subcontractor(s).

ARTICLE 5 - Other Available Documents

The following items are available in the Limited Site Data Document for contractor's review in preparing the Bid:

Former Kenco Chemical Company, Operable Unit 02 - Source Area Remedial Investigation Report, February 27, 2015 (AECOM)

Former Kenco Chemical Company, Operable Unit 02 – In-Situ Thermal Remediation,
Remedial Design Report, March 2023 (Ramboll Americas Engineering Solutions, Inc.)

Record of Decision, Former Kenco Chemical Company, Operable Unit 02 - Source Area,
March 2015 (NYSDEC)

ARTICLE 6 - Subcontracting

The maximum subcontracting allowed for this contract is fifty percent (50%) unless a higher percentage is approved by Department in writing.

ARTICLE 7 - Type of Schedule

Contractor shall provide a Critical Path Method (CPM) type of schedule as described in Specification 01 32 16 - 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 – Wage Rates and Associated Contract Requirements.

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 30th. 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 (3) 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.

ARTICLE 9 – Bid Protest Guidelines

The intent and purpose of these guidelines is to set forth the procedure to be utilized when an interested party challenges a contract bid award solicited by the Division of Environmental Remediation and routed to the Office of the State Comptroller (OSC) for approval pursuant to the provisions of Section 112 of the State Finance Law.

The protestor is responsible for complying with the restrictions on “contacts” under the Procurement Lobbying Law (State Finance Law, Section 139-j). All protests must be submitted to the Designated Department Contact listed in the Contract Documents.

1. The bid protest must be submitted within ten (10) Business days of the Department’s Notification of Intent to Award letter being sent to the apparent low bidder.
2. The bid protest must be submitted in writing and must contain specific factual and/or legal allegations setting forth the basis on which the protesting party challenges the contract award. The notice of protest must be filed by the signatory of the bid or by an attorney representing the bidder. Any filing deadlines may be waived by the Department at its own discretion.
3. The Designated Department Contact will promptly submit the notice of protest, a bid protest summary and relevant bid documents to the Division of Management and Budget Services and the Office of General Counsel (OGC).
4. Once the formal notice of protest is filed, the Department, at its sole discretion, may continue or suspend the contract award process until the protest is resolved and a final Department determination is made.
5. As set forth in Section III, Article 17, of the Contract Documents, the 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.”

SECTION V

Bid Forms and Acknowledgements

ARTICLE 1(a) - Contract Bid Form and Acknowledgment for the Former Kenco Chemical Company, Inc., OU-02 In Situ Thermal Remediation Project.

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 appurtenances, 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 Section III - Bidding Information and Requirements, Article 5 - Required Bid Submittals.

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

Attention:	
Company Name:	
Street Address:	
City, State, Zip (+4):	
Email Address:	
Phone Number:	

BID (Page 1 of 2)
New York State Department of Environmental Conservation

Former Kenco Chemical Company, Inc.
OU-2 In Situ Thermal Remediation Project
Site Number: 447039
Glenville, Schenectady

Payment Item Number	Description	Unit	Estimated Quantity	Unit or Lump Sum Price		Total Amount (\$)
				Words	Figures	
LS-1	Revised Work Plan and Pre-Mobilization Activities	LS	-----			
LS-2	Mobilization and Demobilization	LS	-----			
LS-3	Site Preparation and ISTR System Construction	LS	-----			
LS-4	ISTR Primary Power Service Installation	LS	-----			
LS-5	ISTR Operations	LS	-----			
LS-6	Site Restoration	LS	-----			
LS-7	ISTR Power Usage	LS	-----			

LS-8	ISTR Natural Gas Usage	LS	-----			
LS-9	ISTR Potable Water Usage	LS	-----			
LS-10	ISTR Wastewater Discharge Fees	LS	-----			
LS-3A	ISTR Natural Gas Service Installation (Estimated National Grid Design/Construction Fee)	LS	-----	Fifty-Eight Thousand Four Hundred Forty-Three Dollars and Fifty-Three Cents	\$58,443.53	\$58,443.53
LS-4A	ISTR Primary Power Service Installation (Estimated National Grid Design/Construction Fee)	LS	-----	Nine Hundred Thirty-Eight Thousand Three Hundred Dollars	\$938,300.00	\$938,300.00

GRAND TOTAL BID: \$ _____ <div style="text-align: center;"><i>(Price in figures)</i></div>						

BID (Page 2 of 2)

Contractor Authorized Representative

Contractor Name

Date

ARTICLE 1(b) Bidder's/Proposer's Certification

Non-Collusive Bidding and Nondiscrimination in Employment in Northern Ireland MacBride Fair Employment Principles and State Ethics Law Principles and Procurement Lobbying Law

BY SUBMISSION OF THIS BID/PROPOSAL, 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:

A. 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.

B. MacBride Fair Employment Principles, State Finance Law §165(5)

- 1) it or any individual or legal entity in which the Bidder/Proposer holds a ten-percent (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.

Yes ☐ or No ☐ (check answer)

C. 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)

(Bidder/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 Joint Commission on Public Ethics, 540 Broadway, Albany, NY 12207 or by phone (518) 408-3976.

D. Procurement Lobbying Affirmation

The Undersigned 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).

Print Name, Title

Signature, Date

ARTICLE 1(c) – Bid Security (Page to Attach)

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

ARTICLE 1(d) - Bid Bond

Know all persons 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 Former Kenco Chemical Company Inc, OU-2 In Situ Thermal remediation Project, Contract No. D012803, Site No. 447039

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.

Corporate Seal(s) – Principal & Surety
(If no seal, write "No Seal" and sign)

By _____
Principal (Print Name and Title)

Principal (Signature and Date)

By _____
Surety (Print Name and Title)

Surety (Signature and 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 _____ (city, state), that he/she is
 the _____ (title) of _____ (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 that he/she signed his/her 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 BY PRINCIPAL -

State of)
County of) S.S.:

On the _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, 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.

(Seal)

Notary Public

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

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

Name: _____

Address: _____

Name and Title of Person Submitting this Form:

Name: _____

Title: _____

Contract Procurement Number: D012803

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?

Yes ☐ No ☐ (If yes, answer 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?

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?

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: Provide details under separate cover, endorse, date and provide marked as Supplement to Article 1(e).

ARTICLE 1(e) - Offerer Disclosure of Prior Non-Responsibility Determinations
(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?

Yes ☐ No ☐ (If yes, provide details below.)

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: Provide details under separate cover, endorse, date and provide marked as Supplement to Article 1(e).

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.

Signature: _____

Date: _____

Name: _____

Title: _____

This form must be signed by an authorized executive or legal representative and returned with the bid/proposal.

ARTICLE 1(f) – Vendor Assurance of No Conflict of Interest or Detrimental Effect
(Page 1 of 2)

The Firm offering to provide services pursuant to this Procurement/Contract, as a contractor, joint venture contractor, subcontractor, or consultant, attests that its performance of the services outlined in this Procurement/Contract does not and will not create a conflict of interest with nor position the Firm to breach any other contract currently in force with the State of New York.

Furthermore, the Firm attests that it will not act in any manner that is detrimental to any State project on which the Firm is rendering services. Specifically, the Firm attests that:

1. The fulfillment of obligations by the Firm, as proposed in the response, does not violate any existing contracts or agreements between the Firm and the State;
2. The fulfillment of obligations by the Firm, as proposed in the response, does not and will not create any conflict of interest, or perception thereof, with any current role or responsibility that the Firm has with regard to any existing contracts or agreements between the Firm and the State;
3. The fulfillment of obligations by the Firm, as proposed in the response, does not and will not compromise the Firm's ability to carry out its obligations under any existing contracts between the Firm and the State;
4. The fulfillment of any other contractual obligations that the Firm has with the State will not affect or influence its ability to perform under any contract with the State resulting from this Procurement;
5. During the negotiation and execution of any contract resulting from this Procurement, the Firm will not knowingly take any action or make any decision which creates a potential for conflict of interest or might cause a detrimental impact to the State as a whole including, but not limited to, any action or decision to divert resources from one State project to another;
6. In fulfilling obligations under each of its State contracts, including any contract which results from this Procurement, the Firm will act in accordance with the terms of each of its State contracts and will not knowingly take any action or make any decision which might cause a detrimental impact to the State as a whole including, but not limited to, any action or decision to divert resources from one State project to another;
7. No former officer or employee of the State who is now employed by the Firm, nor any former officer or employee of the Firm who is now employed by the State, has played a role with regard to the administration of this contract procurement in a manner that may violate section 73(8)(a) of the State Ethics Law; and

ARTICLE 1(f) – Vendor Assurance of No Conflict of Interest or Detrimental Effect
(Page 2 of 2)

8. The Firm has not and shall not offer to any employee, member or director of the State any gift, whether in the form of money, service, loan, travel, entertainment, hospitality, thing or promise, or in any other form, under circumstances in which it could reasonably be inferred that the gift was intended to influence said employee, member or director, or could reasonably be expected to influence said employee, member or director, in the performance of the official duty of said employee, member or director or was intended as a reward for any official action on the part of said employee, member or director.

Firms responding to this Procurement/Contract should note that the State recognizes that conflicts may occur in the future because a Firm may have existing or new relationships.

The State will review the nature of any such new relationship and reserves the right to terminate the contract for cause if, in its judgment, a real or potential conflict of interest cannot be cured.

Signature: _____

Date: _____

Name: _____

Title: _____

This form must be signed by an authorized executive or legal representative and returned with the bid/proposal.

ARTICLE 1(g) - Sexual Harassment Prevention Certification Form

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of section two hundred one-g of the labor law.

Company Name:_____

Signature:_____

Print Name and Title:_____

Date:_____

If the above certification cannot be made, the bidder must submit a signed statement below detailing the reasons why the certification cannot be made.

Company Name:_____

Signature:_____

Print Name and Title:_____

Date:_____

Article 1 (h) - Certification Under Executive Order No. 16 - Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia

Executive Order No. 16 provides that “all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia.” The complete text of Executive Order No. 16 can be found [here](#).

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Executive Order No. 16, an “entity conducting business operations in Russia” means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is Vendor an entity conducting business operations in Russia, as defined above? Please answer by checking one of the following boxes:

- ☐ 1. No, Vendor does not conduct business operations in Russia within the meaning of Executive Order No. 16.
- ☐ 2.a. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion.)
- ☐ 2.b. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extent necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being provided or the relevant laws, regulations, etc.)
- ☐ 3. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor's business and operations and that the answer provided herein is true to the best of their knowledge and belief.

Vendor Name (legal entity): _____

By (signature): _____

Name (printed): _____

Title: _____

Date: _____

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

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

We have reviewed the Bid of:

(Contractor)

Having its place of business at:

(Address)

For the Project:

Bids for which will be received on _____ (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, the undersigned, are duly licensed to do business in the State of New York.

Attest, and Attach Power of Attorney:

Corporate Seal

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

Surety Name, Title

Surety's Authorized Signature(s), Date

**Telephone Number and email address for
Bonding Company**

**Telephone Number and email address for
Bonding Broker**

Article 2(b) - M/WBE-EEO Utilization Plan and Work Force Utilization

Contractor must submit M/WBE-EEO Utilization Plan after being issued Notice of Intent to Award in accordance with Article 5c. of Section III. Quarterly reporting is required throughout the term of the contract and Contractors will receive quarterly reminders from the M/WBE-EEO compliance unit.

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
625 Broadway, 10th Floor
Albany, New York 12233-5028

Contractors opting to file electronic forms can obtain the appropriate forms from the website. The Contractor will be able to amend the forms either online, through the quarterly report process, or by contacting the M/WBE-EEO compliance specialist.

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 <https://ny.newnycontracts.com/>. 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 (855)-ESD-4MWBE or (855)-373-4692.

Article 2 (c) - 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:

NYS Department of Environmental Conservation
Division of Environmental Remediation
Elyse DuBois, Project Manager
625 Broadway, 12th Floor
Albany, New York 12233-7017

Article 2 (d) – Authorizing Resolution

The Contractor is required to submit an Authorizing Resolution stating that a certain individual has the authority to sign the Contract on behalf of the firm.

ARTICLE 2(e) – Executive Order No. 177 Certification

The New York State Human Rights Law, Article 15 of the Executive Law, prohibits discrimination and harassment based on age, race, creed, color, national origin, sex, pregnancy or pregnancy-related conditions, sexual orientation, gender identity, disability, marital status, familial status, domestic violence victim status, prior arrest or conviction record, military status or predisposing genetic characteristics.

The Human Rights Law may also require reasonable accommodation for persons with disabilities and pregnancy-related conditions. A reasonable accommodation is an adjustment to a job or work environment that enables a person with a disability to perform the essential functions of a job in a reasonable manner. The Human Rights Law may also require reasonable accommodation in employment on the basis of Sabbath observance or religious practices.

Generally, the Human Rights Law applies to:

all employers of four or more people, employment agencies, labor organizations and apprenticeship training programs in all instances of discrimination or harassment; employers with fewer than four employees in all cases involving sexual harassment; and, any employer of domestic workers in cases involving sexual harassment or harassment based on gender, race, religion or national origin.

In accordance with Executive Order No. 177, the Bidder hereby certifies that it does not have institutional policies or practices that fail to address the harassment and discrimination of individuals on the basis of their age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status under the Human Rights Law. Executive Order No. 177 and this certification do not affect institutional policies or practices that are protected by existing law, including but not limited to the First Amendment of the United States Constitution, Article 1, Section 3 of the New York State Constitution, and Section 296(11) of the New York State Human Rights Law.

Contractor: _____

Signature: _____

Name: _____

Title: _____

Date: _____

ARTICLE 3(a) - Instructions for Insurance

Please refer to Contract Documents Section VIII, Article 4, and any Addenda if applicable, for the types and amounts of insurance required for this contract, as well as the necessary forms and endorsement requirements.

Bidders should:

1. Request that your insurance provider note the Department's specific contract number D012803 in the Description of Operations box on the ACORD form.
2. List the following address on the Workers' Compensation and Disability Benefits Certificates as Entity Requesting Proof of Coverage and on the ACORD forms and endorsements as the Certificate Holder:

State of New York and the NYS Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau E
Elyse DuBois, Project Manager
625 Broadway, 12th Floor
Albany, NY 12233-7017

3. Submit all required insurance certificates and applicable endorsements to the following address:

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

ARTICLE 3(b) - 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)
- 4) Performance Bond and Labor and Materials Payment Bond must be secured by the surety and notarized within three (3) days of the date the Contractor signs the agreement.

ARTICLE 3(c) - Performance Bond (page 1 of 3)

Date Bond Executed: _____

NYSDEC-DER Site Number: _____

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 Numbers)

Know all persons by these presents, that we, the **Principal** and **Surety**, above named, are held and firmly bound unto the New York State 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.

ARTICLE 3(c) - Performance Bond (page 2 of 3)

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 authorized officers 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)

Principal Organization

By _____
Print Name, Title

Signature, Date

Surety

Business Address

By _____
Print Name, Title

Corporate Seal of Surety Company

Signature, Date

Attest _____
Print Name, Title

Signature, Date

ARTICLE 3(c) - Performance Bond (page 3 of 3)

- ACKNOWLEDGMENT BY SURETY COMPANY -

State of _____)
S.S.:
County of _____)

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 _____ (city, state), that he/she is the _____ (title) of _____ (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 that he/she signed his/her 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 BY PRINCIPAL -

State of _____)
S.S.:
County of _____)

On the _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, 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.

(Seal)

Notary Public

ARTICLE 3(d) - Labor and Material Payment Bond (page 1 of 3)

Date Bond Executed: _____

NYSDEC-DER Site Number: _____

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 Numbers)

Know all persons 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

ARTICLE 3(d) - Labor and Material Payment Bond (page 2 of 3)

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 authorized officers 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)

Principal Organization

By _____
Print Name, Title

Signature, Date

Surety

Business Address

By _____
Print Name, Title

Corporate Seal of Surety Company

Signature, Date

Attest _____
Print Name, Title

Signature, Date

ARTICLE 3(e) – SDVOB Utilization Plan

Contractor must submit a Service-Disabled Veteran-Owned Business (SDVOB) Utilization Plan after being issued a Notice of Intent to Award in accordance with Section III, Article 5(c). Quarterly reporting is required throughout the term of the contract.

For additional information regarding the SDVOB Utilization Plan and quarterly reporting including information on how to obtain the forms, the contractor should contact the Department's SDVOB lead at:

SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway, 10th Floor
Albany, NY 12233-1080

Phone: 518-402-9240
Email: sdvob@dec.ny.gov

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, _____ (Bidder name)

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

a partnership, consisting of _____,

an individual conducting business as _____,

hereinafter called "Contractor", the location of whose principal office is,

_____.

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
Division of Environmental Remediation
Site Name: Former Kenco Chemical Company, Inc.
Contract No. D012803
Date: April 2023

ARTICLE 3 - Engineer

Ramboll Americas Engineering Solutions, Inc. (Ramboll) 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:

- 4.1 Appendices A, B, C & D
- 4.2 Engineer's written clarifications and interpretations
- 4.3 Change Orders
- 4.4 Administrative Agreements
- 4.5 Field Orders
- 4.6 Proposed Change Orders signed by Department
- 4.7 Approved Shop Drawings
- 4.8 Addenda
- 4.9 Agreement (including all Appendices)
- 4.10 Measurement for Payment
- 4.11 Bid Forms and Attachments Exclusive of Bonds and Insurance Certificates
- 4.12 Drawings, Plans
- 4.13 Supplementary Specifications
- 4.14 Supplementary Conditions
- 4.15 Standard Specifications
- 4.16 General Conditions
- 4.17 Supplementary Bidding Information and Requirements
- 4.18 Bidding Information and Requirements
- 4.19 Terms and Definitions
- 4.20 Advertisement
- 4.21 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.
- 5.7 General Responsibility: The Contractor shall at all times during the Contract term remain responsible. The Contractor agrees, if requested by the Commissioner or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity. Additional responsibilities required of the 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, are specified within the provisions of Article 5 of the General Conditions.

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 **One Thousand and Forty One days (1.041) 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 **One Thousand one Hundred and Six days (1.106) calendar days** from the Effective Date of the Agreement, plus twenty (20) calendar days

- 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 **Four Thousand Six Hundred Eighty One dollars and Ninety One cents (\$4,681.91)** 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 **Four Thousand Three Hundred Twenty Four dollars and Ninety One cents (\$4,324.91)** for each day that expires after the Contract Time specified in paragraph 6.3 above for completion and readiness for final 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 6.2 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.

Payments for expenditures incurred under this contract will be rendered electronically to the **Recipient/Contractor/Vendor** unless payment by paper check is expressly authorized by the Commissioner of the Department (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 **Recipient/Contractor/Vendor** shall comply with the **Office of the State Comptroller's (OSC's)** procedures to authorize electronic payments. Authorization forms are available at the **OSC's** website at www.osc.state.ny.us/epay/index.htm, by e-mail at epunit@osc.state.ny.us or by telephone at (518) 474-4032. The **Recipient/Contractor/Vendor** acknowledges that it will not receive payment under this **Contract** if it does not comply with the **OSC's** electronic 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.
- 12.6 Termination for Non-Responsibility: Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate Department officials or staff, the Contract may be terminated by the Commissioner, or his or her designee, at the Contractor's expense where the Contractor is determined by the Commissioner, or his or her designee, to be non-responsible. In such event, the Commissioner, or his or her designee, may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for breach.
- 12.7 Suspension of Work (for Non-Responsibility): The Commissioner, or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls into question the responsibility of the Contractor. In the event of such suspension, the Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the Commissioner, or his or her designee, issues a written notice authorizing a resumption of performance under the Contract.

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.

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Michael J. Cruden, Director - Remedial Bureau E
625 Broadway, 12th Floor
Albany, New York 12233-7017**

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 documents and data are to be submitted in electronic format to the Engineer and Department. The Engineer/Department will not approve a final report unless, and until, all documents and data generated in support of that report have been submitted in accordance with the electronic submission protocols. Information on the format of data submissions can be found at:

<http://www.dec.ny.gov/chemical/62440.html>. Information on document submissions can be found at: <http://www.dec.ny.gov/regulations/2586.html>.

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 (6) years. The six- (6-) year period shall commence to run as of the date of final payment.

ARTICLE 18 - Effective Date

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

ARTICLE 19 – Vendor Responsibility

The Department recommends that vendors file a required Vendor Responsibility Questionnaire online via the New York State VendRep System. 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/vendor-index.htm> or go directly to the VendRep System online at <https://portal.osc.state.ny.us> .

Vendors must provide their New York State Identification Number when enrolling. To request assignment of a Vendor ID or for VendRep System assistance, contact the Office of the State Comptroller's Help Desk at 866-370-4672 or 518-408-4672 or by email at: ciohelpdesk@osc.state.ny.us. Vendors opting to complete and submit a paper questionnaire can obtain the appropriate questionnaire from the VendRep website www.osc.state.ny.us/vendrep or may

contact the Department of the Office of the State Comptroller's Help Desk for a copy of the paper form.

ARTICLE 20 - 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 Agreement, is the total of:

Bid

\$ _____ (Express Sum in Words)

\$ _____ (Express Sum in Numbers)

Plus/Minus executed change order(s)

SIGNATURE PAGE

IN WITNESS WHEREOF, this Contract has been duly executed by the parties hereto on the day and year appearing following their respective signatures.

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."

CONTRACTOR SIGNATURE
By:
Print Name:
Title:
Dated:

DEPARTMENT SIGNATURE
By:
Print Name:
Title:
Dated:

<p>Contractor Acknowledgement</p> <p>State of _____)</p> <p>County of _____) ss.:</p> <p>On the _____ day of _____ in the year _____, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(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.</p> <p>_____ Notary Public</p>

ATTORNEY GENERAL SIGNATURE
Approved as to Form:
Dated:

COMPTROLLER SIGNATURE
Approved: Thomas P. DiNapoli State Comptroller
Dated:

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SECTION VI

Agreement – Attachment A

As referenced in Article 6.2 of the Agreement, separable parts of the Work and associated completion dates are identified below:

1. Part A: The Contractor shall complete all work required for hydraulic control barrier/sheet pile installation, ISTR Well-field drilling, cap installation and ISTR above-grade equipment vapor/liquid treatment systems installation within four hundred and twenty seven (427) calendar days from the Effective Date of the Agreement, plus twenty (20) calendar days. Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of **four thousand six hundred eighty one dollars and ninety one cents (\$4,681.91)** for each day that expires after the Contract Time specified herein.
2. Part B: The Contractor shall complete all work required to allow for completion of start-up and testing activities and initiation of full-scale ISTR heating operations no later than five hundred and sixty one (561) calendar days from the Effective Date of the Agreement, plus twenty (20) calendar days. Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of **four thousand six hundred eighty one dollars and ninety one cents (\$4,681.91)** for each day that expires after the Contract Time specified herein.
3. Part C: The Contractor shall complete all ISTR heating operations, including post-treatment verification sampling, no later than eight hundred and twenty (820) calendar days from the Effective Date of the Agreement, plus twenty (20) calendar days. Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of **four thousand six hundred eighty one dollars and ninety one cents (\$4,681.91)** for each day that expires after the Contract Time specified herein.

SECTION VII

Appendices A, B, C & D

APPENDIX A

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

PLEASE RETAIN THIS DOCUMENT
FOR FUTURE REFERENCE.

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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 \$25,000, 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 § 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, nor subject any individual to harassment, because of age, race, creed, color, national origin, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. 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 (2 NYCRR § 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 Part 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 clause. 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
<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)-(p)) 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, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5))) require that they be denied contracts which they would otherwise obtain. NOTE: As of October 2019, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.

22. COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law § 899-aa and State Technology Law § 208) and commencing March 21, 2020 shall also comply with General Business Law § 899-bb.

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 §§ 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law §§ 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 § 5-a, if the contractor fails to make the certification required by Tax Law § 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.

26. IRAN DIVESTMENT ACT. By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <https://ogs.ny.gov/list-entities-determined-be-non-responsive-biddersofferers-pursuant-nys-iran-divestment-act-2012>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

27. ADMISSIBILITY OF REPRODUCTION OF CONTRACT. Notwithstanding the best evidence rule or any other legal principle or rule of evidence to the contrary, the Contractor acknowledges and agrees that it waives any and all objections to the admissibility into evidence at any court proceeding or to the use at any examination before trial of an electronic reproduction of this contract, in the form approved by the State Comptroller, if such approval was required, regardless of whether the original of said contract is in existence.

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:

Michael Cruden, Director, Bureau E

(Name and Title)

NYS Dept of Env. Conservation - Env. Remediation
625 Broadway, 12th Floor, Albany, NY 12233-7012

(Address)

(518) 402-9764

(Telephone)

The designated appeal individual to review decisions is:

Janette Brown, Asst. Division Director

(Name and Title)

NYS Dept of Env. Conservation - Env. Remediation
625 Broadway, 12th Floor, Albany, NY 12233-7012

(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, 10th Floor
Albany, NY 12233-5010
Telephone: (518) 402-9228

(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) 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.

(k) 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.
- (4) 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

(a) General Provisions

(1)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.

(2)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.

(3)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.

(b) Contract Goals

(1) For purposes of this procurement, the Department hereby establishes an overall goal of 30% for Minority and Women-Owned Business Enterprises (“MWBE”) participation, (based on the current availability of qualified MBEs and WBEs).

(2) 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;

<https://ny.newnycontracts.com>

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.

(3) 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.

(c) Equal Employment Opportunity (EEO)

(1) 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:

(i) 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.

(ii) 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.

(iii) 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.

(iv) 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 0% Minority Labor Force Participation, 0% Female Labor Force Participation.

(2) 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.

(3) Workforce Employment Utilization Report Form ("Workforce Report")

- (i) 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.
- (ii) Separate forms shall be completed by Contractor and any subcontractor performing work on the Contract.

- (iii) 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.

- (2) 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.

(d) MWBE Utilization Plan

- (1) 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.
- (2) 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.
- (3) 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.

(e) Waivers

- (1) For Waiver Requests Contractor should use Waiver Request Form.

(2) 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.

(4) 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.

(f) 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.

(g) Liquidated Damages - MWBE Participation

(1) 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.

(2) Such liquidated damages shall be calculated as an amount equaling the difference between:

- (i) All sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and
- (ii) All sums actually paid to MWBEs for work performed or materials supplied under the Contract.

(3) 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.

(h) 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>

Appendix C

Standard Clauses for Ethics in all NYSDEC 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 "Offeror" herein refers to any party submitting an application, bid, proposal, or other documents in response to this procurement. The word "Contractor" herein refers to any party to the contract, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. Conflict of Interest

A. Procurement Phase:

1. An Offeror will disclose any existing or contemplated relationship with any other person or entity, including relationships with any member, shareholders of 5% or more, parent, subsidiary, or affiliated firm, which would constitute an actual or potential conflict of interest or appearance of impropriety, relating to other clients/customers of the Offeror or former officers and employees of the Agencies and their Affiliates, in connection with the Offeror rendering services enumerated in this procurement. If a conflict does or might exist, the Offeror will describe how the Offeror would eliminate or prevent it. This description will include, but not be limited to what procedures will be followed to detect, notify the Agencies of, and resolve any such conflicts.
2. The Offeror must disclose whether it, or any of its members, shareholders of 5% or more, parents, affiliates, or subsidiaries, have been the subject of any investigation or disciplinary action by the New York State Joint Commission on Public Ethics or its predecessor State entities (collectively, "Commission"), and if so, a brief description must be included in the Offeror's response indicating how any matter before the Commission was resolved or whether it remains unresolved.
3. The Offeror/Contractor has provided a form (Vendor Assurance of No Conflict of Interest or Detrimental Effect attached hereto as **Attachment 4**), signed by an authorized executive or legal representative attesting that the Offeror's/Contractor's performance of the services does not and will not create a conflict of interest with, nor position the Offeror/Contractor to breach any other contract currently in force with the State of New York, that the Offeror/Contractor will not act in any manner that is detrimental to any State project on which the Offeror/Contractor is rendering services.

B. Contract Phase:

1. The Contractor hereby reaffirms the attestations made in its proposal and covenants and represents that there is and shall be no actual or potential conflict of interest that could prevent the Contractor's satisfactory or ethical performance of duties required to be performed pursuant to the terms of this contract. The Contractor shall have a duty to notify the Department immediately of any actual or potential conflicts of interest.

2. In conjunction with any subcontract under this contract, the Contractor shall obtain and deliver to the Department, prior to entering into a subcontract, a Vendor Assurance of No Conflict of Interest or Detrimental Effect form, signed by an authorized executive or legal representative of the subcontractor. The Contractor shall also require in any subcontracting agreement that the subcontractor, in conjunction with any further subcontracting agreement, obtain and deliver to the Department a signed and completed Vendor Assurance of No Conflict of Interest or Detrimental Effect form for each of its subcontractors prior to entering into a subcontract.
3. The Department and the Contractor recognize that conflicts may occur in the future because the Contractor may have existing or establish new relationships. The Department will review the nature of any relationships and reserves the right to terminate this contract for any reason, or for cause, if, in the judgment of the Department, a real or potential conflict of interest cannot be cured.
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 prior 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.
5. The Department may terminate this contract in whole or in part, if it deems such termination necessary to avoid a 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 allowed by law or other applicable provisions of this contract regarding termination.
6. 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.
7. ***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.***

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.

- a. 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.

- b. 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.

II. PUBLIC OFFICERS LAW

Contractors, consultants, vendors, and subcontractors may hire former State Agency or Authority employees. However, as a general rule and in accordance with New York Public Officers Law, former employees of the State Agency or Authority may neither appear nor practice before the State Agency or Authority, nor receive compensation for services rendered on a matter before the State Agency or Authority, for a period of two years following their separation from State Agency or Authority service. In addition, former State Agency or Authority employees are subject to a "lifetime bar" from appearing before the State Agency or Authority or receiving compensation for services regarding any transaction in which they personally participated or which was under their active consideration during their tenure with the State Agency or Authority.

III. ETHICS REQUIREMENTS

The Contractor and its subcontractors shall not engage any person who is, or has been at any time, in the employ of the State to perform services in violation of the provisions of the New York Public Officers Law, other laws applicable to the service of State employees, and the rules, regulations, opinions, guidelines or policies promulgated or issued by the New York State Joint Commission on Public Ethics, or its predecessors (collectively, the "Ethics Requirements").

The Contractor certifies that all of its employees and those of its subcontractors who are former employees of the State and who are assigned to perform services under this contract shall be assigned in accordance with all Ethics Requirements. During the Term, no person who is employed by the Contractor or its subcontractors and who is disqualified from providing services under this contract pursuant to any Ethics Requirements may share in any net revenues of the Contractor or its subcontractors derived from this Contract. The Contractor shall identify and provide the State with notice of those employees of the Contractor and its Subcontractors who are former employees of the State that will be assigned to perform services under this Contract, and make sure that such employees comply with all applicable laws and prohibitions.

The State may request that the Contractor provide it with whatever information the State deems appropriate about each such person's engagement, work cooperatively with the State to solicit advice from the New York State Joint Commission on Public Ethics, and, if deemed appropriate by the State, instruct any such person to seek the opinion of the New York State Joint Commission on Public Ethics. The State shall have the right to withdraw or withhold approval of any subcontractor if utilizing such subcontractor for any work performed hereunder would be in conflict with any of the Ethics Requirements. The State

shall have the right to terminate this Contract at any time if any work performed hereunder is in conflict with any of the Ethics Requirements.

IV. SUBCONTRACTING

The Contractor agrees not to subcontract any of its services, unless as indicated in its proposal, without the prior written approval of the Department. Approval shall not be unreasonably withheld upon receipt of written request to subcontract.

The Contractor may arrange for a portion/s of its responsibilities under this Contract to be subcontracted to qualified, responsible subcontractors, subject to prior approval of the Department. If the Contractor decides to subcontract a portion of the services, the subcontractors must be clearly identified and the nature and extent of its involvement in and/or proposed performance under this contract must be fully explained by the Contractor to the Department. As part of this explanation, the subcontractor must submit to the Department a completed Vendor Assurance of No Conflict of Interest or Detrimental Effect form, as required by the Contractor prior to execution of this contract.

The Contractor retains ultimate responsibility for all services performed under the contract.

All subcontracts shall be in writing and shall contain provisions, which are functionally identical to, and consistent with, the provisions of this contract including, but not limited to, the body of this contract, Appendix A – Standard Clauses for New York State Contracts, Appendix B – Standard Clauses for All New York State Department of Environmental Conservation Contracts, Appendix C - Standard Clauses for Ethics in all New York State Department of Environmental Conservation Contracts, and the Solicitation Document.

Unless waived in writing by the Department, all subcontracts between the Contractor and subcontractors shall expressly name the State, through the Department, as the sole intended third party beneficiary of such subcontract. The Department reserves the right to review and approve or reject any subcontract, as well as any amendment to said subcontract(s), and this right shall not make the Department or the State a party to any subcontract or create any right, claim, or interest in the subcontractor or proposed subcontractor against the Department.

The Department reserves the right, at any time during the term of the contract, to verify that the written subcontract between the Contractor and subcontractors is in compliance with all of the provisions of this Section and any subcontract provisions contained in this contract. The Contractor shall give the Department immediate notice in writing of the initiation of any legal action or suit which relates in any way to a subcontract with a subcontractor or which may affect the performance of the Contractor's duties under the contract. Any subcontract shall not relieve the Contractor in any way of any responsibility, duty and/or obligation of the contract.

If at any time during performance under this contract total compensation to a subcontractor exceeds or is expected to exceed \$100,000, or as otherwise requested by the Department that subcontractor shall be required to submit and certify a Vendor Responsibility Questionnaire.

APPENDIX **D**

Participation Opportunities for New York State Certified Service-Disabled Veteran Owned Businesses (SDVOB)

PLEASE RETAIN THIS DOCUMENT
FOR FUTURE REFERENCE

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Appendix D

PARTICIPATION OPPORTUNITIES FOR NEW YORK STATE CERTIFIED SERVICE-DISABLED VETERAN-OWNED BUSINESSES

Veterans' Services Law article 3 provides for more meaningful participation in public procurement by certified Service-Disabled Veteran-Owned Businesses ("SDVOB"), thereby further integrating such businesses into New York State's economy. the Department recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Department contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Bidders are expected to consider SDVOBs in the fulfillment of the requirements of the Contract. Such participation may be as subcontractors or suppliers, as protégés, or in other partnering or supporting roles.

The following link includes additional information regarding the responsibilities associates with the Department's SDVOB program: <https://www.dec.ny.gov/about/61016.html#SDVOB>

I. Contract Goals

- A. The Department hereby establishes an overall goal of _____% for SDVOB participation, based on the current availability of qualified SDVOBs. For purposes of providing meaningful participation by SDVOBs, the Bidder/Contractor should contact the Department's SDVOB lead with questions regarding compliance with SDVOB participation goals at:

Mark Krisanda

Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development

New York State Department of Environmental Conservation

625 Broadway – 10th Floor, Albany, NY 12233-1080

Phone #: (518) 402-9240

sdvob@dec.ny.gov

or reference the directory of New York State Certified SDVOBs found at: <https://online.ogs.ny.gov/SDVOB/search> Additionally, following Contract execution, Contractor is encouraged to contact the Office of General Services' Division of Service-Disabled Veterans' Business Development at 518-474-2015 or <https://ogs.ny.gov/veterans> to discuss additional methods of maximizing participation by SDVOBs on the Contract.

- B. Contractor must document "good faith efforts" to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract (see clause IV below).

II. SDVOB Utilization Plan

- A. Pursuant to 9 NYCRR § 252.2(i), Contractors are required to submit a completed SDVOB Utilization Plan on Form SDVOB 100 prior to contract execution.
- B. The Utilization Plan shall list the SDVOBs that the Bidder intends to use in the performance of the Contract, a description of the work that the Bidder intends the SDVOB to perform to meet the goals on the Contract, the estimated dollar amounts to be paid to an SDVOB, or, if not known, an estimate of the percentage of Contract work the SDVOB will perform. By signing the Utilization Plan, the Bidder acknowledges that making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by SDVOBs after the Contract award and during the term of the Contract must be reported on a revised SDVOB Utilization Plan and submitted to the Department.
- C. The Department will review the submitted SDVOB Utilization Plan and advise the Bidder/Contractor of the Department's acceptance or issue a notice of deficiency within 20 days of receipt.
- D. If a notice of deficiency is issued, Bidder/Contractor agrees that it shall respond to the notice of deficiency, within seven (7) business days of receipt, by submitting to the Department, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by the Department to be inadequate, the Department shall notify the Bidder/Contractor and direct the Bidder/Contractor to submit, within five business days of notification by the Department, a request for a partial or total waiver of SDVOB participation goals on SDVOB 200. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.
- E. The Department may disqualify a Bidder's bid or proposal as being non-responsive under the following circumstances:
 - (a) If a Bidder fails to submit an SDVOB Utilization Plan;
 - (b) If a Bidder fails to submit a written remedy to a notice of deficiency;
 - (c) If a Bidder fails to submit a request for waiver; or
 - (d) If the Department determines that the Bidder has failed to document good faith efforts.
- F. If awarded a Contract, Contractor certifies that it will follow the submitted SDVOB Utilization Plan for the performance of SDVOBs on the Contract pursuant to the prescribed SDVOB contract goals set forth above.
- G. Contractor further agrees that a failure to use SDVOBs as agreed in the Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, the Department shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsibility.

III. Request for Waiver

- A. **Prior to submission of a request for a partial or total waiver, Bidder/Contractor shall speak to the Department's Designated Contacts for guidance.**

- B. Pursuant to 9 NYCRR § 252.2(m), a Bidder/Contractor that is able to document good faith efforts to meet the goal requirements, as set forth in clause IV below, may submit a request for a partial or total waiver on Form SDVOB 200, accompanied by supporting documentation. A Bidder may submit the request for waiver at the same time it submits its SDVOB Utilization Plan. If a request for waiver is submitted with the SDVOB Utilization Plan and is not accepted by the Department at that time, the provisions of clauses II (C), (D) & (E) will apply. If the documentation included with the Bidder's/Contractor's waiver request is complete, the Department shall evaluate the request and issue a written notice of acceptance or denial within 20 days of receipt.
- C. Contractor shall attempt to utilize, in good faith, the SDVOBs identified within its SDVOB Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract award may be made at any time during the term of the Contract to the Department, but must be made no later than prior to the submission of a request for final payment on the Contract.
- D. If the Department, upon review of the SDVOB Utilization Plan and Monthly SDVOB Compliance Report (SDVOB 101) 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 business days of receipt. Such response may include a request for partial or total waiver of SDVOB contract goals.

Waiver requests should be sent to:

Mark Krisanda
Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway – 10th Floor, Albany, NY 12233-1080
Phone #: (518) 402-9240
sdvob@dec.ny.gov

IV. Required Good Faith Efforts

Pursuant to 9 NYCRR § 252.2(n), Contractors must document their good faith efforts toward utilizing SDVOBs on the Contract. Evidence of required good faith efforts shall include, but not be limited to, the following:

- (1) Copies of solicitations to SDVOBs and any responses thereto.
- (2) Explanation of the specific reasons each SDVOB that responded to Bidders/Contractors' solicitation was not selected.
- (3) Information describing the specific steps undertaken to reasonably structure the Contract scope of work for the purpose of subcontracting with, or obtaining supplies from, certified SDVOBs.
- (4) Other information deemed relevant to the waiver request.

V. Quarterly SDVOB Contractor Compliance Report

Pursuant to 9 NYCRR § 252.2(q), the Contractor is required to report quarterly SDVOB Contractor Compliance to the Department during the term of the Contract for the preceding month's activity, documenting progress made towards achieving the Contract SDVOB goals. This information must be submitted using form SDVOB 101 distributed by the Department's SDVOB program and should be completed by the Contractor and submitted to the Department, by the 20th day of October, January, April, and July during the term of the Contract, for that quarter's activity to:

Mark Krisanda
Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway – 10th Floor, Albany, NY 12233-1080
Phone #: (518) 402-9240
sdvob@dec.ny.gov

VI. Breach of Contract and Damages

Pursuant to 9 NYCRR § 252.2(s), any Contractor found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, shall be found to have breached the contract and Contractor shall pay damages as set forth therein.

SECTION VIII

General Conditions

ARTICLE 1 - Preliminary Matters

Copies of Documents:

- 1.1 Department shall furnish to Contractor without charge up to five (5) 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 (20) 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 – *Contractor's Responsibilities* 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 ten (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 (3) 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 (3) 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 (3) 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 (20) 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, Design Engineer, 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 New York State licensed 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 the 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 3.5 and 3.6) 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 3.9 and 3.10, 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.

Physical Conditions - Underground Facilities Shown or Indicated:

- 3.5 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:
- 3.5.1 Department shall not be responsible for the accuracy or completeness of any such information or data; and,
 - 3.5.2 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.

- 3.5.3 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 (30) 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 (30) 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 (15) 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.
- 3.5.4 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 on structures.
- 3.5.5 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, and satisfactory fulfillment of applicable permits, fees, or requirements of the proposed action.

Underground Facilities Not Shown or Indicated:

- 3.6 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 5.23), 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.
- 3.6.1 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 3.6. Further, up to thirty (30) 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.

- 3.6.2 No claim by Contractor under paragraph 3.6 of the General Conditions will be allowed unless more than thirty (30) days has elapsed and 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen (15) 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:

- 3.7 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, Contractor shall, immediately after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 5.23), 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.
- 3.8 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.
- 3.9 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."
- 3.10 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.
- 3.11 No claim by Contractor under paragraph 3.10 of the General Conditions will be allowed unless: 1) Contractor has given the written notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen (15) 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.

- 3.12 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 3.8, and Department's issuance of a Change Order or a Proposed Change Order as described in paragraph 3.9 in connection with a report of differing conditions. Further, a reasonable interval of time, not less than thirty (30) 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 (30) days is used, no claim will be allowed unless (1) Contractor has given the written notice required in paragraph 3.7 of the General Conditions, and (2) within fifteen (15) 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. 447039".

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 The Contractor shall be required to procure, at their sole cost and expense, and shall maintain in force at all times during the term of any Contract resulting from this solicitation, policies of insurance as required herein. All insurance required herein shall be written by companies that have an A.M. Best Company rating of "A-," Class "VII" or better. In addition, companies writing insurance intended to comply with the requirements herein should be licensed or authorized by the New York State Department of Financial Services to issue insurance in the State of New York. The Department may, in its sole discretion, accept policies of insurance written by a non-authorized carrier or carriers when certificates and/or other policy documents are accompanied by a completed Excess Lines Association of New York (ELANY) affidavit or other documents demonstrating the company's strong financial rating. If, during the term of a policy, the carrier's A.M. Best rating falls below "A-," Class "VII," the insurance must be replaced, on or before the renewal date of the policy, with insurance that meets the requirements above.

The Contractor shall furnish to the Department a certificate or certificates with the appropriate endorsements showing that it has complied with this Article. The insurance documentation shall provide that:

- a. Liability and protective liability insurance policies shall provide primary and non-contributory coverage to the NYS Department of Environmental Conservation for any claims arising from the Contractor's Work under this contract, or as a result of the Contractor's activities. Insurance policies will not be accepted that:
 - o remove or restrict blanket contractual liability located in the "insured contract" definition (as stated in Section V, Number 9, Item f in the ISO CGL policy) so as to limit coverage against claims that arise out of work; or
 - o remove or modify the "insured contract" exception to the employers liability exclusion; or
 - o do not cover the additional insured for claims involving injury to employees of the named insured or subcontractors.
- b. The Contractor shall provide fully completed ACORD 855 New York Construction Certificate of Liability Insurance Addendum along with specified General Liability certificate and accompanying endorsements.
- c. The State of New York, NYS Department of Environmental Conservation, its officers, agents and employees, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7017 shall be listed as Certificate Holder on all liability insurance certificate(s), as additional insureds on endorsement(s) and on additional supporting documentation.
- d. The policies shall include a waiver of subrogation endorsement in favor of the Department as an additional insured. The endorsement shall be on ISO Form number CG 24 04 or a similar form with same modification to the policy.
- e. Policies shall not be changed or canceled until thirty (30) days prior written notice has been given to the Department; as evidenced by an endorsement or declarations page.
- f. Insurance documentation shall disclose any deductible, self-insured retention, aggregate limit or any exclusion to the policy that materially changes the coverage required by the Contract.
- g. Endorsements in writing must be added to and made part of the insurance contract for the purpose of changing the original terms to reflect the revisions and additions as described. A copy of these endorsements must be provided to the Department.

- h. Applicable insurance policy number(s) referenced on the ACORD form must be referenced in the supporting documentation requested by the Department and supplied by the insurance company (e.g. endorsement page, declarations page, etc.).
- i. When coverage is provided by a non-admitted carrier, a copy of the declarations page along with the ELANY stamped certification wording affixed to the certificate of insurance must be provided to ensure that the excess line insurance has met all of the requirements for a valid excess line transaction in accordance with Article 21 of the New York State Insurance Law.
- j. Worker's Compensation and Disability Benefits certificates shall name the New York State Department of Environmental Conservation, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7017, as entity requesting proof of coverage.
- k. This Contract shall be void and of no effect unless the Contractor procures the required insurance policies and maintains them until acceptance or completion of the work, whichever event is later. If at any time during the term of this contract the coverage provisions and limits of the policies required herein do not meet the provisions and limits set forth in the Contract or proof thereof is not provided to the Department, the Contractor shall immediately cease Work on the Project. The Contractor shall not resume Work on the Project until authorized to do so by the Department. Any delay, time lost, or additional cost incurred as a result of the Contractor not having insurance required by the Contract or not providing proof of same in a form acceptable to the Department, shall not give rise to a delay claim or any other claim against the Department. Should the Contractor fail to provide or maintain any insurance required by this contract, or proof thereof is not provided to the Department, the Department may withhold further contract payments, treat such failure as a breach or default of this contract, and/or, after providing written notice to the Contractor, require the Surety "if any" to secure appropriate coverage and/or purchase insurance complying with the Contract and charge back such purchase to the Contractor.
- l. Should the Contractor engage a subcontractor, the Contractor shall endeavor to impose the insurance requirements of this document on the subcontractor, as applicable. The Contractor shall determine the required insurance types and limits, commensurate with the work of the Subcontractor and maintain the certificate or certificates and endorsements for all subcontractors hired as part of the Contractor's records.

The following types and amounts of insurance are required for this Contract:

- 4.2.1 **Workers' Compensation:** For work to be performed in New York State, the Contractor shall provide and maintain full New York State coverage during the life of this contract for the benefit of such employees as are required to be covered by the New York State Workers' Compensation Law.

If the agreement involves work on or near a shoreline, a U.S. Longshore and Harbor Workers' Compensation Act and/or Jones Act policy as applicable must be provided. Any waiver of this requirement must be approved by the Agency and will only be granted in unique or unusual circumstances.

Evidence of Workers' Compensation and Employers Liability coverage must be provided on one of the following forms specified by the Chairman of the New York State Workers' Compensation Board:

FORM #	FORM TITLE
C-105.2	Certificate of Workers' Compensation Insurance (September 2007, or most current version)
U-26.3	State Insurance Fund Version of the C-105.2 form
SI-12/ GSI-105.2	Certificate of Workers' Compensation Self-Insurance
CE-200	Certificate of Attestation of Exemption (when Contractor meets the requirements.)

All forms are valid for one year from the date the form is signed/stamped, or until policy expiration, whichever is earlier.

Please note - ACORD forms are NOT acceptable proof of New York State Workers' Compensation Insurance coverage.

Additional information can be obtained at the Workers' Compensation website:

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

- 4.2.2 **Disability Benefits:** For work to be performed in New York State, 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 New York State Disability Benefits Law. Any waiver of this requirement must be approved by the Department of Environmental Conservation and will only be granted in unique or unusual circumstances.

Evidence of Disability Benefits coverage must be provided on one of the following forms specified by the Chairman of the New York State Workers' Compensation Board:

FORM #	FORM TITLE
DB-120.1	Certificate of Insurance Coverage under the New York State Disability Benefits Law
DB-155	Certificate of Disability Self-Insurance
CE-200	Certificate of Attestation of Exemption (when Contractor meets the requirements.)

All forms are valid for one year from the date the form is signed/stamped, or until policy expiration, whichever is earlier.

Please note - ACORD forms are NOT acceptable proof of New York State Disability Benefits Insurance coverage.

Additional information can be obtained at the Workers' Compensation website:

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

- 4.2.3 **Commercial General Liability Insurance:** Contractor shall provide and maintain Commercial General Liability Insurance (CGL) covering the liability of the Contractor for bodily injury, property damage, and personal/advertising injury arising from all work and operations under this contract. The limits under such policy shall not be less than the following:

Each Occurrence limit – \$5,000,000

General Aggregate – \$8,000,000
Products/Completed Operations –\$8,000,000
Personal & Advertising Injury - \$1,000,000
Damage to Rented Premises - \$50,000
Medical Expense - \$5,000

Coverage shall include, but not be limited to, the following:

Premises liability
Independent contractors
Blanket contractual liability, including tort liability of another assumed in a contract
Defense and/or indemnification obligations, including obligations assumed under this contract
Cross liability for additional insureds
Products/completed operations for a term of no less than 3 years, commencing upon acceptance of the work, as required by the contract
explosion, collapse, and underground hazards;
contractor means and methods; and
liability resulting from Section 240 or Section 241 of the New York State Labor Law.

The following ISO form must be endorsed to the policy:

CG 20 10 11 85, or, an equivalent – Additional Insured-Owner, Lessees or Contractors (Form B)
Contractor shall provide and maintain Business Automobile Liability insurance covering liability arising out of the use of any registered motor vehicle in connection with the contract, including owned, leased, hired and non-owned vehicles. Such policy shall have a combined single limit for Bodily Injury and Property Damage of at least \$1,000,000.

If the Contractor does not own, lease or hire any registered motor vehicles or will not be using any vehicles on State Land proof of Business Automobile Liability Insurance shall not be required for this Contract. However, Contractor is required to execute Business Automobile Liability Insurance Attestation.

The Contractor shall assume full responsibility and liability that owners and operators of any registered motor vehicles entering State Land to conduct work under this contract carry the same Business Automobile Liability Insurance of the kinds and amounts listed above. NYS Department of Environmental Conservation reserves the right to request proof of the same.

- 4.2.4 **Environmental Liability:** Contractor shall procure, or otherwise obtain through an approved subcontractor, and maintain in full force and effect throughout the term of the contract, and for two years after completion hereof, pollution legal liability insurance with limits of not less than \$5,000,000 providing **primary** 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, including any loss, cost or expense incurred as a result of any cleanup of pollutants or in the investigation, settlement or defense of any claim, suit, or proceedings against the Department of Environmental Conservation arising from the Contractor's work.

This requirement applies to mold as well, if excluded in the commercial general liability policy.

If vehicles are to be used for transporting hazardous materials, the Contractor shall also provide pollution liability broadened coverage for covered autos (endorsement CA 01 12 03 06) as well as proof of MCS 90.

- 4.2.5 **Professional Liability:** The Contractor shall procure and maintain during and for a period of three (3) years after completion of this contract, Professional Liability Insurance in the amount of \$2,000,000 issued to and covering damage for liability imposed on the Contractor by this contract or law arising out of any negligent act, error, or omission in the rendering of or failure to render professional services required by this contract. The professional liability insurance may be issued on a claims-made policy form, in which case the Contractor shall purchase at its sole expense, extended Discovery Clause coverage of up to three (3) years after work is completed if coverage is cancelled or not renewed. The Contractor shall provide coverage for its negligent act, error or omission in rendering or failing to render professional services required by this contract arising out of specifications, installation, modification, abatement, replacement or approval of products, materials or processes containing pollutants, and the failure to advise of or detect the existence or the proportions of pollutants.

Should any subcontractor(s) or supplier(s) retained by the Contractor provide professional services requiring design (i.e. the signature, stamp or certification of a licensed professional), the Contractor shall collect Professional Liability Insurance from the subcontractor(s) or supplier(s) and retain said insurance as part of the contract documents.

- 4.2.6 **Contractor's Equipment:** The Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented capital equipment and tools, including any tools owned by employees, and any tools or equipment, staging towers, and forms owned, borrowed or rented by the Contractor. The requirement to secure and maintain such insurance is solely for the benefit of the Contractor. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not render the Department or their agents and employees responsible for any losses; and the Department, their agents and employees shall have no such Liability.

- 4.2.7 **Owners and Contractors Protective Liability:** The Contractor shall obtain Owners/Contractors Protective Liability (OCP) Policy as follows:

For work related to street, road, highway, and/or bridge work

- Form CG 00 09, Owners and Contractors Protective Liability Coverage form – Coverage for Operations of the Designated Contractor; AND
- Form CG 00 14, Special Protective and Highway Liability Policy – New York Department of Transportation

For projects not related to street, road, highway, and/or bridge work

- Form CG 00 09, Owners and Contractors Protective Liability Coverage form – Coverage for Operations of the Designated Contractor ONLY

The policy shall be written on a project basis for the benefit of the People of the State of New York, the Department, its officers, agents, and employees, with respect to all operations under

this contract by the Contractor or its subcontractors, including in such coverage any omissions and supervisory acts of the Department, its officers, agents, and employees.

The State of New York and the NYS Department of Environmental Conservation, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7012 shall be the Named Insured in the OCP Policy, which shall be promptly furnished to the Department. OCP policy limits shall be no less than \$1 Million (Each Occurrence) / \$2 Million (General Aggregate).

- 4.2.8 **Railroad Protective Liability:** Contractor shall provide and maintain a Railroad Protective Liability (RRP) Policy in the amounts required by the respective Railroad. The policy must name the Railroad as the Named Insured and the definition of "physical damage to property" must be amended to mean direct and accidental loss of or damage to "all property of any Named Insured and all property in any Named Insured's care, custody or control".

Evidence of Railroad Protective Liability Insurance must be provided on the Certificate of Insurance, and a detailed Binder pending issuance of the policy, or on an ISO-RIMA or equivalent form approved by the Railroad, and meet any other requirements as specified by the Railroad and/or the Department of Environmental Conservation.

- 4.2.9 **Unmanned Aircraft Systems ("UAS") Liability:** UAS Liability will be required whenever the contracted work includes operation of an Unmanned Aircraft System (UAS), also known as a Drone. The Contractor and/or its subcontractor shall provide an Aviation Liability Insurance policy covering the liability of the operator for bodily injury, property damage, and Personal injury arising from all operation in the amount of \$1,000,000.00 per Occurrence.

- 4.2.10 **Umbrella and Excess Liability:** When the limits of the CGL, Auto, and/or Employers' Liability policies procured are insufficient to meet the limits specified, the Contractor shall procure and maintain Commercial Umbrella and/or Excess Liability policies with limits in excess of the primary; provided, however, that the total amount of insurance coverage is at least equal to the requirements set forth above. Such policies shall follow the same form as the primary.

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 Federal- or New York State-observed holidays. 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 (10) 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 a source other than the 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 ten (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 Contractor(s) 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 Contractor(s) 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 (1) 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 or electronic 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 (6) physical copies and one electronic copy of all 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 paragraph 5.26 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 5.26 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 (2nd) 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 (2nd) 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, or at an interval agreed to by the Department, 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 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 ten (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 (30) 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 VIII of 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 Article 8.10 of the General Conditions within three (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 (3) 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 (30) 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, 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 (15) 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 on EquipmentWatch.com, its successor or equivalent, 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 eight (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 eight (8) hours and 40 hours of actual use: The weekly rate or the product of the hours of actual use used divided by eight (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 EquipmentWatch.com, is successor or equivalent.
- 10.4.5.9 In the event that a rate is not established in EquipmentWatch.com, its successor or equivalent, 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 EquipmentWatch.com, is successor or equivalent. 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 (50%) 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 it is used on the Work involved or required by Department to be present, not to exceed the rental rate in EquipmentWatch.com, is successor or equivalent, 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 EquipmentWatch.com, is successor or equivalent. 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 \$100.00.

- 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 reallocating 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 (15) 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 (15) 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 changes by \$30,000 or five-percent (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 fifteen-percent (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 one hundred-fifteen-percent (115%) or below eighty-five-percent (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 (7) 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 (15) 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 (1) 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 30 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, which 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 (30) 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 (30) 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 (30) 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 (7) 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 (14) 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 (5) 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 (7) 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 (7) 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, as-built 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 (10) 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 (7) 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 (22) 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 12.11 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 (7) 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 violation(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 (7) 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 (30) days after it is submitted, or Department fails for one hundred and twenty (120) days to pay Contractor any sum finally determined to be due by Department, then Contractor may, upon seven (7) 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 (7) 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 5.31 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 The term “notice” in this Article shall refer to any notice required under the Contract for claims (delay, change order, extra work, liquidated damages, etc.) or initial contract disputes against the Department. When notice is required to be sent by the Contractor to the Department, it must be in writing and provided within 15 calendar days of the date that the Contractor knew or should have known of the facts that form the basis of the claim or dispute. Notice should be as factually complete as possible, and contractors should have a continuing duty to promptly provide the agency with information about conditions of the claim. If a claim or dispute involves a matter of life, health or safety, notice must be made immediately to the Department.
- 15.1.1 The Contractor shall give the Department immediate notice in writing of the initiation of any legal action or suit which relates in any way to a subcontract with a subcontractor or which may affect the performance of the Contractor’s duties under the contract.
- 15.1.2 The written notice must be addressed and delivered to the Project Manager at the address provided in Article 2 of Section IV.
- 15.1.3 Written notice may be provided by the Contractor to the Department in one of the three methods to achieve actual notice: (i) first class mail and email; (ii) certified mail and first-class delivery; or (iii) overnight mail and first-class delivery. The written notice shall contain a sufficient description of the claim or dispute pursuant to the provisions of the Contract.
- 15.1.4 Upon receipt of the written notice from the Contractor, the Department shall provide a written acknowledgment of receipt of notice. The Department’s failure to provide written acknowledgment shall not be deemed a breach of contract or alter the Contractor’s obligation to provide timely notice.
- 15.1.5 Any notice to or demand upon Contractor shall be deemed served 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 Contract Documents, or emailed to the electronic address provided in Section V- Bid Forms and Acknowledgement and followed by written notice.
- 15.1.6 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.
- 15.1.7 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, 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 (1) 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 six (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 six (6) years after any resulting final termination settlement.
- 15.10.2.2 Records pertaining to appeals under Article 8 of Appendix B of the Agreement, 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 the 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 15.11.1 above.
- 15.11.3 Any decrease in Contract Price under paragraph 15.11.2 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

These Supplementary Conditions (SC) amend or supplement the provisions, as indicated below, of the Contract Documents. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in Section II – Terms and Definitions. Additional terms, if any, used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

SECTION VIII - Article 4.2.c

The CONTRACTOR shall name the State of New York, New York State Department of Environmental Conservation, ENGINEER, and other entities as may be required, as additional insured and shall provide each of those entities with certificate(s) of insurance indicating the same. This requirement shall also apply with respect to owners of properties affected by the Work, including but not limited to the following:

- CSX (formerly Pan Am Railways, Inc.) – Note that CSX may provide additional insurance requirements as part of the right-of-entry permit/access agreement.
- Ultimate LLC (SBL No. 30.14-2-12)
- SBL No. 30.14-2-26 (Name to be provided)
- SBL No. 30.14-2-13 and SBL No. 30.14-2-14 (Name to be provided)
- SBL No. 30-1-24.411 (Name to be provided)

SC 2.0 - PERMITS, APPROVALS, AND PLANNING DOCUMENTS

The following permits, approvals, and planning documents have been or will be obtained and/or prepared by the Department:

- A Joint Application Permit issued by the U.S. Army Corps of Engineers and NYSDEC to allow for the wetlands temporary disturbance and restoration of wetland areas affected by the project activities as well as an accompanying Water Quality Certification under Section 401 – Clean Water Act issued by the NYSDEC Regional Administrator.
- Right of entry permit/access agreement with CSX (formerly Pan Am Railways, Inc.) for access to and required Work on the railway property.
- A temporary discharge agreement with the City of Schenectady publicly owned treatment works (POTW) to accept treated ISTR wastewater discharges during ISTR heating/treatment operations.
- A State Pollutant Discharge Elimination System (SPDES) permit equivalent for the discharge of treated ISTR wastewater to surface water.

END OF SECTION

SECTION X

Standard Specifications

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SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope: Section includes:
 - 1. Administrative and procedural requirements for selecting materials and equipment for the Project.
 - 2. Procedural requirements for substitutions of materials and equipment.
 - 3. Procedural requirements for substitute construction methods or procedures, when construction methods or procedures are specified.
 - 4. This section supplements the requirements of Article 5.7 of the General Conditions.
- B. A proposed substitute will not be accepted for review if:
 - 1. Approval would require changes in design concept or a substantial revision of the Contract Documents.
 - 2. Approval would delay completion of the Work or the work of other contractors.
 - 3. Substitution request is indicated or implied on a Shop Drawing or other submittal, or on a request for interpretation or clarification, and is not accompanied by CONTRACTOR's formal and complete request for substitution.
- C. If proposed substitute is not approved, CONTRACTOR shall provide the specified materials, equipment, method, or procedure, as applicable.
- D. Approval of a substitute does not relieve CONTRACTOR from requirement for submitting Shop Drawings and other submittals in accordance with the Contract Documents.
- E. ENGINEER and DEPARTMENT have the right to rely upon the completeness and accuracy of the information included in CONTRACTOR's request for approval of a substitute, and CONTRACTOR accepts full responsibility for the completeness and accuracy thereof.
- F. When approved substitute is defective or fail to perform in accordance with the Contract Documents, responsibility for remedying the defect or failure resides solely with CONTRACTOR and Supplier.

1.2 SUBSTITUTE MATERIALS AND EQUIPMENT

- A. Requests for approval of substitute items of materials or equipment will be evaluated in accordance with the requirements of the Article 5.7 of the General Conditions.

B. Procedure:

1. Submit requests for substitution in accordance with requirements for furnishing submittals, as indicated in Section 01 33 00, Submittal Procedures.
2. Submit separate request for each proposed substitute.
3. Submit request for substitution using forms attached to this Section. Complete all information requested on each form and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with each substitute request the following:
 - a. Identification of the materials and equipment (as applicable), including manufacturer's name and address.
 - b. Manufacturer's literature with description of the materials and equipment, performance and test data, and reference standards with which materials and equipment comply.
 - c. Samples, when appropriate.
 - d. Name and address of similar projects on which the materials and equipment were used, date of installation, and names and contact information (including telephone number) for the facility operations and maintenance manager.

1.3 SUBSTITUTE CONSTRUCTION METHODS OR PROCEDURES

- A. Where construction methods or procedures are specified, for a period of 15 days after the Effective Date of the Contract, ENGINEER will consider CONTRACTOR's written requests for substitute construction methods or procedures shown or specified in the Contract Documents.
- B. The provisions of the General Conditions, as may be modified by the Supplementary Conditions, regarding substitute items of materials and equipment are hereby extended to apply to substitute construction methods or procedures.
- C. Procedure:
 1. Submit requests for substitution in accordance with requirements for furnishing submittals, as indicated in Section 01 33 00, Submittal Procedures.
 2. Submit separate request for each proposed substitute.
 3. Submit request for substitution using forms attached to this Section. Complete all information requested on each form and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with each substitute request the following:
 - a. Detailed description of proposed method or procedure.
 - b. Itemized comparison of the proposed substitution with the specified method or procedure.
 - c. Drawings illustrating method or procedure.
 - d. Other data required by ENGINEER to establish that proposed substitution is equivalent to specified method or procedure.

1.4 CONTRACTOR'S REPRESENTATIONS

- A. In submitting request for substitution, CONTRACTOR represents that:
1. CONTRACTOR has read, fully understands and complies with the provisions regarding substitutes as indicated in the General Conditions, as may be modified by the Supplementary Conditions.
 2. Substitution request is complete and includes all information required by the Contract Documents.
 3. CONTRACTOR certifications required by the General Conditions, as may be modified by the Supplementary Conditions, are valid and made with CONTRACTOR's full knowledge, information, and belief.
 4. CONTRACTOR will provide the same or better guarantees or warranties for proposed substitute as for the specified materials, equipment, methods, or procedures, as applicable.
 5. CONTRACTOR waives all Claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The documents listed below and attached following this Section's "End of Section" designation, are part of this Specification Section.
1. Substitution Request Form (two pages).
 2. Product Substitution Checklist (one page).

+ + END OF SECTION + +

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SUBSTITUTION REQUEST

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____

Engineer Project. No. _____
Re: _____ Contract For: _____

Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitute: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No.: _____
Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1 to 4 years old ☐ 5 to 10 years old ☐ More than 10 years old

Differences between proposed substitute and specified item: _____

☐ Point-by-point comparative data attached — REQUIRED BY THE CONTRACT DOCUMENTS

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Engineer: _____
Address: _____ Department: _____
_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitute: _____ (\$ _____)
(attach detailed, itemized estimate)

Proposed substitute changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.
(clarify whether change is to Substantial Completion, Milestone, or time for readiness for final payment)

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST

(Continued)

☐ Substitute product, method, or procedure is subject to payment of licensing fee or royalty (check if “yes” and attach information)

☐ Substitute product, method, or procedure is patented or copyrighted (check if “yes” and attach information)

The undersigned certifies:

- Representations in the General Conditions and in Section 01 25 00, Substitution Procedures, regarding substitutions are valid.
- Same or better warranty and guarantee will be furnished for proposed substitution as for specified item.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitute will have no adverse effect on other trades and will not affect or delay Progress Schedule.
- Cost data as stated above is complete. Claims for additional costs or time related to accepted substitution which may subsequently become apparent are waived.
- Proposed substitute does not affect dimensions and functional clearances.
- Payment will be made for Engineer’s review and changes, if any, to the design and Contract Documents, and construction costs caused by the substitute.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: ☐

ENGINEER’S REVIEW AND ACCEPTANCE (OR NON-ACCEPTANCE) WILL BE DOCUMENTED IN A FIELD ORDER OR CHANGE ORDER, AS APPROPRIATE. _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ Engineer
☐ Other:

PRODUCT SUBSTITUTION CHECKLIST

Date: _____

Re: _____

Engineer Proj No.: _____

Manufacturer's Project No.: _____

Filing No.: _____

Contract For: _____

Item Equivalence:

- ☐ Is the submitted item equivalent to the specified item? _____
- ☐ Does it serve the same function? _____
- ☐ Does it have the same dimensions? _____
- ☐ Does it have the same appearance? _____
- ☐ Will it last as long? _____
- ☐ Does it comply with the same codes, and standards and performance requirements? _____
- ☐ Has the item been used locally, and where are the projects? _____

- ☐ Has a problem occurred with the item, and what was the remedy? _____

Effect on the Project:

- ☐ Will the substitute affect other aspects of the construction? _____
- ☐ Are any details affected and are changes required? _____
- ☐ What is the cost of the changes? _____
- ☐ Who pays for the required changes? _____
- ☐ Are Contract Times affected? _____

Effect on the Warranty:

- ☐ How does the proposed warranty differ from the specified warranty? _____

- ☐ Does the manufacturer have a track record of standing behind the warranty? _____

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SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope.
 - 1. This Section provides requirements which are in addition to provisions of the General Conditions (Articles 9 and 10), as may be modified by the Supplementary Conditions, and includes:
 - a. Requests for interpretation.
 - b. Minor changes in the Work and Field Orders.
 - c. Proposed Change Order Request.
 - d. Proposed Change Orders.
 - e. Approved Change Orders.
- B. Submit Contract modification documents to ENGINEER, addressed to the contact person as specified in the preconstruction conference, and in accordance with Section 01 31 26, Electronic Communication Protocols.
- 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. Transmit written requests for interpretation to ENGINEER. CONTRACTOR may prepare and transmit requests for interpretation.
 - 2. Prepare and transmit request for interpretation to obtain clarifications or interpretations of the Contract Documents. Report conflicts, errors, ambiguities, and discrepancies in the Contract Documents by requesting an interpretation in accordance with General Conditions.
 - 3. Do not transmit request for interpretation when other form of communication is appropriate, such as CONTRACTOR's submittals, requests for approvals of substitutes, notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate requests for interpretation will be returned without response or action by ENGINEER.
 - 4. Do not submit request for interpretation or clarification when:
 - a. answer may be obtained by observations at the Site; or
 - b. required information is clearly indicated in the Contract Documents; or
 - c. required information is included in industry standards referenced in the Contract Documents or Supplier's instructions that are consistent with the Contract Documents; or
 - d. are reasonably inferable from any of foregoing.

5. CONTRACTOR shall have sole financial responsibility for requests for interpretations or clarifications that are submitted late, out of sequence, or that are unnecessary.

B. Procedure.

1. Transmit requests for interpretation in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Include with each request for interpretation a 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. Upon request, copy of log will be transmitted to CONTRACTOR
4. ENGINEER's response to requests for interpretation will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each response to a request for interpretation will include a separate letter of transmittal.
5. ENGINEER's written response to each request for interpretation will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
6. If ENGINEER requests additional information to make an interpretation, CONTRACTOR requesting the interpretation shall transmit the information requested within ten days, unless ENGINEER allows additional time, via correspondence referring to request for interpretation number.
7. Interpretations that One or Both Parties Believes Entails a Change to the Contract:
 - a. If CONTRACTOR believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of ENGINEER's interpretation, so advise ENGINEER in writing before proceeding with the Work associated with the request for interpretation.
 - b. If, after this initial communication, CONTRACTOR believes that change in Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the Contract Documents.

C. Preparation of Requests for Interpretation:

1. Prepare each request for interpretation on the "Request for Interpretation" form included with this Section, or other form acceptable to ENGINEER.
2. 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 A15" would be, "RFI No. A15-GC-001".
3. In space provided on form, describe the interpretation requested. Provide additional sheets as necessary. Include text and sketches as required in sufficient detail to describe the the need for an interpretation.

4. When applicable, request for interpretation shall include CONTRACTOR's recommended resolution.

1.3 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 document EJCDC® C-942, "Field Order".
4. ENGINEER will maintain a log of Field Orders issued.

B. Procedure.

1. Field Orders will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Field Order will include a separate letter of transmittal.
2. Each Field Order will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
3. Field Orders that One or Both Parties Believes Entails a Change to the Contract Price or Contract Times:
 - a. If CONTRACTOR or DEPARTMENT believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of a Field Order, so advise ENGINEER in writing before proceeding with the Work associated with the Field Order in accordance with General Conditions, Section VIII, Article 8.10.
 - b. If, after this initial communication, CONTRACTOR believes that change in Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the General Conditions.
4. If the Field Order is unclear, submit request for interpretation.

1.4 PROPOSED CHANGE ORDER REQUEST

A. General:

1. Proposed Change Order Request may be initiated by ENGINEER or DEPARTMENT in accordance with General Conditions, Article 9.1
2. Proposed Change Order Request are for requesting the effect on the Contract Price and the Contract Times and other information relative to contemplated changes in the Work. Proposed Change Order Request 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. Proposed Change Order Request will be furnished using the "Proposed Change Order Request" form included with this Section.

B. Procedure.

1. Proposal Change Order Request will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Proposed Change Order Request will include a separate letter of transmittal.
2. Each signed Proposed Change Order Request will be transmitted to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
3. Transmit request for interpretation to clarify conflicts, errors, ambiguities, and discrepancies in Proposal Request.
4. Upon receipt of Proposed Change Order Request, CONTRACTOR shall prepare and transmit to ENGINEER a Proposed Change Order, in accordance with the Contract Documents, for the proposed Work described in the Proposed Change Order Request.

1.5 PROPOSED CHANGE ORDERS

A. General.

1. Prepare and transmit written Proposed Change Order to ENGINEER in response to each Proposed Change Order Request; or when CONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required; or to appeal an initial decision by ENGINEER concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the General Conditions.

B. Procedure.

1. Prepare and transmit Proposed Change Order within time limits indicated in the General Conditions, as may be modified by the Supplementary Conditions.
2. Transmit Change Proposals in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Include with each Proposed Change Order all required supporting documentation and a separate letter of transmittal.
3. ENGINEER's Review and Requests for Interpretation:
 - a. ENGINEER will review and act on each Proposed Change Order in accordance with, and within the time limits indicated in, the General Conditions, as may be modified by the Supplementary Conditions.
 - b. When, ENGINEER requests additional information to render a decision, submit required information within three days of receipt of ENGINEER's request, unless ENGINEER allows more time. Submit the required information via correspondence that refers to the specific Proposed Change Order number.
 - c. DEPARTMENT shall transmit to ENGINEER such comments, if any, that DEPARTMENT has on the Change Proposal, within 30 days of DEPARTMENT's receipt of the Proposed Change Order.

- d. ENGINEER will render a written decision on the Proposed Change Order.
 - e. ENGINEER's response to Proposed Change Order will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section, the General Conditions, and the Supplementary Conditions.
 - 4. ENGINEER's response to each Proposed Change Order will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT
 - c. ENGINEER.
 - 5. If Proposed Change Order is recommended for approval by ENGINEER and is approved by DEPARTMENT, an Approved Change Order will be issued or, when applicable, an appropriate use of contingency allowance will be authorized by DEPARTMENT.
 - 6. If parties do not agree on terms for the change, DEPARTMENT or CONTRACTOR may file a Claim against the other, in accordance with the General Conditions, as may be modified by the Supplementary Conditions.
- C. Preparation of Change Proposals:
- 1. Each Proposed Change Order shall be submitted on the "Proposed Change Order" form included with this Section, or other form acceptable to ENGINEER.
 - 2. Number each Proposed Change Order as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First Change Proposal for the general contract for project named "Contract A15" would be, "Proposed Change Order No. A15-GC-001".
 - 3. In space provided on Change Proposal 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 Proposed Change Order Request, write in as scope, "In accordance with Proposed Change Order Request No." followed by the Proposal Request number. Submit written clarifications, if any, to scope of change.
 - b. Submit justification for each proposed change. If change is in response to Proposed Change Order Request, write in as justification, "In accordance with Proposed Change Order Request No." followed by the proposed change order request number.
 - c. List the total change in the Contract Price and Contract Times for each separate change item included in the Proposed Change Order Request.
 - 4. Unless otherwise directed by ENGINEER, attach to the Proposed Change Order 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 cost of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
- d. 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 (e.g., overhead and profit).
- f. Breakdown of other costs eligible, in accordance with the General Conditions and the Supplementary Conditions under "Cost of the Work" provisions.
- g. Other information required by ENGINEER.
- h. CONTRACTOR's fees applied to eligible CONTRACTOR costs and eligible Subcontractor costs.
- i. The change order backup shall be completed using the NYS Standard MURK 2018 (or current) format. DEPARTMENT will provide electronic version for CONTRACTOR use.

1.6 APPROVED CHANGE ORDERS

A. General:

- 1. Approved Change Orders will be recommended by ENGINEER (when required by the General Conditions), and will be approved and signed by DEPARTMENT and CONTRACTOR, to authorize additions, deletions, or revisions to the Work, or changes to the Contract Price or Contract Times.
- 2. Approved Change Orders will be in the form of EJCDC® C-941, "Change Order".

B. Procedure.

- 1. Approved Change Orders for signature by CONTRACTOR will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Change Order will include a separate letter of transmittal. CONTRACTOR shall print three originals of Approved Change Order for CONTRACTOR's signature.
- 2. CONTRACTOR shall promptly sign each original Approved Change Order and, within five days of receipt, return all originals to ENGINEER.
- 3. ENGINEER will sign each original Approved Change Order and forward them to DEPARTMENT.
- 4. After approval and signature by DEPARTMENT, original Approved Change Orders will be distributed as indicated below.
- 5. Original, signed Approved Change Orders will be distributed as follows:
 - a. CONTRACTOR: One original.
 - b. DEPARTMENT: One original.
 - c. ENGINEER: One original.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The forms listed below, following this Section’s “End of Section” designation, are part of this Specifications Section:
1. Request for Interpretation form (one page).
 2. Proposed Change Order Request (one page).
 3. Proposed Change Order (one page).
 4. Field Order EJCDC C-942

+ + END OF SECTION + +

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REQUEST FOR INTERPRETATION

DEPARTMENT: _____

Project Name: _____

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: _____

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NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Field Order No. _____

Date of Issuance:

Site Name:

Owner: **DEC**

Owner's Contract No.:

Contractor:

Site No.:

Engineer:

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 9.2, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit written notification in accordance with Paragraph 8.10 within 3 days and provide documentation within 15 days in a Proposed Change Order to Engineer.

Reference:

Specification(s)

Drawing(s) / Detail(s)

Description:

Attachments:

ISSUED:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Date:

Date:

Copy to: DEC Project Manager and DEC Designated Representative

April 2023

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Site Name:	PCO No.:
Site Location:	Date Issued:
	Site No.:
Owner:	Contract No.:
Contractor:	Associated RFI or FO:
	<input type="checkbox"/> RFI No.: _____ <input type="checkbox"/> FO No.: _____ <input type="checkbox"/> None

PROPOSAL	
<i>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.</i>	
Description of Change: INSTRUCTIONS - Provide a description of the change in sufficient detail to specify the additional work contemplated and how measurement for payment will be made. Refer to paragraph 10.3 of the General Conditions (for example, if time and materials is contemplated indicate herein). Specifications and drawings should be attached as appropriate.	
Reason for Change: INSTRUCTIONS - Provide an explanation why the change to the original Contract Documents is necessary	
	Associated Bid Item:
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Attachments: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:
	Relevant Contract Documents:
	Specification Section:
	Drawing No.: _____ Detail: _____

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. 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.

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.

Cost and Time Documentation required: The submission shall account for the requirements of this proposed change order, Article 10 - Change of Contract Price or Time and Article 11 - Unit Price Work and Cash Allowances of the General Conditions. Proposed changes of contract time will be supported by a revised project schedule.

Differing site conditions: 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.

Audit; Access to Records: 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.

Engineer's Review: Costs associated with Engineer's review and return of cost documentation shall be borne by Contractor after the Engineer's second review.

Issued By:

Signature

Date

CONTRACT TITLE

Site No.

Contract No.

Change Order No.

Change Order Amount: \$0.00

Date of Issue:

Contractor:

Engineer:

This Change Order is comprised of **number (#)** items described below:

I. CHANGE ORDER ITEMS: (as many as needed)

A. Item Name or Brief Description:

Description of Change: Text

Drawing Reference: Text

Contract Pay Item: Text

Reason for Change: Text

Cost: The cost of this Change Order Item is \$0.00.

B. Item Name and Brief Description:

Description of Change: Text

Drawing Reference: Text

Contract Pay Item: Text

Reason for Change: Text

Cost: The cost of this Change Order Item is \$0.00.

II. CHANGE ORDER COST SUMMARY:

Item A: Description	\$0.00
Item B:	
Item C:	
Total:	\$0.00

III. CHANGE IN CONTRACT PRICE:

Original Contract Price:	\$0.00
Net Increase/Decrease in Contract Price Due to Prior Change Order(s):	\$0.00
Net Increase/Decrease in Contract Price Due to This Change Order (No. X):	\$0.00
New Contract Price Including This Change Order:	\$0.00

IV. CHANGE IN CONTRACT TIME:Contract Execution Date: **Month, DD, YYYY**

	Calendar Days	Substantial Completion Date	Final Completion Date
Original Contract Completion Time/Date:	330 / 360		
Net Change of Contract Time Due to Prior Change Order(s)	0 / 116		
Net Change of Contract Time Due to This Change Order (No. X)	0 / 153		
New Contract Completion Date	330 / 629		

It is understood and agreed that, unless expressly so stated above, the work herein authorized will not extend the time for the completion of the contract.

It is understood and agreed that this change order represents full and complete compensation for all work described herein.

This work is to be performed in accordance with the terms of the contract and original plans and specifications, except as herein modified. It is understood and agreed that this order shall be deemed executory only to the extent of moneys available and no liability shall be incurred by the state beyond the moneys available for the purpose.

IN WITNESS WHEREOF, this Change Order has been duly executed by the parties hereto on the day and year appearing following their respective signatures.

Agency Certification: "In addition to the acceptance of this Change Order, I also certify that original copies of this signature page will be attached to all other exact copies of this Change Order."

CONTRACTOR SIGNATURE	DEPARTMENT SIGNATURE
By:	By:
Print Name:	Print Name:
Title:	Title:
Dated:	Dated:

<p>Contractor Acknowledgement</p> <p>State of _____)</p> <p>County of _____) ss.:</p> <p>On the _____ day of _____ in the year _____, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(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.</p> <p>_____ Notary Public</p>

COMPTROLLER SIGNATURE
Approved: Thomas P. DiNapoli State Comptroller
Dated:

SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and 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, established in Section III, Article 12, Section V, Contract Bid Form and Section VII, Measurement and Payment.
2. Upon request of ENGINEER, support values with data that substantiate their correctness.
3. 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.
4. Schedule of Values may be used as a basis for negotiating price of changes, if any, in the Work.
5. Schedule of Values and the Progress Schedule updates specified in Section 01 32 16, Progress Schedule, will be basis for preparing each Application for Payment.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Submit to ENGINEER Schedule of Values in the form and quantity required in Section 01 33 00, Submittal Procedures, and in accordance with Section 01 31 26, Electronic Communication Protocols.
2. Content of Schedule of Values submittals shall be in accordance with Article 1.3 of this Section.
3. Timing of Submittals:
 - a. Submit preliminary Schedule of Values within ten days following the date that the Contract Times commence running in accordance with the Notice to Proceed.
 - b. Submittal of the Schedule of Values for acceptance by ENGINEER shall be in accordance with the General Conditions, Articles 1.4 and 1.6 a. 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.

1.3 SCHEDULE OF VALUES FORMAT AND CONTENT

- A. Organization and Major Elements of Schedule of Values
 - 1. Prepare Schedule of Values on the “progress estimate” or “continuation sheets”, as applicable, of the Application for Payment form indicated in Section 01 29 76, Progress Payment Procedures.
 - 2. Organization in Accordance with General Conditions Section V, Bid Form and Section VII, Measurement and Payment:
 - a. Organize the Schedule of Values by the Bid Schedule of Values.
 - b. Label each row in the Schedule of Values with the appropriate Bid Item number. Include an amount for each row in the Schedule of Values.
 - c. List sub-items of major items as identified in Section VII, measurement and payment for each item on the Bid Form.
 - 3. Include in Schedule of Values unit price payment items with their associated quantity. Provide in the Schedule of Values detailed breakdown of labor, equipment, materials and other direct costs (ODCs) for each unit prices when required by ENGINEER.
- B. Requirements for preliminary Schedule of Values and Schedule of Values are:
 - 1. Subcontracted Work:
 - a. Schedule of Values shall show division of Work between CONTRACTOR and Subcontractors.
 - b. Line items for Work to be done by Subcontractor shall include the word, “(SUBCONTRACTED)”.
 - 2. Apportionment between Materials and Equipment, and Installation:
 - a. 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.
 - b. List purchase and delivery costs for materials and equipment for which CONTRACTOR may apply for payment as stored materials, when required by the ENGINEER.
 - 3. 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.
 - 4. Overhead and Profit: 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).
 - 5. Include separate line item for each work item under both lumps sum and unit price items in accordance with Section VII, Measurement and Payment.
 - 6. Project Record Documents:
 - a. Include in the Schedule of Values a line item with appropriate value for Project record documents.
 - b. If adequate record documents are maintained, up to 50 percent of the value of the record documents line item will be eligible for payment, spread evenly over those progress payments in which construction at the Site is performed.

- c. Remainder of Project record documents line item will be eligible for payment when complete record documents are submitted in accordance with the General Conditions. If record documents submitted are unsatisfactory to ENGINEER, amount may be reduced via set-offs in accordance with the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

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SECTION 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 in accordance with General Conditions, Section VIII, Article 1.2.
 - 2. CONTRACTOR shall attend the conference prepared to discuss all items on the pre-construction conference 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 Pre-construction Conference:
 - 1. Purpose of conference is to designate responsible personnel, establish working relationships, discuss preliminary schedules submitted by CONTRACTOR, and formalize procedures for the preparation and review administrative and procedural requirements for the Project.
 - 2. Review and comply with the requirements of the General Conditions.
 - 3. Review CONTRACTOR's plans for complying with the requirements of Article 5 of the General Conditions.
 - 4. Discuss any conflicts, errors or discrepancies that CONTRACTOR has discovered by review of the Contract Documents.
 - 5. Unless otherwise indicated in the Contract Documents or otherwise agreed to by the entities involved, Site mobilization meeting will be part of the pre-construction conference.

1.2 PREPARATION FOR PRE-CONSTRUCTION CONFERENCE

- A. Date, Time, and Location:
 - 1. Conference will be held no later than twenty calendar days after the effective Date of the Agreement, but before the CONTRACTOR starts the Work.
 - 2. Department will establish the date, time, and location of conference and notify the interested and involved entities.
- B. CONTRACTOR shall furnish information required and contribute appropriate items for discussion at the pre-construction conference.
- C. Handouts for Pre-Construction Conference:
 - 1. CONTRACTOR shall bring to the conference the following, with sufficient number of copies for each attendee:
 - a. Preliminary Progress Schedule, as submitted to ENGINEER.
 - b. Preliminary Schedule of Submittals, as submitted to ENGINEER.

- c. Preliminary Schedule of Values, as submitted to ENGINEER.
- d. Listing of identity and general scope of Work or supply of planned Subcontractors and Suppliers.
- e. List of emergency contact information.

1.3 REQUIRED ATTENDEES

- 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:
 - 1. Project manager.
 - 2. Site superintendent
 - 3. Site Health and Safety Officer
 - 4. Project managers for major Subcontractors, and major equipment Suppliers as CONTRACTOR deems appropriate.
- C. Other attendees will be representatives of:
 - 1. DEPARTMENT.
 - 2. ENGINEER.
 - 3. Authorities having jurisdiction over the Work, if available.
 - 4. Utility owners, as applicable.
 - 5. Others as requested by DEPARTMENT, CONTRACTOR, or ENGINEER.

1.4 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics indicated below. Revisions, if any, to the agenda below will be furnished to required attendees prior to the pre-construction 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) Subcontractors and Suppliers in attendance.
 - 4) Authorities having jurisdiction.
 - b. Procedures for communications and correspondence, including electronic communication protocols.
 - c. Copies of the Contract Documents and availability.
 - d. Subcontractors and Suppliers.
 - 1) Lists of proposed Subcontractors and Suppliers.
 - e. The Work and Scheduling:
 - 1) General 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) Contractor's safety representative.
 - 3) Emergency procedures and accident reporting.
 - 4) Emergency contact information.
 - 5) Confined space entry permits.
 - 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) Construction coordinator.
 - 3) Coordination with DEPARTMENT's operations.
 - 4) Progress meetings.
 - 5) Preliminary Schedule of Submittals.
 - 6) Procedures for furnishing and processing submittals.
 - 7) Work not eligible for payment until submittals are approved or accepted (as required).
 - 8) Construction photographic documentation.
- k. Substitutes and "Or-Equals":
 - 1) Product options.
 - 2) Procedures for proposing "or-equals".
 - 3) Procedures for proposing substitutes.
- l. Contract Modification Procedures
 - 1) Requests for interpretation
 - 2) Written clarifications
 - 3) Field Orders
 - 4) Proposal Requests
 - 5) Change Proposals
 - 6) Work Change Directives.
 - 7) Change Orders.
 - 8) Procedure for Claims and dispute resolution
- m. Payment:
 - 1) DEPARTMENT's Project financing and funding, as applicable.
 - 2) DEPARTMENT's tax-exempt status.
 - 3) Preliminary Schedule of Values
 - 4) Procedures for measuring for payment.
 - 5) Retainage.
 - 6) Progress payment procedures.
 - 7) Prevailing wage rates and payrolls.
- n. Testing and inspections, including notification requirements.
- o. Disposal of demolition materials.
- p. Record documents.
- q. 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, storage 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 Site and premises.
 - i. Protection of property.
 - j. Security.
 - k. Temporary controls, such as sediment and erosion controls, noise controls, dust control, storm water controls, 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.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 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.

1.2 PREPARATION FOR PROGRESS MEETINGS

A. Date and Time:

1. Regular Meetings: Bi-weekly, occurring twice per month, on a day and time agreeable to DEPARTMENT, ENGINEER, and CONTRACTOR.
2. Other Meetings: Weekly meetings may be requested in accordance with the General Conditions, Section VIII, Article 5.36, to discuss and/or resolve matters concerning various elements of the Work.

B. Location:

1. CONTRACTOR's field office at the Site or other location mutually agreed upon by DEPARTMENT, CONTRACTOR, and ENGINEER.

C. Handouts:

1. CONTRACTOR shall bring to each progress meeting not less than eight copies of each of the following:
 - a. List of Work accomplished since the previous progress meeting.
 - b. Up-to-date Progress Schedule.
 - c. Up-to-date Schedule of Submittals.
 - d. Health and Safety/Community Air Monitoring Summary.
 - e. Quality control testing including analytical testing Summary.
 - f. 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 DEPARTMENT, Project, and Site.
 - g. 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.

2. Engineer shall bring to each progress meeting not less than eight (-8-) copies of each of the following:
 - a. Up-to-date Schedule of Submittals including identification of outstanding critical submittals.
 - b. Up-to-date Status tracking logs for RFI, PCOs, and Field Orders.

1.3 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. Construction coordinator (if any).
 3. ENGINEER:
 - a. Project manager or designated representative
 - b. Others as required by ENGINEER.
 4. Department 's representative(s), as required.
 5. Testing and inspection entities, as required.
 6. Others, as appropriate.

1.4 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. Safety
 2. Review, comment, and amendment (if required) of minutes of previous progress meeting.
 3. Review of progress since the previous progress meeting.
 4. Planned progress through next progress meeting.
 5. 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.
 6. Submittals:
 - a. Review status of critical submittals.
 - b. Review revisions to Schedule of Submittals.
 7. Contract Modifications (Status Tracking Log as maintained by ENGINEER)
 - a. Requests for Interpretation.

- b. Field Orders.
- c. Proposed Change Orders.
- d. Approved Change Orders.
- e. Claims.
- 8. Applications for progress payments status
- 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. Permits.
- 13. Construction photographic documentation, as applicable.
- 14. Record documents status, as applicable.
- 15. Punch list status, as applicable.
- 16. Other business.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

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SECTION 01 31 26

ELECTRONIC COMMUNICATION PROTOCOLS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section establishes the procedures with which the parties will comply regarding transmission or exchange of electronic data for the Project.
 2. CONTRACTOR shall provide labor, materials, tools, equipment, services, utilities, and incidentals shown, specified, and required for complying with this Section throughout the Project.
 3. This Section does not supersede the General Conditions, as may be modified by the Supplementary Conditions, regarding transmitting of the Contract Documents to CONTRACTOR after the Effective Date of the Contract.
 4. In addition to the requirements of this Section, comply with requirements for exchange of electronic data in the following:
 - a. Section 01 32 16, Progress Schedule.
 - b. Section 01 32 33, Photographic Documentation.
 - c. Section 01 33 00, Submittal Procedures.
 - d. Section 01 78 39, Project Record Documents.
- B. Coordination:
1. CONTRACTOR shall require all Subcontractors and Suppliers to comply with the electronic communication protocols established in this Section.
- C. Related Sections:
1. Section 01 32 16, Progress Schedule.
 2. Section 01 32 33, Photographic Documentation.
 3. Section 01 33 00, Submittal Procedures.
 4. Section 01 78 39, Project Record Documents.

1.2 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
1. “Electronic data” means information, communications, drawings, or designs created or stored for the Project in electronic or digital form.
 2. “Confidential information” means electronic data that the transmitting party has designated as confidential and clearly marked with an indication such as “Confidential”, “Business Proprietary”, or similar designation.
 3. “Written” or “in writing” means any and all communications, including without limitation a notice, consent, or interpretation, prepared and sent to an address provided in the Contract Documents or otherwise agreed upon by

the parties and ENGINEER using a transmission method set forth in this Section that allows the recipient to print or store the communication. Communications transmitted electronically are presumed received when sent in conformance with this Paragraph 1.2.A.3.

1.3 TRANSMISSION OF ELECTRONIC DATA

- A. Transmission of electronic data constitutes a warrant by the transmitting party to the receiving party that the transmitting party is one or more of the following:
 - 1. The copyright owner of the electronic data.
 - 2. Has permission from the copyright owner to transmit the electronic data for its use on the Project.
 - 3. Is authorized to transmit confidential information.
- B. Receiving party agrees to keep confidential information confidential and not to disclose it to another person except to (1) its employees, (2) those who need to know the content of the confidential information to perform services or construction solely and exclusively for the Project, or (3) its Consultants, Contractors, Subcontractors, and Suppliers whose contracts include similar restrictions on the use of electronic data and confidential information.
- C. Transmitting party does not convey any right in the electronic data or in the software used to generate or transmit such data. Receiving party may not use electronic data unless permission to do so is provided in the Contract Documents, or in a separate license.
- D. Unless otherwise granted in a separate license, receiving party's use, modification, or further transmission of electronic data, as provided the Contract Documents, is specifically limited to the design and construction of the Project in accordance with this Section, and nothing contained in this Section conveys any other right to use the electronic data for any other purpose.
- E. Means of Transmitting Electronic Data: Unless otherwise indicated in Table 01 31 26-A of this Section or elsewhere in the Contract Documents, transmission of electronic data for the Project will generally be via:
 - 1. E-mail and files attached to e-mail. Maintain e-mail system capable of transmitting and receiving files not less than 20 megabytes (MB) file size.

1.4 ELECTRONIC DATA PROTOCOLS

- A. Comply with the data formats, transmission methods, and permitted uses set forth in Table 01 31 26-A, Electronic Data Protocol Table, below, when transmitting or using electronic data on the Project. Where a row in the table has no indicated means of transmitting electronic data, use for such documents only printed copies transmitted to the receiving party via appropriate delivery method.

TABLE 01 31 26-A

ELECTRONIC DATA PROTOCOL TABLE (E-MAIL ATTACHMENTS)

Electronic Data	Data Format	Transmitting Party	Transmission Method	Receiving Party	Permitted Uses	Notes
1.4.A.1. Project communications						
General communications & correspondence	EM, PDF	D, E, C	EM, EMA	D, E, C	R	
Meeting notices and agendas	EM, PDF	E	EM, EMA	D, C	R	
Meeting minutes	PDF	E	EM, EMA	D, C	R	
1.4.A.2. Contractor's submittals to Engineer						
Shop Drawings	PDF	C	EMA	E	M (1)	(1)
Product data	PDF	C	EMA	E	M (1)	(1)
Informational and closeout submittals:	PDF	C	EMA	E	M (1)	(1)
Documentation of delivery of maintenance materials submittals	PDF	C	EMA	E	M (1)	
1.4.A.3. Engineer's return of reviewed submittals to Contractor						
Shop Drawings	PDF	E	EMA	O., C	R	
Product data	PDF	E	EMA	O., C	R	
Informational and closeout submittals:	PDF	E	EMA	O., C	R	
Documentation of delivery of maintenance materials submittals	PDF	E	EMA	O. C	R	
1.4.A.4. Contract Modifications Documents						
Requests for interpretation to Engineer	PDF	C, D	EMA	E	M (1)	(1)
Engineer's interpretations (RFI responses)	PDF	E	EMA	C, D	R	
Engineer's clarifications to Contractor	EM, PDF	E	EM, EMA	C, D	R	
Engineer's issuance of Field Orders	PDF	E	EMA	C, D	R	
Potential Change Orders	PDF	E, D	EMA	C	R	
Change Proposals – submitted to Engineer	PDF	C	EMA	D, E	S	
Change Proposals – Engineer's response	PDF	E	EMA	C, D		
Change Orders (for Contractor signature)	PDF	E	EMA	C	R	(2)
1.4.A.5. Applications for Payment						(3)
1.4.A.6. Claims and other notices						(4)
1.4.A.7. Closeout Documents						
Record drawings (As-Built)	DWG and PDF	C	EMA	E, D	M (5)	(5)
Other record documents	PDF	C	EMA	E, D	M (5)	(5)
Contract closeout documents						

B. Key to Electronic Data Protocol Table:

Data Format:

EM .msg, .htm, .txt, .rtf, e-mail text
 W .docx, Microsoft® Word 2007 or later
 EX .xlsx, Microsoft® Excel 2007 or later
 PDF .pdf. Portable Document Format
 DWG .dwg. Autodesk AutoCAD 2013 drawing.

Transmitting Party:

D	DEPARTMENT
C	CONTRACTOR
E	ENGINEER

Transmission Method:

EM	Via e-mail
EMA	As an attachment to an e-mail transmission
CD	Delivered via compact disc
PW	Posted to Project website
FTP	FTP transfer to receiving FTP server

Receiving Party:

D	DEPARTMENT
C	CONTRACTOR
E	ENGINEER

Permitted Uses:

S	Store and view only
R	Reproduce and distribute
I	Integrate (incorporate additional electronic data without modifying data received)
M	Modify as required to fulfill obligations for the Project

Notes:

- (1) Modifications by ENGINEER to CONTRACTOR's submittals and requests for interpretations are limited to printing out, marking-up, and adding comment sheets.
- (2) May be distributed only to affected Subcontractors and Suppliers. Print out, sign document, and return executed ("wet") signatures to ENGINEER after Department Approval.
- (3) Submit printed Applications for Payment with original ("wet") signatures.
- (4) Submit notices, including Claims, in accordance with the notice provisions of the General Conditions.
- (5) Submit record drawings in native CAD format indicated when CONTRACTOR has executed ENGINEER's standard agreement for release of electronic files. In addition, always submit record drawings as a PDF file. Comply with requirements of Section 01 78 39, Project Record Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

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SECTION 01 32 16

PROGRESS SCHEDULE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Prepare and submit Progress Schedules in accordance with the General Conditions (as may be modified by the Supplementary Conditions) and this Section, unless otherwise accepted by ENGINEER.
2. Maintain and update Progress Schedules. Submit updated Progress Schedules as specified in this Section unless otherwise directed by ENGINEER.
3. ENGINEER's acceptance of the Progress Schedule, and comments or opinions concerning the activities in the Progress Schedule shall not control CONTRACTOR's independent judgment relative to means, methods, techniques, sequences, and procedures of construction. CONTRACTOR is solely responsible for complying with the Contract Times.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Interim Schedule:
 - a. Submit an interim schedule indicating CONTRACTOR's anticipated schedule for the Work for the first three (3) months in detail and for the remainder of the Work in summary form in accordance with Article 1.4 of the General Conditions.
2. Progress Schedules:
 - a. Submit preliminary Progress Schedule in accordance with the General Conditions, Section VIII, Article 1.6. Submit in accordance with Section 01 33 00, Submittal Procedures and Section 01 31 26, Electronic Communication Protocols.
 - b. Preliminary Progress Schedule shall consist of a CPM Diagram and schedule narrative.
 - c. After making revisions in accordance with ENGINEER's comments on the preliminary Progress Schedule, submit the Progress Schedule in accordance with the General Conditions. Submit in accordance with Section 01 33 00, Submittal Procedures. This schedule will constitute the Baseline Schedule.
 - d. Bi-monthly (every two weeks) project schedules with a 2-week look ahead shall be submitted in Excel format.
 - e. Submit updated Baseline Progress Schedule with schedule narrative as part of the monthly Contractor's Application for Payment. If a Progress Schedule remains unchanged from one payment application to the next, submit a written statement to that effect.

- f. Furnish each Progress Schedule submittal with letter of transmittal complying with requirements of Section 01 33 00, Submittal Procedures, and specifically indicating the following:
 - 1) Listing of activities and dates that have changed since the previous Progress Schedule submittal.
 - 2) Discussion of problems causing delays, anticipated duration of delays, and proposed countermeasures.
3. Recovery Schedules: Submit in accordance with this Section, and other provisions of the General Conditions.
4. Accelerated Schedules may be submitted for in accordance with General Conditions Section VIII, Article 5.3.
5. Adjusted Project Schedules shall be submitted in accordance with General Conditions Section VIII, Article 5.6
6. If CONTRACTOR doesn't intend to perform Work on the date with the Contract Time commences, CONTRACTOR must notify the DEPARTMENT as soon as possible in writing when work will commence. An interim schedule shall be submitted in accordance with Section VIII, Article 1.4. Within 20 days after starting work at the site, an updated Baseline Project Schedule shall be provided to the ENGINEER for review.
7. ENGINEER reviewed project schedules shall be managed as Record Documentation.

1.3 PROGRESS SCHEDULE FORMAT AND CONTENT

A. Format:

1. Type:
 - a. Gantt chart prepared using software such as Microsoft Project 2007 or later edition, Oracle Primavera P6, Oracle Primavera Project Planner – P3, or similar software.
2. Sheet Size: 11x17, unless otherwise accepted by ENGINEER.
3. Time Scale: Indicate first date of each work week.
4. Organization:
 - a. Indicate on the separate Schedule of Submittals dates for submitting and reviewing Shop Drawings, Samples, and other submittals.
 - b. Group deliveries of materials and equipment into a separate sub-schedule that is part of the Progress Schedule.
 - c. Group construction into a separate sub-schedule (that is part of the Progress Schedule) by activity.
 - d. Group critical activities that dictate the rate of progress (the “critical path”) into a separate sub-schedule that is part of the Progress Schedule. Clearly indicate the critical path on the Progress Schedule. At minimum activities should align with Bid Form.
 - e. Organize each sub-schedule item in accordance with the approved Schedule of Values.
5. Activity Designations: Indicate title and related Specification Section number.
6. Deliver schedules in both working file and PDF formats with the accompanying narrative.

- B. Content: Progress Schedules shall indicate the following:
1. Dates for shop-testing, as applicable.
 2. Delivery dates for materials and equipment to be incorporated into the Work.
 3. Dates for beginning and completing each phase of the Work by activity and by trade.
 4. Dates for start-up and check-out, field-testing, and instruction of operations and maintenance personnel.
 5. Dates corresponding to the Contract Times, and planned completion date associated with each Milestone (if any), Substantial Completion, and readiness for final payment.
- C. Coordinate the Progress Schedule with the Schedule of Submittals.
- D. 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.
- E. Any float identified in the approved (or approved as noted) Baseline Schedule will be available for the project. The use of float shall be documented in each progress payment. If the 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 the DEPARTMENT 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 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 DEPARTMENT 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.

1.4 RECOVERY SCHEDULES

A. Recovery Schedules – General:

1. When updated Progress Schedule indicates that the ability to comply with the Contract Times falls five or more days behind schedule, and the delay is within the control of CONTRACTOR, and there is no corresponding Change Order or Work Change Directive to support an extension of the Contract Times, CONTRACTOR shall prepare and submit a Progress Schedule demonstrating CONTRACTOR's plan to accelerate the Work to achieve compliance with the Contract Times ("recovery schedule") for ENGINEER's acceptance.
2. Submit recovery schedule within five days after submittal of updated Progress Schedule where need for recovery schedule is indicated.

B. Implementation of Recovery Schedule:

1. At no additional cost to DEPARTMENT, do one or more of the following: furnish additional resources (additional workers, additional construction equipment, increased work hours or additional shifts, and other resources), provide suitable materials, expedite procurement of materials and equipment to be incorporated into the Work, and other measures necessary to complete the Work within the Contract Times.
2. Upon acceptance of recovery schedule by ENGINEER, incorporate recovery schedule into the next Progress Schedule update.

C. Lack of Action:

1. CONTRACTOR's refusal, failure, or neglect to take appropriate recovery action, or to submit a recovery schedule, shall constitute reasonable evidence that CONTRACTOR is not prosecuting the Work or separable part thereof with the diligence that will ensure completion within the Contract Times. Such lack of action shall constitute sufficient basis for Department to exercise remedies available to Department under the General Conditions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 32 33

AERIAL AND GROUND PHOTOGRAPHIC AND VIDEO DOCUMENTATION

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Scope:
 - 1. Furnish Unmanned Aircraft Systems (UAS), also known as a Drone, aerial imagery (photographic and video documentation, as required) and ground photographic documentation (still photographs only) for the following phases of construction:
 - a. Pre-construction – prior to mobilization to Site, prior to land disturbance.
 - b. Construction progress – frequency, as specified herein, including but not limited to, at Substantial Completion and at Final Completion.
 - c. Final – following final demobilization.
- B. Ground camera equipment specifications including camera resolution requirements and photograph submission requirements.
- C. Drone aerial imagery equipment specifications including camera resolution requirements and aerial photograph and video submission requirements.

1.2 REFERENCES

- A. DEC Policy CP-71 / Acquisition and Use of Unmanned Aircraft, March 29, 2021.
- B. Low Altitude Authorization and Notification Capability (LAANC).
- C. Federal Aviation Administration (FAA) rules and regulations.
- D. Title 14 of Code of Federal Regulations (CFR) Part 107 – Small Unmanned Aircraft Systems.
- E. EPA IT/IM Directive Policy – Unmanned Aircraft Systems (UAS) Policy, July 7, 2005.
- F. National Wildfire Coordinating Group (NWCG) Aviation Mishap Response Guide and Checklist.

1.3 QUALITY ASSURANCE

- A. CONTRACTOR personnel, or their Subcontractor, operating Unmanned Aircraft Systems (UAS or drone) shall be licensed in accordance with all applicable rules and regulations, including FAA and 14 CFR Part 107 requirements.

- B. Personnel shall include the remote pilot in command (PIC), the visual observer (if one is used/required), and the person operating the flight controls of the UAS (if different from the PIC).
- C. Personnel must maintain a visual line of sight (VLOS) to the aircraft operation throughout the entire flight with vision that is unaided by any device other than corrective lenses. The VLOS is established in order to:
 - 1. Know the UAS location;
 - 2. Monitor the UAS attitude, altitude, and direction of flight;
 - 3. Observe the airspace for other air traffic or hazards; and
 - 4. Ensure that the UAS does not endanger the life or property of another.
- D. When a visual observer is used during the UAS operation, all of the following requirements must be met:
 - 1. The remote PIC, the person operating the flight controls of the UAS, and the visual observer must maintain effective communication with each other at all times.
 - 2. The remote PIC must ensure that the visual observer is able to see the UAS in the manner specified in paragraph (C) of this section.
 - 3. The remote PIC, the person operating the flight controls of the UAS, and the visual observer must coordinate to do the following:
 - a. Scan the airspace where the UAS is operating for any potential collision hazard; and
 - b. Maintain awareness of the position of the UAS through direct visual observation.
- E. CONTRACTOR shall be responsible for documenting all activity at the Site in accordance with the following schedules:
 - 1. Ground photography shall be used to document the project activity and work progress on a frequency of twice per week (minimum), at the project milestones specified herein, and as directed by the DEPARTMENT or ENGINEER.
 - a. Ground camera requirements:
 - (1) Minimum of 10 megapixel still camera capability.
 - (2) Full color photographs.
 - (3) Ground camera aspect ratio shall be 4:3.
 - (4) Ground camera settings shall be set according to site conditions, light conditions, and the subject being photographed.
 - (5) All ground photograph files shall be JPG format, unless otherwise requested by DEPARTMENT or ENGINEER.

2. Drone aerial imagery shall be used to document the project activity and work progress on a frequency of twice per month (minimum), at the milestones specified herein, and as directed by the DEPARTMENT or ENGINEER.
 - a. UAS-mounted camera requirements:
 - (1) Minimum of 10 megapixel still camera.
 - (2) Drone camera settings shall be set according to site conditions, light conditions, and the subject being photographed.
 - (3) Minimum of 1080p, 60 frames per second video camera.
 - (4) All video files shall be MP4 or MOV formats, and all still photographs shall be JPG format unless otherwise requested by DEPARTMENT or ENGINEER.
- F. CONTRACTOR shall be responsible to provide UAS equipment and accessories of appropriate capabilities (multiple battery packs, memory capacity, etc.) to perform the work and meet the requirements specified.
- G. Photographic images and video shall be suitably staged and set up ("framed"), focused, and shall have adequate lighting to illuminate the Work and conditions that are the subject of the photograph.
- H. Photographic images and video that are not well framed, focused, or do not have adequate lighting, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.

1.4 SUBMITTALS

- A. Licenses and Certifications. Submit the following:
 1. Remote Pilot Certificate (shall be current) from the FAA for all drone pilots proposed for the project, or for the certified Pilot in Command (PIC) overseeing the operation.
 2. Insurance: must maintain Commercial Drone Liability Insurance with a minimum of \$1,000,000 liability limit. Submit insurance certificate(s) demonstrating the proper current insurance limits and listing additional insured(s) according to the requirements of the Contract Documents.
- B. Pre-Flight Submittals. Submit the following prior to each flight:
 1. Documentation of authorization for each flight plan (as needed) through LAANC.
- C. Pre-Flight Submittals required by CP-71:
 1. CONTRACTOR shall complete the DEPARTMENT's Unmanned Aircraft System (UAS) Mission Planning Form and submit to the DEPARTMENT or ENGINEER.
 2. CONTRACTOR shall allow for a DEPARTMENT review period of thirty (30) days and shall expect a response (approval or modifications required) in writing.

3. CONTRACTOR shall not proceed with any UAS work without written authorization from the DEPARTMENT.

D. Informational Submittals. Submit the following:

1. Pre-construction Photographic and Video Documentation: Submit acceptable pre-construction photographic and video documentation (digital files) prior to mobilizing to and disturbing the Site. Submit pre-construction photographic and video documentation not later than submittal of the first Application for Payment, unless other schedule for pre-construction photographic and video documentation as accepted by ENGINEER.
2. Construction Progress Photographic and Video Documentation: Submit acceptable construction progress photographic and video documentation (digital files) not less-often than monthly, unless otherwise agreed to by ENGINEER.
3. Qualifications Statements:
 - a. Work shall be performed by a photographer and drone pilot meeting the requirements of this Specification and applicable regulations. The photographer and drone pilot shall be proficient in the type of work specified in this section. The CONTRACTOR shall provide individual(s) demonstrating the requisite proficiencies, to the satisfaction of the ENGINEER.

E. Closeout Submittals. Submit the following:

1. Final Photographic and Video Documentation: Submit acceptable photographic and video documentation prior to requesting the inspection by ENGINEER for Substantial Completion and Final Completion.
2. Photographic and Video Documentation shall be considered part of the Record Documentation. Photographic and Video Documentation shall not replace or supplant As-Built Drawings or other documentation required by Contract Documents.

- F. CONTRACTOR shall host and maintain for the benefit of the ENGINEER and DEPARTMENT a secured, password enabled/encrypted sharepoint site or dropbox site for the secure transfer of electronic files.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 DOCUMENTATION - GENERAL

- A. The documentation specifications in this Part shall be used as default requirements in the absence of an alternate plan submitted by CONTRACTOR, and reviewed and approved by ENGINEER and/or DEPARTMENT.
- B. All photography, video and drone flights shall be performed only by DEPARTMENT-approved professionals.
- C. Digital Files of Videos and Photographs:
 - 1. For each photograph, furnish high-quality digital image in "JPG" file format compatible with Microsoft Windows 10 and higher operating systems.
 - 2. Image resolution shall be sufficient for clear, high-resolution prints. Minimum resolution shall be 10 megapixels.
 - 3. For each video, furnish high-quality (minimum of 1080p, 60 frames per second) digital video file in MP4 or MOV file format, unless otherwise requested by DEPARTMENT or ENGINEER.
 - 4. Do not imprint date and time in the images, unless specifically directed by DEPARTMENT or ENGINEER.
 - 5. Electronic image filename shall describe the image; do not submit files with filenames automatically created by a digital camera. For example, an acceptable electronic filename would be, "Project Name Preconstruction 01.05.2022 Photo 1.jpg", or "Project Name Postconstruction 01.05.2022 Video 1.MP4".
 - 6. Electronic folder names shall include the project, the date, etc. Do not include folders automatically created by a digital camera. For example, an acceptable folder name would be: "Project Name – Photos 04.06.2022", or "Project Name – Videos 04.06.2022".
 - 7. Form of Digital Video and Photograph Submittals
 - a. CONTRACTOR shall host and maintain a secured, password enabled/encrypted sharepoint site or dropbox site for the secure transfer of electronic files.
 - b. Hardcopy photographs shall not be required unless specifically requested by DEPARTMENT or ENGINEER.
 - c. Include in the sharepoint or dropbox site a file index and appropriately labeled and dated folders for each file transfer containing photographic and video documentation. File index shall list each folder, list the files in each folder by filename, and for each file:
 - (1) Date(s) photographs were taken.
 - (2) Name of Owner.

- (3) Name of the Site.
- (4) Project name.
- (5) Photographer name and address.
- (6) Drone pilot name and address (as applicable).

3.2 PRE-CONSTRUCTION PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Ground Photography

1. Obtain and submit pre-construction photographic documentation to record Site conditions prior to construction. Photographs shall document all locations and areas of all work of the Contract, including all areas which will be disturbed by the work.
2. Pre-construction photographs are not part of the required number of construction progress photographs specified in Article 3.3 of this Section.
3. Furnish ground-based pre-construction video of all locations and areas of work of the Contract, including indoor and outdoor work areas, staging areas and all areas which will be disturbed by the work.
4. If disagreement arises on the condition of the Site and insufficient pre-construction photographic documentation was submitted prior to the disagreement, CONTRACTOR shall restore the conditions in question as directed by ENGINEER and to satisfaction of the DEPARTMENT.

B. Drone Aerial Imagery and Video

1. Take pre-construction aerial photographs at the same time that pre-construction ground photography is performed. The following aerial photographs shall be taken during the pre-construction aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:
 - a. Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph;
 - b. Four (4) photographs from altitude of 400 feet, straight down covering each work area/quadrant of the Site;
 - c. Eight (8) photographs from altitude of between 100 and 150 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W, and NW with horizon visible in each photograph; and
 - d. Four (4) roof-height photographs (if structures are present), from center of property/Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.
2. Take pre-construction video of the Site from an altitude of 100 feet, unless otherwise directed by ENGINEER or DEPARTMENT. Video shall be performed in a slow orbit of the Site covering all proposed work areas, including all areas which

will be disturbed by the work.

3. Regulate the speed of the UAS during the flight to provide clear video. Video files that are not well framed or focused, resulting from the speed of the UAS, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.
4. When possible, aerial based video should be captured using autonomous flight controls to provide smooth and precise footage.

3.3 CONSTRUCTION PROGRESS PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Ground Photography

1. Progress Photographs:
 - a. Approved photographer shall take photographs at the Site not less often than twice per week.
 - b. Take not less than 10 photographs each time photographer is at the Site.
2. Obtain and submit photographic documentation of each area of work as directed by ENGINEER at the time photographic documentation is taken.
3. Take progress, ground-based video, when directed by ENGINEER or DEPARTMENT. Ground-based video shall be conducted in accordance with Article 3.2.A.3.
4. Photographic documentation, documenting adequate completion of the work to the satisfaction of the ENGINEER, shall be required for Substantial Completion and for Final Completion.

B. Drone Aerial Imagery and Video

1. Progress Photographs:
 - a. Take photographs not less often than bi-weekly or twice per month, or as directed by ENGINEER or DEPARTMENT. The following photographs shall be taken during each aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:
 - (1) Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph;
 - (2) Four (4) photographs from altitude of 400 feet, straight down covering each work area/quadrant of the Site;
 - (3) Eight (8) photographs from altitude of between 100 and 150 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph; and

- (4) Four (4) roof-height photographs (if structures are present), from center of Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.

2. Progress Video:

- a. Take video of the Site, as directed by DEPARTMENT or ENGINEER, at a minimum of two (2) occasions, not including Pre-Construction and Final Documentation events.
- b. Video shall be taken from altitude of 100 feet – slow orbit of the Site covering all active work areas, unless otherwise directed by ENGINEER or DEPARTMENT.
- c. Regulate the speed of the UAS during the flight to provide clear video. Video files that are not well framed or focused, resulting from the speed of the UAS, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.
- d. When possible, aerial based video should be captured using autonomous flight controls to provide smooth and precise footage.

3.4 FINAL PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Final Ground Photographs:

1. Take photographs at time and day acceptable to ENGINEER and following completion of all construction and demobilization. Work documented in final (record) photographs shall be generally complete, including all features of completed work and restored areas, as directed by the ENGINEER and DEPARTMENT.

B. Final Drone Aerial Imagery and Video

1. Take final aerial photographs at the same time that final ground photography is performed. The following aerial photographs shall be taken during the final aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:
 - a. Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW, with horizon visible in each photograph;
 - b. Four (4) photographs from altitude of 400 feet, straight down covering each work area/quadrant of the Site;
 - c. Eight (8) photographs from altitude of between 100 and 150 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph; and
 - d. Four (4) roof-height photographs (if structures are present), from center of Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.

2. Take final video of the Site from an altitude of 100 feet, or as approved by DEPARTMENT or ENGINEER. Video shall be performed in a slow orbit of the Site covering all final and restored work areas.

3.5 MISHAP REPORTING

- A. The CONTRACTOR shall immediately notify the Department when an “Aircraft Incident” or mishap occurs, including:
 1. Any missing aircraft.
 2. Any collision.
 3. Injury to any person or any loss of consciousness.
 4. Damage to any property other than the UAS.
- B. The CONTRACTOR shall support the DEPARTMENT and other agencies with subsequent investigations into the cause of the mishap and with the implementation of corrective actions that are required by CONTRACTOR as a result of the mishap.

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and furnish submittals in accordance with the General Conditions, Section VIII, Article 5.24 through 5.30.
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 materials and 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; quantities; information pertaining solely to fabrication processes; means, methods, sequences, procedures, and techniques of construction; safety precautions and programs incident thereto; and for coordinating the work of all trades.
4. CONTRACTOR's signature of submittal's stamp and letter of transmittal shall be CONTRACTOR's representation that CONTRACTOR has complied with his obligations under the Contract Documents relative to that submittal. ENGINEER and DEPARTMENT shall be entitled to rely on such representations by CONTRACTOR.
5. Provisions of the General Conditions, as may be modified by the Supplementary Conditions, apply to all CONTRACTOR-furnished submittals required by the Contract Documents, regardless of whether such submittals are other than Shop Drawings or Samples.

B. Samples:

1. Submittal of Samples shall comply with the General Conditions, as may be modified by the Supplementary Conditions, this Section, and the Specifications Section in which the Sample is specified.
2. Furnish at the same time those Samples and submittals that are related to the same element of the Work or Specifications 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 materials, all related parts and attachments, and full range of color, texture, pattern, and materials.

C. Restrictions on Quantity of Submittals and Compensation of DEPARTMENT:

1. CONTRACTOR shall furnish required submittals with sufficient information and accuracy to obtain required approval or acceptance of submittal by ENGINEER with not more than the number of resubmittals indicated in the General Conditions (as may be modified by the Supplementary Conditions).
2. Total number of CONTRACTOR's submittals shall not exceed 25 percent above the total number of first-time submittals indicated in the Schedule of Submittals initially accepted by ENGINEER in accordance with the General Conditions. ENGINEER will record ENGINEER's time for reviewing submittals of Shop Drawings, Samples, and other submittals and items requiring approval or acceptance, beyond the quantity of first-time submittals indicated in the Schedule of Submittals initially accepted by ENGINEER, and CONTRACTOR shall reimburse DEPARTMENT for ENGINEER's charges for such time.
3. In the event that CONTRACTOR requests a substitution for a previously approved item, Contractor shall reimburse DEPARTMENT for ENGINEER's charges for such time unless the need for such substitution is beyond the control of CONTRACTOR.
4. DEPARTMENT may impose set-offs against CONTRACTOR for the costs for which CONTRACTOR is to reimburse or compensate DEPARTMENT, in accordance with the General Conditions.

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 Specifications Sections; when type of submittal is not designated 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 Specifications 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, testing for a 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 plans for shutdowns and tie-ins and other procedural submittals.
- j. Qualifications statements.
- k. Administrative submittals including:
 - 1) Progress Schedules.
 - 2) Schedules of Submittals.
 - 3) Schedules of Values.
 - 4) Photographic documentation.
 - 5) Coordination drawings, when submittal of such is required.
 - 6) Copies of permits obtained by CONTRACTOR.
 - 7) Field engineering reports, survey data, and similar information.
- 3. Closeout Submittals include:
 - a. Maintenance contracts.
 - b. Operations and maintenance data.
 - c. Bonds, such as special maintenance bonds and bonds for a specific material, equipment item, or system.
 - d. Warranty documentation.
 - e. Record documentation.
 - f. Sustainable design closeout documentation.
 - g. Software.
 - i. Keying.
- 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, request an interpretation from ENGINEER and 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. Reports, documentation, and permit applications required to be furnished by CONTRACTOR to authorities having jurisdiction.
- C. In accordance with Section III, Article 5, the Apparent Low Bidder shall, at a minimum, submit the following with the required five-day submittal package, 5 days following the Notice of Apparent Low Bidder.
1. Health and Safety Plan
 - a. Health and Safety.
 - b. Decontamination of Equipment and Personnel.
 - c. Contingency Measures.
 - d. Community Air Monitoring.
 - e. Odor Control Plan.
 2. Work Plan at minimum shall include:
 - a. Procedures for adequate and safe excavation of soils and materials including a contingency plan detailing procedures and methods to be employed to prevent, contain, and recover spills during the work.
 - b. Description of equipment to be used on site with appropriate safety devices needed to undertake the remediation of the site.
 - c. Identification of the permitted treatment, storage, and disposal facilities (TSDF) proposed to receive liquid or solid wastes to be transported off-site.
 - d. Identification of permits required to conduct the work.
 - e. Worksite layout showing, at a minimum, equipment and material staging areas, trailers, decontamination station, and staging procedures.
 - f. Detailed construction drawing(s) of the proposed decontamination station.
 - g. Procedures for excavating, handling, storing, and placing soils.
 - h. Procedures for handling liquid wastes and groundwater.
 - i. Provisions for control of fugitive air emissions and dust control.
 - j. Other requirements necessary to provide security, staging, sampling, testing, removal, and disposal of wastes.
 - k. Procedures for completing any other major aspect of the work including:
 1. Sampling and Quality Control Plan
 2. Sequencing of Work.
 3. Soil Erosion and Sedimentation Control Measures.
 4. Transportation Plans
 6. Site Security.
 7. Miscellaneous Requirements.
- D. Required for Notice of Intent to Award and Notice to Proceed. The CONTRACTOR shall submit the following plans for the Work by the time of the Notice to Proceed, following receipt of the Notice to Intent to Award:
1. Bid Breakdown of items reflecting adjusted contract amount as reflected in Section III- Bidding Information and Requirements, Article 12- Bid Breakdown.
 2. Six (6) Executed copies of the contract agreements with original signatures;
 3. Performance Bond and Insurances;

4. M/WBE waiver form if contract goals are not expected to be met;
 5. Completed NYS Office of State Comptroller Substitute Form W-9;
 6. Service-Disabled Veteran-Owned Business SDVOB Utilization Plan on Form SDVOC 100.
 7. Acceptable 5-day submittal package as described in Paragraph 1.2.C above; and
 8. Authorizing resolution for (Authority to sign Contract on behalf of the firm).
- E. Submittals following Notice to Proceed. Major submittal requirements identified in other sections of the Specifications are listed below, however, this list is not inclusive of all submittals required elsewhere:
1. Final plans, engineered approved plans, as described in Paragraph 1.2.C.
 2. Interim progress schedule, schedule of values, and technical submittals detailed in the first three months of the progress schedule
 3. All other technical submittals required by the contract in accordance with the approved Submittal Registry and in accordance with General Conditions , Articles 5.24 through 5.30.
 4. All other submittals as required by the Supplementary Specifications applicable to the Work being performed or as requested by the ENGINEER.

1.3 REQUIREMENTS FOR SCHEDULE OF SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Schedule of Submittals:
 - a. Timing:
 - 1) Furnish submittal within time frames indicated in the Contract Documents.
 - 2) Submit updated Schedule of Submittals with each submittal of the updated Progress Schedule.
 - b. Content: In accordance with the General Conditions, as may be 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 received by ENGINEER.
 - 2) Whether submittal will be for a substitution or "or-equal". Procedures for requesting approval of substitutes and "or-equals" are specified in the General Conditions, Section 01 25 00, Substitution Procedures, and Section 01 62 00, Product Options (for "or-equals").
 - 3) Date by which ENGINEER's response is required. Not less than 14 days shall be allowed for ENGINEER's review, starting upon ENGINEER's actual 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, if any.
- c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules in Section 01 32 16, Progress Schedule.
- 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. Assign submittal numbers as follows:
 - a. First part of submittal number shall be the applicable Specifications 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 furnished under the associated Specifications Section.
 - c. Typical submittal number for the third submittal furnished for Section 40 05 19, Ductile Iron Process Pipe, would be "40 05 19-003".
 - 2. Review Cycle Number: Shall be a number indicating the initial submittal or re-submittal associated with each submittal number:
 - a. "01" = Initial (first) submittal.
 - b. "02" = Second submittal (e.g., first re-submittal).
 - c. "03" = 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-	01
Second review cycle (first re-submittal) of third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	02

B. Letter of Transmittal for Submittals:

1. Furnish separate letter of transmittal with each submittal. Each submittal shall be for one Specifications Section.
2. At beginning of each letter of transmittal, include a reference heading indicating: CONTRACTOR's name, DEPARTMENT's name, Project name, Contract designation, 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. ensure proper coordination of the Work;
 - b. determine that each submittal is in accordance with CONTRACTOR's means and methods as applicable;
 - 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 furnished 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: _____
Contract Designation: _____
Date: _____

----- *Reference* -----

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 for Contractor by: _____”

D. Submittal Marking and Organization:

1. Mark on each page of submittal and each individual component submitted with submittal number and applicable Specifications paragraph. Mark each page of each submittal with the submittal page number.
2. Arrange submittal information in same order as requirements are written in the associated Specifications Section.
3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to ENGINEER.
4. Package together submittals for the same Specifications Section. Do not furnish 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 FORMAT**

	Address for Deliveries	Contact Person	E-mail Address	Format*	No. of Printed Copies
a.	Engineer: (TBD)	(TBD)	(TBD)	E	Zero
b.	Resident Project Representative: At the Site.	(TBD)	(TBD)	E & P	One
* Format: E = Electronic files; P = Printed copies. 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 four inches by four 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 quantity of Samples required in Specifications. If quantity of Samples is not indicated in the associated Specifications Section, furnish not less than 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, so advise ENGINEER in writing and furnish 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 indicated in Table 01 33 00-A, unless otherwise directed by ENGINEER.
3. Closeout Submittals:
 - a. Furnish the following Closeout Submittals in accordance with Table 01 33 00-A: maintenance contracts; bonds for specific materials, equipment, or systems; warranty documentation; and sustainable design closeout documentation. On documents such as maintenance contracts and bonds, include on each document furnished original ("wet") signature of entity issuing said document. When original "wet" signatures are required, furnish such submittals in printed form and electronic form to ENGINEER, and to other entities furnish as indicated in Table 01 33 00-A.
 - b. Record Documentation: Submit in accordance with Section 01 78 39, Project Record Documentation.
 - c. Software: Submit number of copies required in Specifications 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 DEPARTMENT's computer(s) or microprocessor(s).
4. Maintenance Material Submittals: For spare parts, extra stock materials, and tools, furnish quantity of items specified in associated Specifications Section.

F. Electronic Submittals:

1. Format: Electronic files shall be in “portable document format” (.PDF). Files shall be electronically searchable.
2. Organization and Content:
 - a. Each electronic submittal shall be one file; do not divide individual submittals into multiple files each.
 - b. When submittal is large or contains multiple parts, furnish PDF file with bookmark for each section of submittal.
 - c. Content shall be identical to printed submittal. First page of electronic submittal shall be CONTRACTOR’s letter of transmittal.
3. Quality and Legibility: Electronic submittal files shall be made from the original and shall be clear and legible. Do not submit scans of faxed copies. Electronic file shall be full size of original, printed documents. Properly orient all pages for reading on a computer screen.
4. Provide sufficient Internet service and e-mail capability for CONTRACTOR’s use in transferring electronic submittals, receiving responses to electronic submittals, and associated electronic correspondence. Check not less than once per day for distribution of electronic submittals, electronic responses to submittal, and electronic correspondence related to submittals.
5. Submitting Electronic Files:
 - a. Transmit electronic files in accordance with Section 01 31 26, Electronic Communication Protocols.

G. Distribution:

1. Distribution of ENGINEER’s Response via Electronic Files: Upon completion of ENGINEER’s review, electronic submittal response will be distributed by ENGINEER to
 - a. CONTRACTOR.
 - b. Other prime contractors.
 - c. DEPARTMENT.
 - d. Resident Project Representative (RPR).
 - e. ENGINEER’s file.

H. Resubmittals: Refer to the General Conditions for requirements regarding resubmitting required submittals.

I. CONTRACTOR shall furnish required submittals with complete information and accuracy in order to achieve required approval of an item within two submittals. All costs to ENGINEER involved with subsequent submittals of Shop Drawings, Samples or other items requiring approval, will be back-charged to CONTRACTOR, at the rate equal to the ENGINEER’s charges to the DEPARTMENT under the terms of the ENGINEER’s agreement with the 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 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. In

the event that CONTRACTOR requests a substitution for a previously approved item, all of ENGINEER'S costs in the reviewing and approval of the substitution will be back-charged to CONTRACTOR unless the need for such substitution is beyond the control of CONTRACTOR.

- J. Shop Drawings shall be submitted well in advance of the need for the material or equipment for construction and with ample allowance for the time required to make delivery of material or equipment after data covering such is approved. CONTRACTOR shall assume the risk for all materials or equipment which are fabricated or delivered prior to the approval of Shop Drawings. Materials or equipment will not be included in periodic progress payments until approval thereof has been obtained in the specified manner.
- K. ENGINEER will review and approve or disapprove Shop Drawings and samples within 14 days of receipt from CONTRACTOR. The ENGINEER will process all submittals promptly, but a reasonable time should be allowed for this, for the Shop Drawings being revised and resubmitted, and for time required to return the approved Shop Drawings to CONTRACTOR.
- L. It is CONTRACTOR'S responsibility to review submittals made by his suppliers and Subcontractors before transmitting them to ENGINEER to assure proper coordination of the Work and to determine that each submittal is in accordance with his desires and that there is sufficient information about materials and equipment for ENGINEER to determine compliance with the Contract Documents. Incomplete or inadequate submittals will be returned for revision without review.
- M. Any related Work performed or equipment installed without an "Approved" or "Approved as Noted" Shop Drawing will be at the sole responsibility of the CONTRACTOR.

1.5 ENGINEER'S REVIEW

- A. Timing: ENGINEER's review will conform with timing indicated in the Schedule of Submittals accepted by ENGINEER.
- B. Submittals not required by the Contract Documents will not be reviewed by ENGINEER and will not be recorded in ENGINEER's submittal log. All printed copies of such submittals will be returned to CONTRACTOR. Electronic copies of such submittals, if any, will not be retained by ENGINEER.
- C. Action Submittals, Results of ENGINEER's Review: Each submittal will be given one of the following dispositions by ENGINEER:
 - 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, and in accordance with the corrections indicated in the ENGINEER’s submittal response.
 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, and in accordance with corrections indicated in ENGINEER’s submittal response. Furnish 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. “Not Approved” disposition may also be applied to submittals that are incomplete. Upon return of submittal marked “Not Approved”, repeat initial submittal procedure utilizing approvable material or equipment, with a complete submittal clearly indicating all information required.
- 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 complies with 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 materials and equipment with submittals with this disposition may be shipped or operated, as applicable.
 - b. Not Accepted: Submittal does not indicate compliance with applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and compliance with the Contract Documents.
- 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 + +

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SECTION 01 35 29

CONTRACTOR'S HEALTH AND SAFETY PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and maintain a written, Site-specific, health and safety plan (SSHASP), and conduct all construction activities in safe manner that avoids:
 - a. injuries to employees, Subcontractors, and other persons with an interest at or near the Site;
 - b. employee exposures to health hazards above occupational limits established by Laws or Regulations, American Conference of Governmental Industrial Hygienists (ACGIH), and Nuclear Regulatory Commission (NRC), as applicable;
 - c. exposure of the public and DEPARTMENT's employees to air contaminants above levels established for public exposure by the USEPA, NRC, and by other authorities having jurisdiction at the Site;
 - d. significant increases in concentrations of contaminants in soil, water, or sediment near the Site; or
 - e. violations of OSHA Regulations, or other Laws or Regulations.
2. 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.
3. 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.
4. 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.
5. 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 apprised, 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.

B. Related Sections:

1. Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Preparer of SSHASP:

- a. Engage a Certified Industrial Hygienist (CIH), accredited by the American Board of Industrial Hygiene, or Certified Safety Professional certified by the Board of Certified Safety Professionals, to prepare or supervise preparation of SSHASP. The CIH must have a minimum of two years of experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations.
- b. SSHASP preparer shall be thoroughly familiar with: (i) Laws and Regulations and industry standards of safety and protection relating to health and safety pertaining to the Work; (ii) the requirements of the Contract Documents relative to health, safety, and protection; (iii) health and safety hazards associated with the Work and appropriate protections therefor; and (iv) CONTRACTOR's and DEPARTMENT's safety programs.
- c. SSHASP preparer shall have previously prepared site-specific health and safety plans for not less than five construction projects similar in nature, scope, and complexity to the Work.
- d. Submit preparer's qualifications with SSHASP.

2. Safety Officer:

- a. The designated Safety Officer (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.

3. Health and Safety Technicians:

- a. 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.

- B. Regulatory Requirements: Laws and Regulations applying to the Work under this Section include, but are not limited to:
1. 29 CFR 1904 (OSHA), Recording and Reporting Occupational Injuries and Illnesses.
 2. 29 CFR 1910 (OSHA), Occupational Safety and Health Standards.
 3. 29 CFR 1926 (OSHA), Safety and Health Regulations for Construction.
 4. 49 CFR 171.8, Transportation, Definitions and Abbreviations.
 5. 40 CFR 261.3, 264, and 265, Resource Conservation and Recovery Act (RCRA).

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. CONTRACTOR's SSHASP, in accordance with this Section. Submit within times indicated in Article 1.4 of this Section.
 2. Job safety analyses (JSA) submittals for each action required for the Work that is not covered in CONTRACTOR's SSHASP.
 3. Reports:
 - a. Health and safety reports.
 - b. Accident reports.
 4. Qualifications Statements:
 - a. Qualifications for SSHASP preparer, including copy of valid, applicable certifications.

1.4 SSHASP AND JSA SUBMITTALS

- A. Timing of Submittals:
1. Submit SSHASP the sooner of: seven days prior to pre-construction conference, or 30 days prior to CONTRACTOR's scheduled mobilization at the Site.
 2. Do not perform Work at the Site until written SSHASP has been accepted by ENGINEER.
 3. When an element of the Work or work activity is not covered by the SSHASP, prepare and submit a JSA and obtain ENGINEER's acceptance of JSA before performing the work activity or activities covered by such JSA.
 4. Delays in the Work Associated with Submittal or Review of SSHASP and JSAs:
 - a. Notwithstanding other provisions of the Contract Documents, changes in the Contract Price or Contract Times will not be authorized due to delay by CONTRACTOR in developing, submitting, revising, or obtaining acceptance of the SSHASP.
- B. Limitations of ENGINEER's Review of SSHASP and JSAs:
1. ENGINEER's review and acceptance of SSHASP and JSAs (if any) will be only to determine if the topics covered in SSHASP comply with the Contract Documents and specific requirements of safety documents referenced therein (such as DEPARTMENT's safety programs, if any).

2. ENGINEER's review and acceptance will not extend to safety measures, means, methods, techniques, procedures of construction, or whether representations made in the SSHASP and JSAs (if any) comply with Laws and Regulations, or standards of good practice.
3. CONTRACTOR's responsibility for safety and protection at the Site shall be as indicated in the Contract Documents. Nothing associated with ENGINEER's review or acceptance of SSHASP or JSAs will create or imply any obligation by ENGINEER to oversee or become, in any way, responsible for CONTRACTOR's safety obligations under the Contract Documents.

1.5 CONTRACTOR'S HEALTH AND SAFETY PROGRAM

A. General:

1. Known prior use(s) of the Site are indicated.
2. The Site is classified as hazardous waste site. Presence of Constituents of Concern (if any), where known to DEPARTMENT and ENGINEER, are indicated in the reports and drawings (if any) of such Hazardous Environmental Conditions listed in the Supplementary Conditions and/or Limited Site Data.
3. Each employer working at the Site shall develop and implement a written SSHASP for their employees and other individuals for whom such employer is responsible.
4. When applicable (including when the Site includes one or more Hazardous Environmental Conditions), SSHASP shall comply with 29 CFR 1904, 29 CFR 1910, 29 CFR 1926, and other Laws and Regulations.
5. Include in the SSHASP requirements for complying with DEPARTMENT's Site-specific hazard/emergency response plans, if any. During the Project, comply with DEPARTMENT's hazard/emergency response plans.
6. 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 items in accordance with 29 CFR 1910.120(I)(2).

B. Location:

1. Retain at the Site a copy of complete SSHASP, JSAs (if any), and related information.
2. Retain copy of SSHASP, JSAs (if any), and related information at CONTRACTOR's project office.
3. Throughout the Project, update as necessary all copies of SSHASP, JSAs, and related information.
4. Copies of SSHASP, JSAs, and other related information shall be made available to CONTRACTOR's employees, Subcontractors, Suppliers, DEPARTMENT, and ENGINEER immediately upon request.

C. SSHASP Content: SSHASP shall address and include the following:

1. Address safety and health hazards of each phase of operations at the Site and shall include requirements and procedures for employee protection.

2. CONTRACTOR's organizational structure and other information required by Paragraph 1.5.D of this Section.
3. Comprehensive work plan.
4. Job safety and health risk or hazard analysis for each task and operation found in the work plan.
5. Employee training assignments including copies of OSHA 40-hour, 24-hour supervised field activities, eight-hour supervisors, and eight-hour refresher training certificates for each CONTRACTOR and Subcontractor employee assigned to the Project.
6. Personal protective equipment (PPE) to be used by employees for each task and activity performed. Include respirator fit test certificates for CONTRACTOR and Subcontractor employees assigned to the Project.
7. Medical Surveillance Requirements: Medical clearance certificates for all CONTRACTOR and Subcontractor employees assigned to the Project. The physical examination shall also include but not be limited to the following minimum requirements:
 - a. Complete blood profile;
 - b. 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;
 - c. Urine analysis;
 - d. "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;
 - e. Electrocardiogram;
 - f. Chest X-ray (if recommended by examining physician in accordance with good medical practice);
 - g. Pulmonary function;
 - h. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.
 - i. 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.
 - j. Tetanus booster shot (if no inoculation has been received within the last five years); and
 - k. Complete medical history.
8. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment.
9. Site control measures, including procedures for:
 - a. preventing trespassing;
 - b. preventing unqualified or unprotected workers from entering restricted areas;
 - c. preventing "tracking" of contaminants out of the Site;

- d. maintaining log of employees at the Site and visitors to the Site;
- e. communicating routes of escape and gathering points.
- f. ensuring safe handling of Constituents of Concern during the Work, including excavating, handling, loading, and transporting activities. Include procedures for ensuring safety when working in or proximity to Hazardous Environmental Conditions,
- g. delineating “hot” (e.g., contaminated), “cold”, and support zones;
- h. locating personnel and equipment decontamination zones; and
- i. decontamination.
- j. first aid facilities including fully equipped first aid station and routine replenishment of supplies.
- k. sanitary facilities including potable drinking water, washing facilities and portable toilets.
- l. The CONTRACTOR shall be responsible for maintaining a log of security incidents and visitor access granted.
- m. 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.
- n. 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.
- o. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the DEPARTMENT.
- p. 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.
- 10. Plan for safe and effective responses to emergencies, including necessary PPE and other equipment.
- 11. Community Protection Plan consisting of the following:
 - a. 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 consisting of the following:
 - 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 a minimum of four real-time monitoring stations (one upwind location, and three downwind locations adjusted as required based on prevailing wind direction) along the 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 & NYSDOH) personnel to review.

- b). Particulates shall be continuously monitored at the same four real-time monitoring stations as noted above for volatile organic compounds. If the downwind particulate level is 100 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 & NYSDOH) personnel to review.
- c. Vapor Emission Response Plan consisting of the following:
 - 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 25 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 over background 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 consisting of the following:
 - 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 consisting of the following:
 - 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 minute 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/m³, 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 control consisting of the following:
 - 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 consisting of the following:
 - 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 (SDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project site.
- 12. Spill containment program. Comply with Spill Prevention Control and Countermeasures regulations as applicable to the Contractor’s proposed means and methods, equipment, and site construction and operations work.
- 13. Requirements for complying with Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

D. CONTRACTOR’s Organizational Structure:

- 1. Organizational structure portion of the SSHASP shall refer to or incorporate information on specific chain of command and specify the overall responsibilities of supervisors and employees, and shall include the following:
 - a. Name and contact information for CONTRACTOR’s “competent person(s)” for various work-related activities.
 - b. Name and contact information for CONTRACTOR’s safety representative.

- c. Designation of general supervisor who has responsibility and authority to direct operations involving handling of Constituents of Concern and work in or near Hazardous Environmental Conditions.
 - c. Other personnel required for operations involving Constituents of Concern and Hazardous Environmental Conditions and emergency response, and general functions and responsibilities of each.
 - d. Lines of authority, responsibility, and communication.
 - 2. Review and update organizational structure as necessary to reflect current status of work activities on the Project and status of personnel.
- E. Work Plan:
- 1. Comprehensive work plan portion of SSHASP shall refer to or incorporate information on the following:
 - a. Tasks and objectives of work activities, onsite operations, and logistics and resources necessary to achieve such tasks and objectives.
 - b. Anticipated activities and CONTRACTOR's normal operating procedures.
 - c. Personnel and equipment requirements for implementing the work plan.

1.6 ACCIDENT REPORTING AND INVESTIGATION

- A. Comply with 29 CFR 1904.29, including using OSHA Forms 300, 300A, and 301 (or equivalent) to document all accidents that result in bodily injury.
- B. Accident Report Submittals:
 - 1. Submit copies of completed accident reports to DEPARTMENT and ENGINEER within 24 hours of the accident.
 - 2. By the tenth day of each month, submit monthly summary of accident reports from the prior month. Monthly summary report shall indicate for each accident the root cause and descriptions of corrective actions to reduce the probability of similar accidents.
 - 3. Submit to DEPARTMENT and ENGINEER a copy of all accident and health or safety hazard reports received from OSHA or other authority having jurisdiction within 24 hours of CONTRACTOR's receipt.
- C. Based upon results of accident investigation, modify the SSHASP as required by changing tasks or procedures to prevent reoccurrence of accident.
- D. Post current copy of CONTRACTOR's OSHA 300A report, Summary of Work-related Injuries and Illnesses, at conspicuous place at the Site during period of February 1 through April 30 of each year.

1.7 DAILY HEALTH AND SAFETY FIELD REPORTS

- A. Submit to DEPARTMENT, DOH and ENGINEER daily health and safety field reports.
- B. Content of CONTRACTOR's Daily Health and Safety Field Reports: Reports shall include, but not necessarily be limited to, the following:

1. Weather conditions.
2. Delays encountered in construction
3. Acknowledgment of deficiencies noted along with corrective actions taken on current and previous deficiencies.
4. Daily health and safety air monitoring results (when air monitoring is performed).
5. Documentation of instrument calibrations performed.
6. New hazards encountered.
7. PPE utilized.
8. Description of problems, real or anticipated, encountered during the Work that should be brought to attention of DEPARTMENT and ENGINEER and notification of deviations from planned Work shown in previously submitted daily health and safety field report(s).

1.8 STANDARD OPERATING PROCEDURES

A. The following are Standard Operating Procedures (SOPs) that should be employed as part of the H&S program:

1. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.
2. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.
3. 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.
4. 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.
5. The CONTRACTOR will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.
6. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.
7. No alcohol, firearms or drugs (without prescriptions) will be allowed on site at any time.
8. 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.
9. The CONTRACTOR shall provide all equipment and personnel necessary to monitor and control air emissions. The determination of the proper level of protection for each task and safety equipment shall be the responsibility of the CONTRACTOR. These task specific levels of protection shall be stated in the CONTRACTOR's HASP.
10. The CONTRACTOR shall provide a hygiene facility on site. The hygiene facility

shall include the following:

- a. Adequate lighting and heat;
 - b. Shower facilities for project personnel;
 - c. Laundry facilities for washing work clothes and towels;
 - d. Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
 - e. Clean and "dirty" locker facilities; and
 - f. Storage area for work clothing, etc.
11. 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.
 12. The CONTRACTOR shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.
 13. 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.
 14. All equipment and material used in this project shall be thoroughly decontaminated 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.
 15. 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.
 16. 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.
 17. 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 downgrade) 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.

18. 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.
19. Real-time monitoring shall be conducted using the following equipment:
 - a. 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.
 - b. 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 µg/m³ for one second averaging; +/- 1.5 µg/m³ 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 µg/m³, 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.

- c. 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 PM10 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.
- d. 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/m³ 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/m³ 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/m³ above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m³ 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.
- e. 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.
- f. 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.
- g. 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.

20. The following master telephone list will be completed and prominently posted at the field office. At minimum, 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 (Use local hospital as applicable to project locations)		ADD
Poison Control Center		(800) 336-6997
Chemical Emergency Advice (CHEMTREC)		(800) 424-9300
NYSDEC Central Office	Work Hours	(518) 457-7878
	After Hours	(800) 342-9296 (leave message)
NYSDEC Regional Office	Work Hours	ADD
INSERT County Dept. of Health		ADD
New York State Dept. of Health - Albany		(518) 402-7860 or 7880
New York State Dept. of Health - Region		ADD

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 35 43.13

ENVIRONMENTAL PROCEDURES FOR HAZARDOUS MATERIALS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, tools, and incidentals necessary to comply with environmental procedures for Constituents of Concern.
2. CONTRACTOR shall develop, implement, and maintain throughout the Project a hazardous materials management program (HMMP) as part of the SSHASP in accordance with Laws and Regulations.
3. Constituents of Concern Brought to Site by CONTRACTOR: Transport, handle, store, label, use, and dispose of in accordance with this Section, other applicable provisions of the Contract Documents, and Laws and Regulations.
4. Constituents of Concern Generated by CONTRACTOR:
 - a. Materials containing Constituents of Concern 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 materials containing Constituents of Concern at the Site, obtain a USEPA identification number listing CONTRACTOR's name and address of the Site as generator of the Constituents of Concern. Obtain identification number from state environmental agency or similar authority having jurisdiction at the Site. Submit identification number within time frame specified in Article 1.3 of this Section.
 - c. CONTRACTOR shall be responsible for identifying, analyzing, profiling, transporting, and disposing of Constituents of Concern generated by CONTRACTOR.
5. Fines or civil penalties levied against DEPARTMENT for violations committed at the Site by CONTRACTOR, and costs to DEPARTMENT (if any) associated with cleanup of a Hazardous Environmental Condition created by CONTRACTOR shall be paid by CONTRACTOR. If CONTRACTOR has exacerbated a Hazardous Environmental Condition existing at the Site prior to the start of the Work, CONTRACTOR shall pay a share of costs associated with fines, civil penalties, and cleanup costs to in proportion equal to the extent of CONTRACTOR's responsibility for creating the Hazardous Environmental Condition and fines and civil penalties associated therewith.

- B. Enforcement of Laws and Regulations:
1. Interests of DEPARTMENT are that accidental spills and emissions, Site contamination, and injury of personnel at and near the Site are to be avoided.
 2. When DEPARTMENT is aware of suspected violations, DEPARTMENT will notify CONTRACTOR, and authorities having jurisdiction if DEPARTMENT reasonably concludes that doing so is required by Laws or Regulations.
 3. Responsibilities regarding Laws and Regulations shall be in accordance with the General Conditions, as may be modified by the Supplementary Conditions.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable Laws and Regulations.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following to the entity(ies) specified for each:
1. Constituents of Concern (including Chemicals) Proposed for Use at the Site:
 - a. Content:
 - 1) Current (dated within the past two years) material safety data sheets (MSDS) in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard).
 - 2) Manufacturer of material or equipment containing such substance.
 - 3) Supplier (if different than manufacturer).
 - 4) Container size(s) and number of containers proposed to be at the Site.
 - 5) Minimum and maximum volume of material intended to be stored at the Site.
 - 6) Description of process or procedures in which Constituent of Concern will be used at the Site.
 - b. Furnish the information required above in sufficient time to obtain DEPARTMENT's acceptance not later least three days before bringing Constituent of Concern to the Site.
 - c. Submit to ENGINEER.
 2. Material Containing Constituents of Concern Generated at the Site:
 - a. Submit for each Constituent of Concern generated at the Site identification number, analysis results, and number and size of storage containers at the Site.
 - b. Furnish such information within not less than 48 hours after CONTRACTOR's receipt of analytical results.
 - c. Submit to ENGINEER.

3. Permits:
 - a. Submit copies of permits for storing, handling, using, transporting, and disposing of materials containing Constituents of Concern, obtained from authorities having jurisdiction.
 - b. Submit to ENGINEER.
4. Other Documents required for the HMMP: Submit to ENGINEER and/or DEPARTMENT's environmental representative the requested documents within 72 hours of CONTRACTOR's receipt of such request. HMMP documents may include emergency/spill response plan, communication plan, and other documents.

1.4 HAZARDOUS MATERIALS MANAGEMENT

- A. Obtain ENGINEER's and/or DEPARTMENT's environmental representative's acceptance before bringing to the Site each material containing a Constituent of Concern.
- B. Communication Plan:
 1. CONTRACTOR shall develop a communication plan relative to materials containing one or more Constituents of Concern.
 2. MSDS Notebooks:
 - a. At minimum, maintain at the Site two notebooks containing: 1) Inventory of materials containing a Constituent of Concern (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 a Constituent of Concern.
 - b. Keep one notebook in CONTRACTOR's field office at the Site; keep second notebook at location acceptable to ENGINEER.
 - c. 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 Constituent of Concern or each class/group of material containing a Constituent of Concern, 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, DEPARTMENT, ENGINEER, the public as applicable, and other entities as required.
 3. Response coordination procedures between CONTRACTOR, DEPARTMENT and others as appropriate.

4. Site plan showing proposed location of Constituents of Concern storage area and location of spill containment/response equipment, and location of storm water drainage inlets and drainage routes, including storm sewers, ditches and swales, and surface waters.
 5. Description of Constituent of Concern 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.
- D. Storage of Materials Containing Constituents of Concern and Storage of Non-Hazardous Materials:
1. Vessels containing materials with a Constituent of Concern shall bear applicable hazard diamond(s).
 2. Container Labeling:
 - a. Properly label each container of consumable materials, whether or not classified as containing a Constituent of Concern.
 - b. Stencil CONTRACTOR's name and, as applicable, Subcontractor's name, on each vessel containing a Constituent of Concern 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 DEPARTMENT becomes aware of unlabeled containers at the Site, ENGINEER and/or DEPARTMENT's environmental representative will so advise CONTRACTOR. Properly label container(s) within one hour of receipt of such notice from DEPARTMENT or remove container from the Site.
 3. To greatest extent possible, store off-Site materials containing a Constituent of Concern until required for use in the Work.
- E. Area for Storing Materials Containing a Constituent of Concern:
1. Maintain designated storage area for materials containing a Constituent of Concern. Storage area shall include secondary containment to prevent release of spilled or leaking substances. 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 storage area.
- F. Not less than monthly, CONTRACTOR's safety representative shall meet with the Engineer and/or DEPARTMENT'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 ++

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SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. Section includes the following:
 - a. Definitions and terminology in general use in the Contract Documents.
 - b. Applicable codes.
 - c. DEPARTMENTS's referenced specifications, where applicable.
 - d. Abbreviations in general use throughout the Contract Documents.
 - e. General requirements regarding reference standards, including a listing of standard-issuing organizations (and their acronyms) used in the Contract Documents.

1.2 DEFINITIONS AND TERMINOLOGY

- A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions, as may be modified by the Supplementary Conditions.
- B. Additional terminology used in the Contract Documents includes the following:
 - 1. "Indicated" refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs, provisions, tables, or schedules in the Specifications and similar locations in the other 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 person or 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 in conjunction with the term "installer", means having successfully completed not less than five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated and required; 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, unless other experience requirements specific to that element of the Work are indicated elsewhere in the Contract Documents.
 - 3. Trades: Use of terms 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.

4. “Assigned specialists” and similar terms: Certain Sections of the Specifications require that specific construction activities be performed by specialists with recognized, extensive experience in such operations. Engage said specialists for such activities, and their engagement is a requirement over which CONTRACTOR has no option. These requirements do not conflict with enforcement of building codes and other Laws and Regulations. Also, such requirements are not intended to interfere with local trade union jurisdictional settlements and similar conventions. Such assignments shall not relieve CONTRACTOR of responsibility for complying with the requirements of the Contract Documents.

1.3 APPLICABLE CODES

- A. References in the Contract Documents to local code(s) shall mean the following:
 1. National Electric Code in effect at the location of the Project.
 2. NFPA 101, Life Safety Code.

1.4 ABBREVIATIONS

- A. Common abbreviations that may be found in the Contract Documents are indicated below, alphabetically by their written-out meaning:

alternating current	a-c
ampere	A
antemeridian	a.m.
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
five-day biochemical oxygen demand	BOD ₅
brake horsepower	bhp
British thermal unit	Btu
building information model	BIM
carbonaceous biochemical oxygen demand	CBOD
five-day carbonaceous biochemical oxygen demand	CBOD ₅
chemical oxygen demand	COD
Centigrade (or Celsius)	C

chlorinated polyvinyl chloride		CPVC
chlorofluorocarbons		CFC
Code of Federal Regulations		CFR
computer-aided drafting and design		CADD, or CAD
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)	(Write)	degrees C, °C, or deg C
degrees Fahrenheit		degrees F, °F, or deg F
diameter		dia
direct current		d-c
dollars		\$
each		ea
efficiency		eff
Fahrenheit		F
feet		ft
feet per hour		fph, or ft/hr
feet per minute		fpm
feet per second		fps, or ft/min
figure		fig
flange		flg
foot-pound		ft-lb
gallon		gal
gallons per hour		gph, or gal/hr
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 of mercury	in. Hg
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 gallons per day	mgd or MGD
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))	NO _x
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, sf, or ft ²
square inch	sq in., or in ²
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

1.6 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. The 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
ADSC- IAFD	International Association of Foundation Drilling.
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
APHA	American Public Health Association
API	American Petroleum Institute
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
BAAQM	Bay Area Air Quality Management District
D	
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
FHWA	Federal Highway Administration
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
NBS	United States Department of Commerce, National Bureau of Standards
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
TCNA	Tile Council of North America
TEMA	Tubular Exchanger Manufacturers Association
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
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
WEF	Water Environment Federation
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 01 45 29

TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This section includes requirements for sampling services furnished by the CONTRACTOR for sampling, analysis, and reporting, or as provided in the supplementary conditions.
 2. CONTRACTOR shall employ and pay for services of independent testing laboratory to perform specified services.
 3. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
 - a. Section 02 62 18 In-Situ Thermal Remediation
 - c. Section 31 23 16 Earthwork
 3. CONTRACTOR shall pay for:
 - a. Tests not specifically indicated in the Contract Documents as being DEPARTMENT 's or ENGINEER'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. New York State Analytical Services Protocol (ASP)
 2. NYSDEC Technical Guidance for Site Investigation and Remediation DER-10, Appendix 2-B

1.3 QUALITY ASSURANCE

- A. Qualifications:
1. Testing Laboratory:
 - a. Comply with applicable requirements of New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation (May 2010)
 - b. Testing laboratory shall be NYSDOH ELAP certified.

1.4 SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Sampling Plan and Quality Control Project Plan Submittals: The sampling Plan shall include the following:
 - a. A chart and/or map indicating the approximate number of samples to be collected and the matrices of each, including anticipated QA/QC samples.
 - b. Procedures for sample collection.
 - c. Description of sampling equipment and maintenance procedures for the equipment.
 - d. Procedures for decontamination of sampling equipment.
 - e. Sample handling, labeling and regulatory compliance procedures for shipping.
 - f. Training requirements for environmental sampling for new employees and refresher training requirements for current employees.
 2. The QAPP shall be project specific and include the following:
 - a. Organizational chart, including a designated QA Officer.
 - b. Data quality objectives for the site.
 - c. A chart reflecting types of samples, approximate number of samples, matrices, holding times, analytical protocols and anticipated QA/QC samples to be collected or analyzed.
 - d. Specific limits of concern for each analyte for each matrix to be sampled.
 - e. The matrix specific method detection limit that must be obtained for each of the analytes and matrices listed.
 - f. The analytical laboratory to be used and evidence of their certification for all subcategories of solid and hazardous waste, including CLP metals, under the NYSDOH ELAP CLP.
 - g. Criteria for laboratory selection and audits.
 - h. Criteria for field sampling audits.
 - i. Record maintenance and archive methods.
 - j. Review and checking procedures for the sampling plan and the analytical results reporting.
 - k. Copy of the QAO's resume and training certificates. QAO must be proficient in analytical methodology, data interpretation and validation, quality control procedures and auditing techniques. The QAO shall interface with laboratory and data validator to make requests and or resolve issues specific to data usability.
 3. 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 conditions.

- g. Date of test.
- h. Identification of material or item tested, and associated Specifications Section.
- i. Location in the Project.
- j. Type of inspection or test.
- k. Results of tests and observations regarding compliance with this section and supplementary sections, as applicable
- j. Category B deliverables for the reporting of deliverables package as per Volume 1 of the NYSDEC ASP.
- i. Electronic deliverables shall conform to DER-10, Appendix 2B requirements.
- 4. Qualifications Statements:
 - a. Testing Laboratory:
 - 1) NYSDOH ELAP certification. – Analytical Labs
 - 2) Statement of Qualifications – Geotechnical Labs

1.5 TESTING LABORATORY DUTIES

- A. Testing laboratory shall:
 - 1. Complete analytical services in compliance with NYSDOH ELAP certification and NYSDEC ASP Protocol.
 - 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 reports of inspections and tests.
 - 5. Perform additional tests and services, as required by CONTRACTOR.
 - 6. Data deliverables shall conform to Guidance for Data Deliverables, DER-10 Appendix 2-B.

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 items to be tested, in required quantities.
 - 3. Promptly submit to ENGINEER results of tests and inspections received from testing laboratory.
 - 4. Furnish 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.
- 8. Confirm that analytical data deliverables conform to DER-10, Appendix 2B prior to submittal to the ENGINEER for review.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 51 05

TEMPORARY UTILITIES AND CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. CONTRACTOR shall provide all temporary utilities and temporary facilities required for the Project, including the following:
 - a. Electricity.
 - b. Lighting.
 - c. Telephone and communications.
 - d. Heating, cooling, ventilating, and temporary enclosures.
 - e. Water.
 - f. Fire protection.
 2. Make all arrangements with utility owners for temporary utilities and with others as appropriate for temporary facilities. Obtain required permits and approvals for temporary utilities and temporary facilities.
 3. Pay all service costs for utilities and facilities indicated in this Section as CONTRACTOR's responsibility, including cost of electricity, water, fuel, and other utility services and temporary facilities required for the Work.
 4. At minimum, provide and maintain temporary utilities and temporary facilities through Substantial Completion unless otherwise approved in writing by ENGINEER.
 5. Maintain, including cleaning, temporary utilities and temporary facilities, and continuously provide consumables (i.e. potable water, soap, paper towels, toilet paper, etc.) as required.
 6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and the needs of the Project.
 7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

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.
 2. Provide written plan for electrical service including; approved service requests and work orders; as applicable
 3. Provide materials that comply with applicable NEMA, NECA, and UL standards and governing regulations of temporary electrical services.

4. Provide grounded extension cords with waterproof connectors. Use "hard service" cords where there is exposure to abrasion and traffic.
5. Provide general service lamps and guard cages or tempered glass enclosures where lamp is exposed to breakage by removal operations. Use liquid-tight enclosures or boxes for the devices.
6. The CONTRACTOR shall provide a weatherproof, grounded temporary electrical power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of the work.
7. Install overload protection and disconnect switches for each temporary circuit at the power source.
8. Install all cable or extension cords in the work area in such a manner that visual surveillance is easily accomplished.

B. Lighting.

1. Provide lighting at the Site of not less than five foot-candles for open areas and not less than ten foot-candles for stairs and shops. Provide not less than one, 300-watt lamp every 15 feet in indoor work areas. Provide night security lighting of not less than five foot-candles within 50 feet of all parts of the Site during hours of darkness, controlled by photocell.
2. Do not work in areas with insufficient lighting. Where lighting is insufficient for the work activities to be performed, provide additional temporary lighting.
3. Provide temporary lighting sufficient for observation of the Work by ENGINEER and inspection by CONTRACTOR and authorities having jurisdiction. Where required by ENGINEER, provide additional temporary lighting.
4. Provide temporary lighting for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.

C. Telephone and Communications.

1. Provide temporary telephone and communications required for CONTRACTOR's operations at the Site and for summoning emergency medical assistance.
2. Provide temporary telephone and communications for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.

D. Heating, Ventilating, and Enclosures.

1. Provide sufficient temporary heating, cooling, ventilating, and enclosures to ensure safe working conditions and prevent damage to existing facilities and the Work.
2. Maintain temperature of areas occupied by DEPARTMENT'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 supplementary conditions for the associated Work and/or 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 DEPARTMENT 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.
7. Provide temporary heating, ventilating, and cooling for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.

E. Water:

1. General:
 - a. Provide temporary water facilities including piping, valves, meters if not provided by DEPARTMENT of existing waterline, backflow preventers, pressure regulators, and other appurtenances. Provide freeze-protection as required.
 - b. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water systems.
2. Water for Construction Purposes:
 - a. Provide water for Site maintenance and cleaning and, water necessary for construction activities, and water for disinfecting and testing of systems.
 - b. CONTRACTOR may use existing hose bibbs for short-term wash-downs and intermittent use of water for work areas in the existing building. Obtain consent of ENGINEER and DEPARTMENT if connections to existing hose bibbs and similar existing connections will be used for more than one day at a time.
3. Water for Human Consumption and Sanitation:
 - a. Provide potable water in accordance with NYSDOH Laws and Regulations for consumption by personnel at the Site, for field offices, and for sanitary facilities.
 - b. When necessary, provide bottled, potable water for use and consumption by personnel at the Site, including CONTRACTOR, ENGINEER, and visitors to the Site.
 - c. Provide temporary water for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.
 - d. Provide separate sanitary facilities for males and females.

F. 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. Provide Class A (ordinary combustibles), Class B (combustible liquids and gases), and Class C (electrical equipment) fire extinguishers as necessary.

3. Comply with NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.
4. Provide temporary fire protection for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.

G. Staging Areas:

1. Staging areas (if required) shall be located on the site in areas (exclusion zone) approved by the ENGINEER in order to minimize possible cross contamination.
2. The staging areas for waste materials shall have a lined bottom with a minimum 40-mil sealed, HDPE watertight liner or 20-mil pre-seamed LLDPE liner, as approved by the ENGINEER. Remove the liners when the staging area is no longer needed and dispose off-site.
3. Waste materials shall be covered at all times with a minimum 6-mil poly liner sealed, watertight liner to prevent contaminated runoff. Remove the liners when the staging area is no longer needed and dispose off-site.
4. All staging areas shall be constructed to prevent the spread of any contamination to the surrounding soils, surfaces, and/or groundwater.
5. Water spray or equivalent shall be utilized as necessary to prevent dust generation. Monitoring shall be provided to ensure that unacceptable levels of dust generated from the movement and handling of soil do not migrate from the site.
6. Shop Drawings of all staging areas shall be submitted by the CONTRACTOR to the ENGINEER for review and approval prior to the start of work.
7. The CONTRACTOR shall decontaminate staging areas on concrete pads as directed by the ENGINEER.
8. Clean soil staging areas: Can be located outside the exclusion zone over non-remedial areas, as applicable, erosion controls shall be maintained at the perimeter of piles. Long-term storage of piles may require additional stabilization measures, as directed by the ENGINEER or required in the supplementary conditions.
9. Materials staging area: provide and maintain material staging areas as needed in locations indicated on the CONTRACTOR's work site layout, or as approved by the ENGINEER.

H. Decontamination Trailer and Personal Hygiene Facility:

1. A separate trailer for personnel decontamination shall be provided. The equipment and fixtures specified below shall be provided:
 - a. Shower facilities with at least one shower for every six on-site personnel. Separate showers shall be provided for men and women.
 - b. Locker room with one locker for each employee.
 - c. A room where all personnel safety equipment and protective clothing can be stored.
 - d. Laundry area equipped with automatic washing and drying machines or sub-contract laundering to a service firm approved by the ENGINEER.

- e. Boot rack for wash boots to drain.
 - f. Toilet facilities in accordance with OSHA and local health organizations.
 - g. Sanitary waste holding tank and piping from the decontamination facility and site offices.
 - 2. All equipment and fixtures shall be maintained in clean condition. No storage of any equipment will be allowed in the decontamination trailer. The installation shall be in accordance with the HASP.
 - 3. Shop drawing of the trailer and facilities shall be submitted by the CONTRACTOR to the ENGINEER for review and approval.
- I. Temporary (Work Zone) Fencing:
- 1. Work Zone Fencing, unless otherwise detailed in the supplementary conditions, provide a temporary, secure 4-foot high, high strength polyethylene orange plastic fence around the operations and work areas to control access. Fence posts shall be a minimum of 5- feet in total length and shall adequately support the fence and prevent leaning. Fence posts shall be set a maximum 10 feet apart.
 - 2. Perimeter Fencing, unless otherwise detailed in the supplementary conditions, shall consist of temporary or driven post fence panels a minimum of 6-feet in height. Privacy screening shall be provided
- J. Water Control:
- 1. Comply with procedures outlined in the NYSDEC Stormwater Management Design Manual.
- K. Pollution Control:
- 1. Maintain work areas on and off site free from further environmental pollution that would be in violation of any federal, state, or local regulations.
 - 2. Minimize air pollution by wetting down bare soils with clean water, requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by CONTRACTORS, and encouraging shutdown of motorized equipment not actually in use.
 - 3. Any emissions during site activities that may have an adverse health effect on workers or the community shall be suppressed to the extent possible.
 - 4. Chemicals used, whether herbicide, pesticide, disinfectant, polymer, reactant, or other classification, must be approved by either the DEPARTMENT or any other applicable regulatory agency and the ENGINEER and be used in a manner as their original purpose was intended.
 - 5. Use of such chemicals and disposal of residues shall be in conformance with manufacturers' instructions.
 - 6. Use of chemicals must be approved in advance by the ENGINEER.
 - 7. Disposal of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer system or into streams or waterways is not permitted.
 - 8. Volatile wastes generated will be handled as hazardous wastes and reported to NYSDEC.

9. The CONTRACTOR shall provide that the generated project hazardous waste (if any) and any existing hazard waste to be removed under this project shall be transported, manifested, and disposed in accordance with the current regulations.
 10. More specific requirements are given in other sections of this document.
- L. Traffic Control:
1. The CONTRACTOR shall maintain all on-site temporary roads necessary for performance of the Work. Temporary access roads will be repaired as necessary to insure unimpeded daily operations. This may include at a minimum, routine grading and repairs to areas subject to settling resulting from site-related traffic.
 2. Park vehicles in areas designated and approved in the Work Plan.
 3. Keep the designated parking areas clear of dirt and debris resulting from the work.
- M. Rubbish Control (Noncontaminated)
1. Clean up the debris resulting from the work at the end of each day and leave work areas broom clean. Locate containers where directed.
 2. Remove debris from the site at least once a week or more often if it presents a fire hazard or becomes excessive. Burning of waste material will not be permitted.
 3. Containers shall have secure tops.
- N. Protection of Natural Resources:
1. General:
 - a. Preserve the natural resources within the project site that are not specified for removal or change or in accordance with supplementary permit conditions.
 - b. Preserve the natural resources outside the project site impacted by the work.
 - c. Conform to federal, state and local permitting requirements.
 - d. Restore disturbed resources to an equivalent or improved condition upon completion of work.
 - e. Vehicles, equipment and machinery delivered or used at the site that have visible oil or hydraulic leaks will not be allowed on site. Clean up any oil or hydraulic fluid spills immediately.
 2. Land Resources:
 - a. Except in areas specified to be cleared, do not remove, cut, deface, injure, or destroy existing vegetation.
 - b. Protect vegetation, that is to remain, from damage by construction operations.
 - c. Vegetation, intended to remain, that is scarred or damaged by construction operations shall be removed and replaced with equivalent undamaged vegetation.

- d. Removal of scarred or damaged vegetation shall be in accordance with the specifications.
 - e. Trees or shrubs with 30 percent or more of their root systems damaged shall require removal and replacement.
 - f. Replacement vegetation shall be approved by the ENGINEER before replacement.
 - 3. Water Resources:
 - a. Prevent oily or hazardous substances from entering the ground, drainage areas, or local bodies of water.
 - b. Provide secondary containment of temporary fuel oil, petroleum, or hazardous substance storage tanks of sufficient size and strength to contain the contents of the tanks.
 - 4. Fish and Wildlife Resources:
 - a. Do not alter or significantly disturb water flows on or adjacent to the project site, except as indicated or specified.
 - b. Do not alter or significantly disturb native habitat on or adjacent to the project site, except as indicated or specified.
 - c. Conformance with supplementary permit conditions, as applicable.
- O. Noise, Vibration and Dust Control:
- 1. Conduct operations in compliance with applicable local noise ordinance.
 - 2. Dust shall be controlled in compliance with approved CONTRACTOR's Vapor Control Emissions Plan, Community Health and Safety Plan, and Site-Specific Health and Safety Plan (SSHASP), or otherwise directed by the DEPARTMENT.
 - 3. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise, vibration and dust. Equip compressors with silencers on intake lines.
 - 4. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.
 - 5. Provide unpaved roads, detours, or haul roads used in construction areas with water treatment to minimize dust. No visible dust, as determined by the ENGINEER, will be permitted beyond the limits of the exclusion zone.
 - 6. CONTRACTOR is responsible for providing all sound barriers needed to meet the requirements of these specifications. CONTRACTOR is responsible for all costs related to the manufacturer's representatives or consultants (contractors) who specialize in addressing such problems.
 - 7. Control noise levels associated with site operations in accordance with local noise ordinances.
 - 8. Measure noise levels in decibels with a sound level meter conforming to the American National Standard Specification.
 - 9. Measurements shall be made at site perimeter.
 - 10. Measurements shall be continuous during the first week of construction activities. Additional measurements may be directed by the ENGINEER throughout the course of the project.
 - 11. Measurements shall be documented and reported to the ENGINEER.

12. If the Leq levels are not maintained the CONTRACTOR shall take appropriate measures to bring the noise under control at no additional cost to the DEPARTMENT.
13. Comply with DER-10, Appendix 1A.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary utilities and temporary 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, cabling, controls, and appurtenances.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary utilities and 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 DEPARTMENT s and others.
 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, temporary 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. Where permanent utilities and systems were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

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SECTION 01 52 11

ENGINEER'S FIELD OFFICE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes requirements for CONTRACTOR-provided field office, with furnishings, equipment, and consumables, for use by ENGINEER.
 2. 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.
 3. Field office shall be complete and fully functional within 10 days after date on which the Contract Times commence or ENGINEER approved mobilization date, unless the schedule is otherwise modified in accordance with the General Conditions.
 4. Obtain required permits for field offices, as applicable.

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 the following under one submittal cover:
 - 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, telephones, and other office equipment.

PART 2 – PRODUCTS

2.1 FIELD OFFICE CONSTRUCTION AND SITE REQUIREMENTS

- A. Site at Field Office:
1. Allocate total of four reserved parking spaces for use by ENGINEER and DEPARTMENT in close proximity to ENGINEER's field office. Parking area shall be paved with bituminous paving, concrete, crushed stone, or other material approved by ENGINEER. Parking area shall be suitably drained and free of standing water during wet weather.
 2. Provide sidewalk or walkway, not less than four feet wide, of bituminous pavement, concrete, crushed stone, or other material approved by ENGINEER, for the full distance between parking area and field office.
- B. Field Office, Minimum Construction: Field office shall comply with the following:
1. Structurally sound foundation and superstructure.
 2. Size: Floor area of not less than 430 square feet, and not less than 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 good 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 complying with building codes and other Laws and Regulations 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. Door Security:
 - 1) Doors shall be secure and lockable.
 - 2) Furnish each door with suitable, lockable security bar. Security bar shall be Master Lock 265DCCSEN Dual-Function Security Bar, or equal.
 7. Windows:
 - a. Window area equal to not less than ten percent of floor area.
 - b. Windows shall each have insect screen and operable sash.
 - c. Provide each window with lock and exterior security bars approved by ENGINEER.
 8. One lockable closet for storage.
 9. Keys:
 - a. 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.
 - b. Permanently label each key to indicate its associated lock.

10. Restroom:
 - a. Provide in field office one private restroom including one lavatory, one toilet, medicine cabinet with mirror, soap dispenser, and paper towel holder.
 - b. Provide each restroom with appropriate electric ventilation fan with positive discharge to location outside the field office.
 - c. Portable units and hand washing stations may be provided, as equivalent, as approved by the ENGINEER.
 11. Exterior Sign:
 - a. Field office identifying exterior sign, approved by ENGINEER. Sign shall be durable, weatherproof, suitable for long-term exposure to sunlight.
 - b. Exterior sign shall be not less than 1.5 feet high by four feet wide, installed at location determined in field and acceptable to ENGINEER.
 - c. Sign shall be in color, as presented in the layout below.
 - d. Sign layout and general proportions shall be as presented below. Text of first line and last line shall be Arial. Text size and size of graphic shall be proportionate to the graphic below. ENGINEER will furnish graphic as JPG file for use by CONTRACTOR in preparing the sign.
- 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 complying with 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. Modular Space Corporation (ModSpace).
 - c. Williams Scotsman, Inc.
 - d. Or equal.

2.2 FIELD OFFICE UTILITIES

- A. Comply with Section 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 DEPARTMENT's system.
 - b. Interior lighting of not less than 50 foot-candles at desktop height.
 - c. Minimum of eight 120-volt, wall-mounted, duplex convenience electrical receptacles.
 - d. Exterior, wall-mounted lighting at each entrance to field office, not less than 250 watts each.
 - e. Exterior security light for ENGINEER's field office parking area. Provide one 1000-watt, pole-mounted fixture with photocell control.

2. Heating, Ventilating, and Air Conditioning System:
 - a. Provide automatic heating to maintain indoor temperature in field office of not less than 65 degrees F in cold weather. Furnish all fuel and pay all utility costs.
 - b. Automatic cooling to maintain indoor temperature in field office of not warmer than 75 degrees F in warm weather.
3. Water and Sewerage:
 - a. Provide potable water service for each plumbing fixture associated with field office.
 - b. Provide sanitary sewerage for each lavatory/sink and toilet.
 - c. Utility Connections – General:
 - 1) Comply with Laws and Regulations, including plumbing and sewer codes, and requirements of authorities having jurisdiction.
 - 2) Protect plumbing from freezing.
 - c. Potable Water Service: Provide the following:
 - 1) Type K copper waterline from potable water main to each plumbing fixture.
 - 2) Reduced pressure zone (RPZ)-type backflow preventer in accordance with Laws and Regulations and requirements of authorities having jurisdiction.
 - 3) Provide 15-gallon electric hot water tank or tankless hot water heater, and hot water piping to serve each lavatory/sink in field office.
 - 4) Not less than one exterior hose bib, with not less than 50 feet of hose, located adjacent to field office sidewalk or walkway, near field office ingress/egress doors. Provide wall-mounted hose reel or hose caddy.
 - 5) Before placing potable water system into service, disinfect piping and appurtenances in accordance with Laws and Regulations.
 - d. Sanitary Sewerage:
 - 1) Provide PVC or other appropriate piping, arranged in accordance with Laws and Regulations, to convey wastewater from field office to sanitary sewer that discharges to a permitted wastewater treatment facility, or to holding tank provided by CONTRACTOR.
 - 2) When holding tank is provided, also provide pumping and disposal of holding tank contents at appropriate, regular intervals.
4. Telephone Service:
 - a. Land Lines:
 - 1) Private telephone service for ENGINEER's sole use, including payment of installation, monthly, and service costs.
 - 2) Provide two telephone lines as follows: one for phone Each line shall have separate telephone number assigned by the telephone service provider.
 - 3) Pay for unlimited local and domestic long distance service for duration of the Project.
 - 4) As approved by the ENGINEER, mobile devices may replace Land Service Lines. Portable Bluetooth conferencing capabilities shall be provided to facilitate group conferencing.

- b. Cellular Telephones and Service: ENGINEER will provide cellular telephones and service for ENGINEER's employees assigned to the field office, as approved by the ENGINEER, may substitute land lines. Portable Bluetooth conferencing capabilities shall be furnished to the CONTRACTOR to facilitate
5. Internet Access:
- a. Obtain and pay for Internet service until removal of the field office, with unlimited (untimed) Internet access, for ENGINEER's sole use.
 - b. Set up system and appurtenances required and verify functionality in the field office.
 - c. Internet service shall be one of the following, listed in order of preference; provide a lower type of access only when the next-higher level is unavailable:
 - 1) Fiber-optic or Cable Provider Service:
 - a) Provide service via communication service provider via either cable or fiber-optic service at download speed of not less than 15 megabytes per second (Mbps) and upload speed of not less than 1 Mbps.
 - b) Provide appropriate modem, cabling, and appurtenances.
 - 2) DSL:
 - a) Provide service via symmetrical digital subscriber line with download speed of not less than 1.5 Mbps and upload speed of not less than 384 kilobits per second (Kbps).
 - b) Provide dedicated telephone line for Internet access.
 - c) Provide DSL filters on each non-DSL outlet in the field office telephone system.
 - 3) Mobile Broadband Wireless:
 - a) Provide mobile broadband wireless 4G network by AT&T, Verizon, Sprint, T-Mobile, or equal, with download speed of not less than 37 Mbps and upload speed of not less than 17 Mbps.
 - a) Provide mobile broadband wireless router. Product and Manufacturer: Linksys Wireless-G Router for Mobile Broadband, or equal.
 - b) Mobile broadband air-card for field office. Product and Manufacturer: Sierra Wireless 597E, Novatel Merlin EX720, or equal.
 - c) Router and air-card will remain CONTRACTOR's property upon removal of field office from the Site.
 - 4) Satellite:
 - a) Provide 4G network service with download speed of not less than 12 Mbps.
 - b) Provide required equipment, including outdoor unit (dish) and indoor satellite modem equipment, together with required cabling.
 - c) Provide telephone modem in computer, together with telephone line and service, for file uploading.

- 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 DEPARTMENT.

2.3 FURNISHINGS AND EQUIPMENT

- A. Provide the following furnishings and equipment:
1. Desks: Two 5-drawer desks, each with desktop surface five feet long by 2.5 feet wide with not less than 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 with seat-height adjustment.
 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 four feet long by 2.5 feet wide.
 6. Plan rack(s) to hold not less than 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 and not less than 12 inches deep.
 10. Four polyethylene waste baskets, each with capacity of not less than seven gallons.
 11. Suitable doormat at each exterior ingress/egress door.
 12. Two cork tack-boards, each 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 office. Furnish supply of colored markers and eraser for the white board.
 14. Safety Equipment: Provide the following:
 - a. Fire extinguishers with associated signage.
 - b. Smoke detector with supply of batteries.
 - c. Carbon monoxide detector with power supply.
 - d. Provide in accordance with Laws and Regulations. For each field office structure, provide not less than two wall-mounted fire extinguishers, one battery-operated ceiling-mounted smoke detector, and one carbon monoxide detector suitably installed.
 15. First-Aid Station:
 - a. In addition to first-aid stations otherwise required by the Contract Documents, provide for ENGINEER's sole use a first-aid station in ENGINEER's field office.
 - b. Product and Manufacturer: Zee Medical USA, Item 0152, "Medium Four-Shelf Plastic Cabinet", www.zeemedical.com; or equal.

16. Weather Monitoring Station:
 - a. Monitoring Capability: System shall measure: wind speed, wind direction, outdoor temperature, wind chill, time, date, indoor temperature, and rainfall.
 - b. Manufacturer and Product:
 - 1) Weather Monitoring Station: Provide Peet Bros. ULTIMETER 100; or equal.
 - 2) Rain Gauge: Provide Peet Bros. ULTIMETER PRO Rain Gauge, or equal.
 - c. Sensors:
 - 1) Cable-mounted sensors installed outdoors. Wireless systems are unacceptable.
 - 2) Vane-type wind sensor equipped with 40-foot cable, accurate to wind speeds as low as 1.5 mph.
 - 3) Temperature sensor, installed in the shade, equipped with 25-foot cable.
 - 4) Provide rain gauge for monitoring rainfall/precipitation, with 40-foot cable. Rain gauge shall be suitable for use in winter weather and accurate to 0.01-inch.
 - 5) Sensors and cabling shall be compatible with the weather monitoring recording/display unit.
 - 6) Install sensors at appropriate locations, agreed upon at the Site with ENGINEER, for optimal monitoring of weather. Provide required poles and mounting brackets as required for installation of sensors.
 - d. Recording/Display Unit: Unit shall have keyboard and data display, featuring maximums and minimums of all data monitored, displayed and stored in-unit for the following periods: current day, each of the previous seven days, and long-term. Display and record time and date for each recorded maximum and minimum. Individually-resettable memories and master-reset capability to clear all memory.
 - e. Appurtenances:
 - 1) Provide data logging capability to allow data to be transmitted to and displayed on personal computer in ENGINEER's field office. Provide data relay capability to transmit data to such computer.
 - 2) Provide required appurtenances including junction boxes, 120-volt power supply with transformer, all required cords and cabling, and mounting brackets and hardware.
 - f. Provide all items and Work necessary for a fully-operational unit with properly-functioning capability as specified.
17. Personal Protective Equipment for Visitors: Furnish the following:
 - a. Protective Helmets (Hard Hats): Four, each with full brim, of fiberglass or thermoplastic; each with ratchet suspension; white in color.
 - b. Safety Glasses: Four, each with clear lenses, polycarbonate, anti-fog and anti-scratch coating, suitable to fit over personal eyewear.

- c. Reflective Safety Vest: Four, each of polyester mesh or other material acceptable to ENGINEER, color to be high-visibility orange, with one-inch-wide reflective tape, one-size-fits-all design.
 - d. Earplugs: Supply of foam, disposable earplugs. Promptly resupply when stock is depleted.
- 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. 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.
- 22. 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, and e-mail.
 - b. Products and Manufacturers: Provide one of the following:
 - 1) Xerox WorkCentre 5845.
 - 2) Or equal.
 - c. Minimum Memory: 2 GB.
 - 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 not less than 40 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.
- 23. Kitchen Area Appliances: Provide the following in the field office kitchen area:
 - a. One new, frost-free, refrigerator-freezer, with capacity of not less than six cubic feet.
 - b. One new microwave oven, not less than 1.2 cubic foot size.
 - c. Kitchen area appliances will remain property of CONTRACTOR upon removal of field office."

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, and to provide optimal performance and accuracy.

3.2 CLEANING, MAINTENANCE, AND SUPPLIES

- A. Furnish the following maintenance services:
1. Immediately repair malfunctioning, damaged, leaking, or defective field office structure, site improvements, systems, and equipment.
 2. Provide computer supplies and pay for maintenance on CONTRACTOR-furnished computer system and copier.
 3. Promptly provide snow and ice removal for ENGINEER's 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 not less than once per week. Sweep or vacuum field office not less than daily, or more-frequently when site conditions are such that dirt or mud is frequently tracked into field office. Clean and wax (as appropriate) flooring every six months.
 5. Waste Disposal:
 - a. Properly dispose of trash and waste as needed, not less than twice per week.
 - b. Properly handle and dispose of recyclables. Do not dispose of recyclables as trash.
 - c. Dispose of other waste, if any, as required, to avoid creation of nuisances and adverse environmental effects. Properly dispose of electronic waste, when necessary, at proper waste receiving facility.
- B. Consumables: Provide the following consumables as needed:
1. Toner and ink cartridges for printers and copier, as required.
 2. Paper supplies for printer and copier. Always maintain in field office not less than one ream of each size of paper for which printer and copier are capable.
 3. Dry markers in six colors and white board eraser set. Replace markers when exhausted or lost.
 4. Bottled water suitable for water dispenser and disposable cups.
 5. Coffee supplies, including coffee, filters, cups, sugar, creamer, and stir-sticks.
 6. Hand-soap, paper towels, toilet paper, cleansers, 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. Not less-often than monthly, inspect first-aid kit and inventory items consumed or used and remove items that are at or near their expiration date. Promptly replace and restock consumed and expired items.

3.3 REMOVAL

- A. Remove field office and furnishings when directed by ENGINEER, prior to inspection for final completion. Deliver specified equipment to DEPARTMENT.

+ + END OF SECTION + +

SECTION 01 52 13

CONTRACTOR'S FIELD OFFICE AND SHEDS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide a temporary field office for CONTRACTOR's use with not less than the minimum facilities specified in the Contract Documents.
 - 2. Provide required temporary storage and work sheds, as applicable.
 - 3. Obtain and pay for required permits and utilities. Field offices and sheds shall comply with local ordinances unless otherwise modified in the Supplementary Conditions.
- B. Coordination:
 - 1. Coordinate with DEPARTMENT and ENGINEER use of the Site including the location of field offices and sheds.
- C. Location:
 - 1. Locate field offices and sheds in accordance with the Contract Documents and in accordance with the approved submittals.
- D. Furnish in CONTRACTOR's field office one complete set of the Contract Documents for ready reference by interested persons. In addition to the reference set, comply with Section 01 78 39, Project Record Documents and related provisions of the General Conditions, as may be modified by the Supplementary Conditions.

PART 2 – PRODUCTS

2.1 FIELD OFFICE AND SHEDS – FURNISHINGS, AND EQUIPMENT

- A. Contractor's 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, capable of group teleconference
 - b. Computer network and related facilities as required for CONTRACTOR's needs.
 - c. Utilities and related facilities for lighting and maintaining temperature, in accordance with Section 01 52 11, ENGINEER's Field Office.
 - 3. Furnishings:

- a. Conference Facilities: Provide conference area with conference table and chairs sufficient for 10 people. Conference facilities and furnishings shall be provided with suitable utilities, lighting, ventilation, 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's exterior an identification sign displaying CONTRACTOR's company name and emergency contact number. Maximum size of sign shall be four feet by four feet. Sign shall be suitable for outdoor use for the duration of the Project.
 5. Furnish and maintain at CONTRACTOR's field office six (6) protective helmets ("hard hats") for use by visitors to the Site.
- B. Contractor's 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 CONTRACTOR's temporary 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 temporary 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 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 DEPARTMENT 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 DEPARTMENT's existing roads starting on the Effective Date of the Contract and satisfying other Contract requirements relative to starting the Work.
 - 2. Prevent interference with traffic on existing roads and parking areas. Always keep access roads and entrances serving the Site clear and available to DEPARTMENT and their respective employees; emergency vehicles; and other contractors. Do not use access roads or Site entrances for parking or storage of materials or equipment.
 - 3. CONTRACTOR shall indemnify and hold harmless DEPARTMENT and ENGINEER from expenses and losses caused by CONTRACTOR's operations over existing roads, drives, 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 drawings.

1.3 CONTRACTOR PARKING

- A. CONTRACTOR employee vehicles shall park in area(s) as shown on the drawings.
- 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' requirements for permanent roads, drives, and parking areas.
- B. Traffic controls shall comply with requirements of authorities having jurisdiction. When such authority is the DEPARTMENT or facility manager, and no requirements are indicated, comply with the standard specifications of the state department of transportation in the area of the Project.

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.
 - 2. Provide reasonably-level, graded, well-drained subgrade of satisfactory soil material, compacted to not less than 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 geosynthetic separation fabric as required.
 - 4. Subbase:
 - a. Provide crushed stone subbase material not less than six inches thick, roller-compacted to a level, smooth, dense surface.
 - b. 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 the Contract Documents requirements for permanent roads, drives, and parking areas.
 - 4. Where required by subgrade conditions and construction loads and traffic, provide geosynthetic separation fabric as required on compacted subgrade for subbase support and separation of subbase and subgrade materials.

5. Re-condition granular subbase of temporary roads and parking areas, 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 with each other and with parking areas, including intersections with other temporary roads, intersections with public roads, and intersections with permanent access roads at the Site.
2. Provide temporary warning signs on permanent roads and drives and provide temporary “STOP” AND “TRUCKS ENTERING” signs for traffic on temporary roads where required and at entrances to public roadways.
3. Comply with requirements of authorities having jurisdiction. When such authority is the DEPARTMENT or facility manager, and no requirements are indicated, comply with the standard specifications of the state department of transportation in the area of the Project

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, DEPARTMENT and facility manager vehicles, deliveries for DEPARTMENT and facility manager, emergency vehicles, and parking areas for DEPARTMENT’s and facility manager’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 granular material 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.
2. 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, and between the Site entrance and construction parking and staging areas.
 - c. Public roads that require sweeping and cleaning due to construction operations.

3. Dust Control:
 - a. Control dust resulting from construction activities to prevent nuisances at the Site and in nearby areas.
- C. Protection of Underground Facilities: Comply with the General Conditions, as may be modified by the Supplementary Conditions, and other requirements of the Contract Documents.

3.4 REMOVALS AND RESTORATION

- A. Removals:
 1. Remove temporary roads, drives, walks, and parking areas that are not intended for, or acceptable for, integration into permanent pavement. Return areas of temporary roads, drives, walks, and parking to pre-construction condition unless otherwise required by the Contract Documents.
 2. Remove temporary gates, fencing, and traffic controls associated with temporary roads and parking areas.
 3. Where areas of temporary roads and parking will be permanently landscaped, remove pavement, granular subbase, geosynthetic (where required by ENGINEER), soil, and other materials that do not comply with the Contract Documents regarding fill, subsoil, and landscaping.
 4. Remove and properly dispose of materials contaminated with oil, bitumen, and other petrochemical compounds resulting from CONTRACTOR's operations, 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 DEPARTMENT of affected roads, drives, walks, and parking areas.

+ + END OF SECTION + +

SECTION 01 57 33

SECURITY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes general requirements for security at the Site, including accessing the Site, securing the Work, temporary fencing, and other requirements.
2. CONTRACTOR shall safely guard all the Work, the Project, materials, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion, unless otherwise agreed upon by the parties.
3. CONTRACTOR's duty includes safely guarding DEPARTMENT'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.
4. Employ watchmen as required to provide required security and prevent unauthorized entry.
5. Costs for security required under this Section shall be paid by CONTRACTOR.
6. Make no claim against DEPARTMENT for damage resulting from trespass.
7. Remedy damage to property of DEPARTMENT and others arising from failure to furnish adequate security.
8. Provide temporary fencing in accordance with the Contract Documents.
9. The CONTRACTOR is solely responsible for the security of the ENGINEER's and CONTRACTOR's work areas, equipment, materials, and supplies provided under this contract. Furthermore, CONTRACTOR is responsible for ensuring site visitors related to this contract are escorted as necessary (to get where they are going) and do not enter contaminated areas without authorization.
10. If the CONTRACTOR furnishes a uniformed watchman or other security personnel, the CONTRACTOR shall provide that person(s) with accommodations separate from the DEPARTMENT and ENGINEER. The ENGINEER will have the right of approval and rejection of the CONTRACTOR's security personnel.

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 temporary site security fencing and each breach therein.
 - 2. Product Data:
 - a. Temporary Fencing: Manufacturer's literature, specifications, and installation instructions for temporary site security fencing proposed.
 - 3. Qualifications:
 - a. Submit security firm experience and personnel resumes.
 - 4. Routine Submittals
 - a. Submit monthly security logs.
 - b. Submit 3 copies of the all site entrance/exit log and the watchman logs as part of the project record documents.
- B. Informational Submittals: Submit the following:
- 1. Employee Information: Submit to DEPARTMENT , as applicable under the supplementary conditions;
 - a. Format of employee background data.
 - b. Background data for employees to whom identification badges will be furnished.
 - c. Updated listing of personnel 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 01 55 13, Access Roads and Parking Areas.
- B. Comply with DEPARTMENT's security procedures and access restrictions at the Site throughout the Project. Comply with the following:
 - 1. Personnel Identification:
 - a. All CONTRACTOR personnel, including Subcontractors, Suppliers, and others associated with the Project shall wear, at a visible location, at all times at the Site a durable, waterproof badge bearing CONTRACTOR's name, employer (if other than CONTRACTOR), employee's name and, as applicable, employee number.
 - 2. General Provisions Regarding Personnel Identification, as applicable under the Supplementary Conditions:
 - a. Prerequisites to Issuance of Personnel Identification Badges:
 - 1) Do not issue personnel identification badge until the person receiving the badge is documented by CONTRACTOR as:
 - a) Being eligible to perform work in the jurisdiction where the Project is located.
 - b) Has received all required safety instructions, training, and equipment.

- c) Is known to CONTRACTOR as being qualified to perform the Work to which the person will be assigned.
- b. Listing of Personnel to Whom Badges are Issued:
 - 1) Maintain and continuously update a listing or log of all personnel to whom personnel identification badges have been issued.
 - 2) Listing or log shall indicate each person's full name, home address, personal telephone number, employer name, and employer address and telephone number.
 - 3) Submit copy of listing or to DEPARTMENT in accordance with Article 1.2 of this Section.
- 3. Parking:
 - a. Do not park outside of designated CONTRACTOR parking area.
 - b. Prepare and maintain parking area as required.

PART 2 – PRODUCTS

2.1 TEMPORARY FENCING

- A. When security fencing or barriers are breached or temporarily removed for the Project, provide and maintain temporary security fencing equal to existing, unless otherwise specified, in manner satisfactory to ENGINEER and DEPARTMENT.

PART 3 – EXECUTION

3.1 TEMPORARY FENCING

- A. Installation:
 - 1. Provide temporary fencing for site security so that integrity of site security is maintained throughout the Project.
 - 2. Install temporary fencing used for site security in accordance with the Contract Documents, Section 01 51 05, Temporary Utilities and Controls and fence manufacturer's instructions.
- B. Maintenance:
 - 1. Maintain temporary fencing throughout the Project.
 - 2. Repair damage to temporary fencing and replace fencing when required to preserve Site security.
- C. Removal:
 - 1. Remove temporary fencing when permanent site security fencing is in place and fully functional, or when otherwise directed or ENGINEER.

3.2 LOGS

- A. Site Entrance/Exit Log:
 - 1. Log shall contain signed entry and exit record for project personnel and visitors.
 - 2. Log shall record time of entry and exit and firm of the individual.
- B. Watchman Log/Activities:
 - 1. Log shall record all security checks performed by security personnel and shall contain date and time, problem notes and CONTRACTOR personnel notified of problems. Allow inspection of log by ENGINEER or DEPARTMENT.
 - 2. Conduct three security checks during non-working hours.
- C. Site Access/Control:
 - 1. The CONTRACTOR shall be responsible for the control of all persons and vehicles entering and leaving the project site, and shall:
 - a. Require personnel to print full name and employer and sign in on entering the project site and to sign out when leaving and maintain the logs.
 - b. Maintain a log of project-related vehicles and equipment entering and leaving the work areas.
 - c. Persons not associated with the project will require the ENGINEER's acceptance to be admitted on site.
 - d. Maintain a log of visitors, separate from the project personnel log.
 - 2. A log of all security incidents shall be maintained and furnished to the ENGINEER upon request.
 - 3. The CONTRACTOR shall ensure that all warning signs are in place and temporary fences around work areas are closed and any breaks or gaps are attended immediately. The ENGINEER shall be informed immediately of any incident of vandalism in the work areas.
 - 4. 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.
 - 5. The CONTRACTOR shall maintain a current list of authorized persons and shall submit copies of the updated list to the ENGINEER.

+ + END OF SECTION + +

SECTION 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 the prior approved of DEPARTMENT.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Sign Painter:
 - a. 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 sign (sign proof), indicating layout, text, font, character size, graphics (if any), type and grade of materials, including sign materials, supports, and bracing.
2. Product Data:
 - a. Specifications and product data for finishes proposed for use, when requested by ENGINEER.
3. Samples: Submit color Samples when requested by ENGINEER.

PART 2 – PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

A. Performance Criteria:

1. Temporary signs, including supports and bracing, shall withstand sustained winds of 75 miles per hour.

B. Temporary Signage Required: Provide the following temporary signs:

1. Project Sign: as further defined in the project sign guidance attachment.

PART 3 – EXECUTION

3.1 INSTALLATION, MAINTENANCE, AND REMOVAL

A. Installation:

1. Location of signs shall be as shown or indicated on the Contract Documents, or as directed by ENGINEER. Signs shall be plainly visible to vehicular traffic.
2. Install signs in a neat, professional, workmanlike manner to withstand the performance criteria indicated in this Section.
3. Install signs within two weeks of Mobilization to the site.
4. Fasten sign, in a level position, securely to posts or fenceline. The center of the sign should be located approximately 6 to 7 feet from ground level.

B. Maintenance:


1. Maintain temporary signage so that signs are clean, legible, and upright.
2. Cut grass, weeds, and other plants so that temporary signs are not covered or obscured.
3. Repair and repaint damaged temporary signs.
4. Relocate signs as required by progress of the Project.

C. Remove temporary signage prior to final inspection of the Work, or when directed by ENGINEER.

Sign Requirements

Sign Size:	Horizontal format – 96” wide by 48” high
Construction Materials:	Aluminum or wood blank sign boards with vinyl sheeting.
Content:	“New York State DEC logo”, “STATE SUPERFUND PROGRAM”, “{Site Name}”, “{Site No.}”, “New York State Department of Environmental Conservation”, “Governor {First Name, Middle Initial, Last Name}”, “For More Information: derweb@dec.ny.gov”.
Text and Color Scheme:	<p>New York State DEC Logo (PM to provide .eps file or equivalent) Green text (PANTONE 350C or CMYK 100/43/83/42)</p> <p>STATE SUPERFUND PROGRAM (ALL CAPS) Green text (PANTONE 350C or CMYK 100/43/83/42)</p> <p>{Site Name} Blue text (PANTONE 288C or CMYK 100/87/27/19)</p> <p>Site No. {Site Number} Blue text (PANTONE 288C or CMYK 100/87/27/19)</p> <p>New York State Department of Environmental Conservation Green text (PANTONE 350C or CMYK 100/43/83/42)</p> <p>Governor {First Name, Middle Initial, Last Name} Black text (PANTONE Black 6 C or CMYK 100/61/32/96)</p> <p>For More Information: derweb@dec.ny.gov Blue text (PANTONE 288C or CMYK 100/87/27/19)</p>
Type Specifications:	<p>All Font is: Ariel</p> <p>Format is: Center each line of copy with initial caps and small letters</p>
Production Notes:	96” wide x 48” high aluminum blanks will be covered with vinyl sheeting to achieve background color. Copy and logo will be silk screened on this surface.
Sign Format:	See following page.

Project Sign Format

4'	8'		
	2"		
	6"	 <div> Department of Environmental Conservation </div> <div> <small>Logo (use eps or jpg file) Green Text (See Key) White Background</small> </div>	
	3"		
	4"	STATE SUPERFUND PROGRAM	
	2"		
	4"	{Site Name}	
	2"		
	4"	Site No. {#####}	
	3"		
	3"	New York State Department of Environmental Conservation	
	2"		
	3"	Governor {First Name, Middle Initial, Last Name}	
	4"		
	4"	For More Information: derweb@dec.ny.gov	
2"			

Color Key for Text

Green Text = Pantone 350C or CMYK 80/43/83/42

Blue Text = Pantone 288C or CMYK 100/87/27/19

Black Text = Pantone Black 6 C or CMYK 100/61/32/96

+ + END OF SECTION + +

SECTION 01 62 00

PRODUCT OPTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes:
 - a. CONTRACTOR's options for selecting materials and equipment.
 - b. Requirements for consideration of "or-equal" materials and equipment as further defined in the General Conditions.

1.2 PRODUCT OPTIONS

- A. For materials and equipment specified only by reference standard or description, without reference to Supplier, furnish materials and equipment complying with such standard, by a Supplier or from a source that complies with the Contract Documents.
- B. For materials and equipment specified by naming one or more items or Suppliers, furnish the named materials and equipment that comply with the Contract Documents, unless an "or-equal" or substitute item is approved by ENGINEER.
- C. For materials and equipment specified by naming one or more items or Suppliers and the term, "or-equal", when CONTRACTOR proposes a material or equipment item or Supplier as an "or-equal", submit to ENGINEER a request for approval of an "or-equal" item or Supplier.

1.3 "OR-EQUAL" ITEMS

- A. Procedure:
 - 1. For proposed materials and equipment not named in the Contract Documents and considered as an "or-equal" in accordance with the General Conditions, CONTRACTOR shall request in writing ENGINEER's approval of the "or-equal".
 - 2. Request for approval of an "or-equal" item shall accompany the Shop Drawing or product data submittal for the proposed item
- B. Requests for approval of "or-equals" shall include:
 - 1. CONTRACTOR's written request that the proposed item 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 demonstrate to ENGINEER that proposed item does not require extensive revisions to the Contract Documents, that proposed

item is consistent with the Contract Documents, and that proposed item will produce results and performance required in the Contract Documents, and that proposed item is compatible with other portions of the Work.

3. Detailed comparison of significant qualities of proposed item with the materials and equipment 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 item's manufacturer will furnish warranty equal to or better than that 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, when requested.
6. Samples, when requested by ENGINEER.
7. Other information requested by ENGINEER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes general requirements for preparing for shipping, delivering, and handling materials and equipment to be incorporated into the Work.
 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 changes to the Contract Price or Contract Times.

1.2 SUBMITTALS

- A. Refer to individual Specifications 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. Mark or tag separate parts and assemblies to facilitate field-assembly. Cover machined and unpainted parts that may be damaged by the elements or climate 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 and crate to indicate the associated purchase order number, bill of lading number, contents by name, DEPARTMENT's contract designation, 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 damage by climate 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 required by the Contract Documents 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 submitted to and accepted by ENGINEER.
4. Facilities required for handling materials and equipment in accordance with the Contract Documents and 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 Progress Schedule accepted by ENGINEER and in ample time to facilitate inspection and observation prior to installation.
2. Schedule deliveries to minimize space required for and duration of storage of materials and equipment at the Site or other 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 DEPARTMENT.
 - b. Storage space limitations.
 - c. Availability of equipment and personnel for handling materials and equipment.
 - d. DEPARTMENT'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 clearly marked.
2. Site may be listed as the "ship to" or "delivery" address; but DEPARTMENT 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 DEPARTMENT'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 DEPARTMENT, and CONTRACTOR shall be responsible for the associated delays and additional costs, if incurred.
 5. Comply with Section 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 and of the required quality.
 - 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. 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 DEPARTMENT, 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 oversteering.
- 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 01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes general requirements for storing and protecting materials and equipment.
 - 2. CONTRACTOR shall provide all labor, materials, tools, equipment, and incidentals to store and handle materials and equipment to be incorporated into the Work, and other materials and equipment at the Site.

1.2 STORAGE

- A. Store and protect materials and equipment in accordance with manufacturer's recommendations and the Contract Documents.
- B. General:
 - 1. CONTRACTOR shall make all arrangements and provisions necessary for, and pay all costs for, storing materials and equipment.
 - 2. 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.
 - 3. Store materials and equipment neatly and compactly in locations that cause minimum inconvenience to DEPARTMENT, facility manager, other contractors, public travel, and tenants, and occupants of adjoining property.
 - 4. Arrange storage in manner to allow easy access for inspection by ENGINEER.
- C. Storage Location:
 - 1. Areas available at the Site for storing materials and equipment are shown or indicated in the Contract Documents, or as acceptable to ENGINEER.
 - 2. Restrictions:
 - a Do not store materials or equipment in structures being constructed unless approved by ENGINEER in writing.

- b. Do not use lawns or other private property for storage without written permission of the DEPARTMENT or other person in possession or control of such premises.

D. Protection of Stored Materials:

1. Store materials and equipment to become DEPARTMENT's property to ensure preservation of quality and fitness of the Work, including proper protection against damage by freezing, moisture, and with outdoor ambient air high temperatures as high as 120 degrees F; temperature and humidity inside crates, containers, storage sheds, and packaging may be significantly higher than the outdoor ambient air temperature.
2. 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 DEPARTMENT.
3. When placing orders to Suppliers for equipment and controls containing computer chips, electronics, and solid-state devices, CONTRACTOR shall obtain, 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.
4. CONTRACTOR shall be fully responsible for loss or damage (including theft) to stored materials and equipment.
5. Do not open manufacturer's containers until time of installation, unless recommended by the manufacturer or otherwise specified in the Contract Documents.
6. Comply with requirements of Article 1.3 of this Section.

1.3 PROTECTION – GENERAL

- A. Equipment to be incorporated into the Work shall be boxed, crated, or otherwise completely enclosed and protected during shipping, handling, and storage, in accordance with Section 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, humidity, 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. Precast concrete materials.
 3. Structural steel.
 4. Metal stairs.
 5. Handrails and railings.
 6. Grating.
 7. Checker plate.
 8. Metal access hatches.
 9. Castings.
 10. Fiberglass items.
 11. Rigid electrical conduit, except PVC-coated conduit.
 12. Piping, except PVC or chlorinated PVC (CPVC) pipe.

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. Grout and mortar materials.
 2. Masonry units.
 3. Rough lumber.
 4. Soil materials and granular materials such as aggregate.
 5. PVC and CPVC pipe.
 6. PVC-coated electrical conduit.
 7. Filter media.
- B. Tie down covers with rope and install covering properly sloped 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 indicated in Articles 1.4 and 1.5 of this Section 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 unacceptable. 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 or humidity.
- 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 MATERIALS AND EQUIPMENT

- A. Prevent contamination of personnel, storage areas, and the Site. Comply with Laws and Regulations, manufacturer's instructions, Section 01 35 29, CONTRACTOR's Health and Safety Plan and Section 01 35 43.13, Environmental Procedures for Hazardous Materials, and other provisions of the Contract Documents.

1.8 MAINTENANCE OF STORAGE

- A. On a scheduled basis, periodically inspect stored materials and equipment to ensure that:
 - 1. Condition and status of storage facilities is adequate to provide required storage conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Materials and equipment exposed to elements are not adversely affected.

1.9 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 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes field engineering, surveying, and layouts by CONTRACTOR, and associated requirements. This Section supplements the Agreement and General Conditions' provisions on reference points and other matters.
2. CONTRACTOR shall provide field engineering services, surveying and layout services, and professional services of the types indicated for the Project, including:
 - a. Furnishing civil, structural, and other delegated professional engineering services specified or required to execute CONTRACTOR's construction methods.
 - b. 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.
 - c. Providing materials required for benchmarks, control points, batter boards, grade stakes, structure and pipeline elevation stakes, and other items.
 - d. Keeping a total station; survey grade global positioning system (GPS); leveling instrument; and related surveying equipment at the Site at all times and having a skilled instrument person available when necessary for laying out the Work.
 - e. 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.
 - f. Rectifying all Work improperly installed because of not maintaining, not protecting, or removing without authorization established reference points, stakes, marks, and monuments.
 - g. Providing such facilities and assistance necessary for ENGINEER and/or DEPARTMENT 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.
 - h. All survey work shall be certified by a New York State Professional Land Surveyor (PLS).

- i. PLS shall also work with contractor to develop a Quality Assurance program and necessary certification of GPS guided equipment to ensure accuracy. The use of GPS data from equipment will not replace the required record surveys.

B. Coordination:

1. Review requirements of this and other Sections and coordinate installation of items to be installed with or before field engineering, surveying, and layout Work.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Certificates:
 - a. 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 each deviation, if any.
2. Field Engineering:
 - a. Submit daily reports as indicated in this Section.
 - b. When requested by ENGINEER, submit documentation verifying accuracy of field engineering.
3. Surveying:
 - a. Complete plan for performing survey work, submitted not less than 10 days prior to beginning survey Work.
 - b. Example of survey data to be maintained by CONTRACTOR's surveyor. Example shall have sufficient information and detail, including example instrument output, calculations and notes.
 - c. Submit raw instrument data or field data within two days after completing survey Work.
 - d. Submit certified survey in accordance with this Section.
4. Qualifications Statements:
 - a. Field Engineer: Name, employer, and professional address. When requested by ENGINEER, submit qualifications, including resume'.
 - b. Surveyor: Name, employer, and professional address of firm, and resumes of each professional land surveyor and crew chief that will be engaged in survey Work. Submit not less than 10 days prior to beginning survey Work. During the Project, submit resume for each new registered, licensed land surveyor and crew chief employed by or retained by CONTRACTOR not less than 10 days prior to starting on the survey Work.

1.3 CONTRACTOR'S ENGINEERS

A. Qualifications of Field Engineer:

1. Employ and retain at the Site a field engineer with experience and capability of performing all field engineering tasks required of CONTRACTOR, as indicated in this Article and elsewhere in the Contract Documents.
2. CONTRACTOR's field engineer shall possess experience performing duties similar in scope and extent to those required of CONTRACTOR's field engineer on this Project. Qualifications of the CONTRACTOR's field engineer shall be subject to review and approval by the DEPARTMENT.

B. Responsibilities of Contractor's Field Engineer:

1. Daily Reports:
 - a. Prepare and maintaining daily reports of activity on the Contract. Submit reports to ENGINEER including the following information:
 - 1) Number of employees at the Site.
 - 2) Number employees at the Site for each Subcontractor.
 - 3) Breakdown of employees by trades.
 - 4) Major equipment and materials installed as part of the Work.
 - 5) Major construction equipment utilized.
 - 6) Location of areas in which construction was performed.
 - 7) Materials and equipment delivered to the Site or suitable, offsite storage location.
 - 8) Work performed, including field quality control and testing.
 - 9) Weather conditions.
 - 10) Safety concerns, events, and precautions taken.
 - 11) Delays encountered, extent of delay incurred, reasons for the delay, and measures that will be taken to rectify delays encountered.
 - 12) Acknowledgement of specific instructions received from ENGINEER or DEPARTMENT.
 - b. Daily reports shall be signed and dated by responsible member of CONTRACTOR's staff, such as CONTRACTOR's project manager, field engineer, or superintendent, or foreman designated by CONTRACTOR as having authority to sign daily reports.
 - c. Submit CONTRACTOR's daily reports in accordance with Section 01 31 26, Electronic Communication Protocols, by 9:00 a.m. the next working day after the day covered in the associated report.
2. Continually inspect the Work to ensure that the quality and quantities required by the Contract Documents are provided.
3. Cooperate as required with ENGINEER in observing the Work and performing field inspections.
4. Check and coordinate the Work for conflicts and interferences, and immediately advise ENGINEER of all discrepancies of which CONTRACTOR is aware.

5. Maintain field office files and drawings, record documents, and coordinate field engineering services with Subcontractors and Suppliers as appropriate, and other prime contractors (if any).
 6. Prepare layout and coordination drawings for construction operations.
 7. Review and coordinate the Work with Shop Drawings and CONTRACTOR's other submittals approved or accepted, as applicable, by ENGINEER.
- C. Professionals Retained by Contractor (whether or not stationed at the Site):
1. Delegated Professional Design Services:
 - a. Where the Contract Documents require CONTRACTOR to furnish professional engineering or architecture services as delegated professional design, the provisions of the General Conditions regarding delegated professional design services, and the Contract Documents' requirements applicable to the specific delegated professional design, shall apply.
 2. Professional Services that are Not Delegated as Professional Design of the Completed Work:
 - a. Where the Contract Documents require that the CONTRACTOR retain a design professional for to carry out the CONTRACTOR's responsibilities for construction means, methods, techniques, sequences and procedures (including temporary construction that will not remain as part of the completed Work), such services shall be performed by a registered professional of the discipline required for specific service on the Project, with valid license in the same jurisdiction as the Site.
 - b. DEPARTMENT and ENGINEER shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed by such design professionals.

1.4 CONTRACTOR'S SURVEYOR

- A. Qualifications:
1. 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 qualifications will be subject to review and acceptance by the ENGINEER.
 2. Surveyor shall be a professional land surveyor registered and licensed in the State of New York.
- B. Responsibilities of Contractor's Surveyor:
1. Providing required surveying equipment, including transit, theodolite, or total station; level; stakes; and surveying accessories.
 2. Establishing required lines and grades for constructing all facilities, structures, pipelines, and site improvements, including outdoor electrical equipment and feeders.

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 provided and encountered.
5. Locate on a site plan the actual location of above-ground Work to be indicated on record documents.
6. Complying with requirements of the Contract Documents relative to surveying and related Work, including requirements of this Section's Articles 1.5 and 3.1.
7. Prepare all surveys in AutoCAD format. Coordinate version with ENGINEER.

1.5 RECORDS

A. Records – General:

1. Maintain at the Site a complete and accurate log of control and survey Work as such Work progresses.

B. Field Books and Records:

1. Survey data and records 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.

C. Initial Survey:

1. Provide topographic survey of site property and any contractor use areas, property boundary survey and utilities prior to site disturbance. Elevations will be provided for all control points.
2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.

D. Site Control:

1. Provide one permanent site control monument with elevations referenced to a National Geodetic Vertical Datum (NGVD) benchmark and coordinates referenced to the New York State Plane (NAD 83) Datum. The monument locations and elevations shall meet the Federal Geodetic Control Committee Standard for second order (horizontal and vertical). Final locations will be reviewed by the ENGINEER for acceptability.

E. Payment Surveys:

1. Surveys required for the verification of payment quantities will be signed and sealed by the professional surveyor.
2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.

F. Certified Survey of Surface Structures:

1. Upon completion of foundation walls and major site improvements, prepare a certified survey, signed and sealed by professional surveyor, showing or indicating dimensions, locations, angles and elevations of construction and locations and elevations of Underground Facilities installed and encountered during the Work.
2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.
3. During construction of any concrete slab, the subbase will be surveyed before installation of the concrete, and the concrete surface will be surveyed.
4. Well locations and their corresponding elevations of the top of casing shall be surveyed in.

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, for requirements regarding reference points.
2. DEPARTMENT's established reference points that are damaged or destroyed by CONTRACTOR will be re-established by DEPARTMENT at CONTRACTOR's expense. DEPARTMENT may deduct from payments owed CONTRACTOR such amounts as set-offs in accordance with the Contract Documents.
3. From DEPARTMENT-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.
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 not less than 24 hours before performing survey services for determining quantities to be included in Application for Payment. Unless

waived in writing by ENGINEER, perform quantity surveys in presence of ENGINEER or Resident Project Representative (if any).

- 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. Roads, Drives, and Paved Areas: Stake-out roadway, driveway, and paved area 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 maximum intervals of 100 feet.
 8. Record Staking: Provide permanent stake at each blind flange and each utility cap 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 not greater than second-order accuracy (e.g., 1:10000). Construction staking used as a guide for the Work shall be set at not greater than 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 + +

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SECTION 01 76 50

NUISANCE CONTROLS, MANAGEMENT AND CORRECTIVE MEASURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes requirements for managing, controlling nuisance issues and associated corrective measures during construction. Consideration of equipment noise, vibration levels shall be part of each stage of project planning.
2. The work zones for this project are on, adjacent to or in close proximity to sensitive receptors such as schools and residential properties. The Department has zero tolerance for nuisance emissions, including fugitive dust, noise, vibration, turbidity, disruptive lighting or other situations which may give rise to complaints from the community.
3. The requirements presented in this specification supplement other nuisance monitoring requirements in the contract, e.g. air monitoring. This specification does not relieve the Contractor from other contract requirements and where there is a conflict in monitoring requirements, the more stringent action level shall be applied.
4. The Contractor is responsible for developing means and methods as well as accounting for these requirements or proposing alternate best management practices which meet the intent of these provisions (i.e., minimizing nuisance conditions which may adversely impact the public or the environment through appropriate engineering controls).

B. Performance Requirements:

1. The intent of this Section is to document and formalize the Contractor's plan for managing, controlling nuisance issues and associated corrective measures during construction per the Contract Documents.
2. The Contractor shall provide advance notification to the community of any work activities that will generate nuisances in accordance with this specification. The minimum notification period is 48 hours before noisy work is scheduled. Longer notification periods of a week or more may apply to work likely to exceed the Local regulation noise or other levels or at the start of a project.
3. The point of compliance for fugitive dust, turbidity, vibration, noise, lighting or other nuisance management issues will be at the limit of the work zone. At the point of compliance, no visible dust (or visible contrast in water clarity) is allowed. Complaints from the community will result in work stoppage until corrective measures are implemented to the satisfaction of the Engineer.
4. The Contractor shall provide a competent and reliable community relations liaison, who shall not be replaced without written approval of Department. The community relations liaison will be the Contractor's representative and shall interface with the Engineer's communications representative and the Department's Public Participation Specialist. The intent is to increase public awareness and understanding of remedial activities taking place in their community, as well as understand environmental data developed during the project.

1.2 REFERENCES

- A. 42 US Code, Chapter 65 Noise Control
- B. Local Government Noise Ordinances
- C. Turbidity - 6NYCRR 703.2 - No increase that will cause a substantial visible contrast to natural conditions.
- D. Light Trespass – In accordance with Local Ordinances
- E. Odor - TITLE 6. DEPARTMENT OF ENVIRONMENTAL CONSERVATION CHAPTER III. AIR RESOURCES SUBCHAPTER A. PREVENTION AND CONTROL OF AIR CONTAMINATION AND AIR POLLUTION - Air pollution is the presence of an air contaminant, including odor, "which unreasonably interferes with the comfortable enjoyment of life and property."
- F. Fugitive Dust - Clean Air Act - Particulate Matter (PM) Air Quality Standards.
- G. Vibration - New York State Department of Transportation Engineering Instruction 05- 045.

1.3 SUBMITTALS

- A. Nuisance Controls and Management Plan
 - 1. Plan to provide advance notification
 - 2. Nuisance monitoring plan
 - 3. Complaint resolution approach (and Summary Form)
 - 4. Issues of concern with existing and anticipated nuisances must be defined within the Nuisance Control and Management Plan, including the Contractor's resolution to complete the work of the Contract Documents
- B. The CONTRACTOR shall develop a one-page summary of general practices for nuisance management and clearly display on site. Operating hours, delivery times, truck routes, and extra considerations for works during sensitive times could also be included in the summary.
- C. Monitoring Reports
- D. Community Relations Liaison Qualifications
 - 1. The Contractor will submit resume/qualifications of their Community Relations Liaison person.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.1 COMMUNITY CONSULTATION

- A. Community consultation is an essential part of managing nuisances associated with the construction project. All communications shall be coordinated with the Engineer and the Department.
- B. Contractor shall:
 - 1. Establish good working relationships with community stakeholders such as nearby residents, the school district, and businesses
 - 2. Give and receive feedback on construction activity and performance during a project discuss the community's concerns and be proactive in complaint resolution.
 - 3. As part of a community consultation strategy, neighboring premises shall be given written notification of upcoming work activities in their vicinity. The information should outline the type and duration of works, likely nuisance impacts, and provide contact details (mobile phone number of Community Liaison Person) for feedback and/or complaints resolution.
 - 4. The minimum notification period shall be 48 hours before noisy work is scheduled. Longer notification periods of a week or more may apply to work likely to exceed the Local regulation noise or other levels or at the start of a project.
 - 5. Methods of notification for work and ongoing communication about project progress can include:
 - a. letterbox drops
 - b. meetings
 - c. individual contact
 - d. direct emails to all stakeholders.

3.2 COMPLAINT RESOLUTION

- A. The contractor shall immediately notify DEPARTMENT and the ENGINEER and respond respectfully to a complaint and implement all feasible and reasonable measures to address the issue.
- B. It is particularly important to respond when the complaint refers to disturbed sleep and/or noise that is tonal (beeping, metal-on-metal), impulsive (hammering, pile driving) or low frequency (truck engine, heavy machinery).
- C. The contractor shall have a readily accessible contact point (mobile phone number of Community Liaison Person) for managing complaints. The contractor shall call back as soon as possible, and then maintain communication about how the issue is to be resolved.
- D. The complaint management process shall be well documented, with details about the following:
 - 1. the nuisance in question
 - 2. the time of the complaint and the person making it.
 - 3. the person dealing with the complaint and planned corrective action.
 - 4. how resolution of the complaint is to be communicated to the person who made the complaint, the community and the Engineer

5. who shall be contacted if the complaint cannot be resolved, and
6. the time taken for responses.

3.3 SCHEDULING WORK AND RESPITE PERIODS

- A. In general, the instance and duration of work expected to adversely disturb the community should be minimized. This is particularly important for night and other out- of-hours work.
- B. Scheduling work to provide respite and avoid sensitive times is a vital part of responsible nuisance management.
- C. The following are examples of sensitive times that may require special consideration:
 1. resident sleep periods
 2. shopping plaza deliveries
 3. school activities (e.g. outdoor classes, sporting events, exams, etc.)
- D. The contractor shall consult with affected parties, such as the examples given above, and then arrange appropriate periods of respite from work likely to disturb them. The scheduled respite times shall then be communicated to the relevant parties.
- E. On a typical weekday, more frequent respite periods shall be provided where possible, especially during very disturbing work. For example, a break of 15-20 minutes for every hour of jack-hammering may be a suitable way to manage noise impacts, if there has been appropriate communication
- F. The Contractor shall consider the option of relocating people for short periods of time, such as when high noise levels from construction occur at night and there is no other feasible or reasonable way to reduce noise levels.
- G. The contractor shall weigh the benefits of avoiding sensitive periods against the increased costs and additional time taken on the job. Explaining the various options to affected parties will help develop a fair and balanced approach.

3.4 WORK PRACTICES

- A. General:
 1. CONTRACTOR shall communicate nuisance reduction commitments to staff. Workers and sub-contractors shall be trained to follow nuisance management practices. Nuisance management issues shall be integrated into H&S “tail-gate” meetings.
 2. The CONTRACTOR shall develop a one-page summary of general practices for nuisance management and clearly display on site. Operating hours, delivery times, truck routes, and extra considerations for works during sensitive times could also be included in the summary. Workers shall be reminded about these commitments during daily “tail-gate” meetings.
 3. Monitoring - The contractor shall periodically check the site and local area for nuisance problems and actively manage nuisance issues before and as they arise.
- B. Noise and Vibration:
 1. The Contractor shall implement work practices to reduce noise complaints, particularly important at night or during sensitive times.

2. General construction activities shall be carried out in the following ways:
 - a. Minimize metal-on-metal contact.
 - b. Avoid dropping items from a height.
 - c. Use equipment sensibly: Turn off equipment when not in use. Throttle settings shall be reduced if possible.
 - d. Require appropriate staff conduct: Staff shall not use loud radios and/or stereos outdoors during sensitive times, such as early in the morning in a residential area. Shouting or swearing, loud talking and slamming vehicle doors should be avoided.
 - e. Public Announcement (PA) systems are not allowed.
 - f. Use noise shields/acoustic curtains around higher noise operations.
 - g. Manage truck noise: Noise from trucks is a common issue, especially near residences. Scheduling and management of truck movements is important to reduce issues associated with reverse beepers, engine noise and general off-site activity.
 - h. Plant and equipment – CONTRACTOR shall endeavor to use low-noise, low- vibration well-maintained equipment where feasible and reasonable.
 - i. Equipment Selection - Consideration of equipment noise and vibration levels shall be part of each stage of project planning and contract specification.
3. The CONTRACTOR shall evaluate different types of equipment that do the same job and compare the noise and vibration level data. Noise and vibration emission labels are often provided on equipment and can be used to assist in this process. The following items shall be considered in the evaluation; high-quality mufflers, acoustic enclosures, low-noise tool bits/blades and inquire from suppliers about lower-noise equipment.
4. Alternative equipment - Compressors for pneumatic equipment shall be silenced, enclosed and located appropriately. Hydraulic or electrical equipment shall be considered as viable alternatives. Care must be taken with the location of any generators and supply lines when electrical equipment is proposed to be used to replace diesel or petrol engines. Impacts from noisy excavation and demolition works shall be reduced by alternative work methods.
5. Maintenance - A key commitment for any project is to ensure that:
 - a. equipment is not operated if maintenance or repairs would eliminate or significantly reduce a characteristic of noise, vibration or other disturbance resulting from its operation’.
 - b. Equipment shall be in good working order, and where there is a fault or maintenance issue creating the disturbance, it must be dealt with before it is used.
 - c. CONTRACTOR shall regularly check the condition of mufflers, enclosures and air lines, for example, to make sure they are in good working order and that there are no gaps or leaks. An ongoing inspection and maintenance process shall be established and included in the Work Plan.
 - d. Equipment that is causing excessive nuisance impacts in a manner that is not typical for the equipment shall be removed from the site.
6. Alternatives to traditional ‘beeper’ alarms
7. The traditional ‘beeper’ alarms for mobile equipment can create a nuisance during projects where there is a lot of movement (such as prolonged use of scissor lifts) or if works are being conducted at night.
8. Some examples of alternatives that are less disturbing include:
 - a. ‘Smart alarms’ that adjust their volume depending on the ambient level of noise. These are particularly useful during operations in quieter suburban areas, where other noise on the site is less, or when works take place during quieter periods such as early morning.
 - b. ‘Broadband’ or ‘quacker’ alarms. These emit a less annoying sound and are more

directional. This means the sound is focused to the area of concern and is less likely to travel to noise-sensitive areas.

c. The use of these alternative technologies must be:

1. determined by a competent person based on an assessment of the site, its conditions and on the machines involved
2. compatible with the machines so it does not adversely affect their operation
3. accompanied by specific procedures for installation and maintenance to ensure correct operation
4. communicated to all site staff to ensure they are aware of the new alarm and how it works.
5. The requirements of relevant occupational health and safety must be complied with in all cases.

C. Site planning, barriers and layout:

1. Disturbances shall be managed by appropriately arranging site orientation and operations. These principles need to be addressed during early project stages, when there is greater flexibility to plan for nuisance management.

D. Managing disturbances from trucks/mobile equipment:

1. The site layout shall be arranged to avoid the need for truck reversing. Drive- through parking and deliveries with a one-way thoroughfare is one method that shall be investigated.
2. An area away from residential dwellings shall be selected for off-site truck parking when vehicles arrive before site opening hours. Engineer may require that trucks wait away from the site in a less sensitive area or other areas/options may be suggested depending on the nature of the site. For larger projects, traffic controllers can be used to direct trucks that arrive out of approved times or to instruct drivers to turn off their engines when stationary.
3. The contractor shall designate a truck route that minimizes noise impacts and clearly communicate to drivers the requirements for arrival times, vehicle movements, idling reduction and general conduct, and/or include these requirements as a condition of the sub-contract.
4. Deliveries to construction sites shall be scheduled to occur only within the allowed times. Fewer vehicles with larger loads, rather than a number of smaller vehicles, can help reduce noise impacts. Options may be limited by site access and scale, with larger sites usually providing a greater level of flexibility.
5. Other considerations, such as safety and traffic impacts, will apply when looking at truck access and routes.

E. Location of plant and equipment:

1. The Contractor shall aim to locate plant and equipment away from sensitive sites, thereby maximizing the distance from affected parties.
2. When plant and equipment needs to be located close to noise sensitive areas, restricting the hours of operation should be considered.
3. When possible, noisy fabrication work shall be done off site and transported to the site at a later date.
4. Use the site to shield sources of noise
5. Temporary barriers shall be constructed and existing site materials may be useful in this

regard.

6. General principles for barriers – breaking ‘line of sight’
7. Barriers shall be used to break the ‘line of sight’ between the noisy works and the noise-sensitive areas (when looking towards the noise source from the location receiving the noise).
8. Barriers shall be located as close as possible to the noise source or sensitive receiver. There shall be no gaps or openings at joints in the barrier material and barriers need to be sufficiently dense. In general, material weighing at least 10 kg/m^2 should be used.
9. Barriers shall be sufficiently high and wide, as sound can carry around the structure. In cases where the affected location is in a high-rise development, barriers may not be useful, as the height will not be enough to break ‘line of sight’ to the noise received.
10. Barriers around a noise source shall be constructed with a length at least 10 times greater than its height. For shorter barriers, it may help to bend or wrap the barrier around the equipment.
11. Acoustic sheds shall be considered for very noisy operations where it is possible to contain the plant and equipment. As with barriers, the shed shall be of sufficient density and suitable construction, with seals on doors and internal treatments to reduce noise reverberation. Ventilation and general occupational health and safety requirements also need to be considered.
12. It is important to recognize that large reflecting surfaces, such as concrete or glass walls, may increase noise levels, as the sound can ‘bounce’ off and be magnified. The builder/contractor shall avoid placing equipment in locations where reflected noise will increase noise exposure.
13. In most cases, vibration induced by typical construction equipment may not result in adverse effects on people or structures. Noise from the equipment typically overshadows any meaningful ground vibration effects on people. Some equipment, however, including vibratory rollers, can create high vibration levels. Because of the nature of these types of devices, the options for reducing vibration may be limited. Maximizing the distance between the source and receiver should be considered to the extent practical. Conducting work when most people are not in the area (e.g., at work) or when sensitive equipment is not operating can avoid or minimize adverse impacts.
14. In some circumstances, temporary relocation of residents during these operations may be appropriate. In the absence of measures that can physically reduce induced ground vibration, informing the public about the project and potential vibratory impacts should be performed to avoid adverse reactions from the public. The Contractor must be sensitive to the needs of the community, including testing timeframes at the schools and other nearby activities which may result in adverse reactions from the public.
15. Requiring trucks delivering and picking up at the site to reduce unnecessary engine idling.

F. Fugitive Dust:

1. Control of dust will be a high priority during remediation activities. The primary mechanism for dust control will be the use of water trucks for example with a spray bar and hose(s) or other appropriate methods for the work being performed. Only potable water will be used for dust control purposes. Proactive controls will be instituted to reduce the amount of dust generation during Site activities, including enforcement of low speed limits for vehicular traffic, decontamination of trucks leaving the remediation work areas and height limits for stockpiles, if applicable.

2. The Contractor will implement a dust control training program for all Site personnel. This training program will review the potential sources of dust, individual responsibilities, and actions for controlling dust as described in this plan. The training will emphasize the importance of dust control to the overall success of the remedial activities and familiarize Site personnel with the air monitoring requirements and appropriate dust control procedures that must be adhered to in accordance with this plan to minimize dust generation.
3. Bulk material piles will not be created other than while gathering material to load into trucks (e.g., pulling soil into a pile for the excavator to load into trucks). If any bulk material piles are left on the site overnight (e.g., due to equipment failure, transportation delays, etc.), they will be tarped as necessary to limit wind-blown dust. All trucks being utilized for transport and disposal of excavated material at the Site are required to be fitted with solid, sliding or slot-top type covers with no gaps when fully deployed. Trucks shall be covered immediately after loading and are to remain covered throughout the transportation and disposal of excavated material. The cover must not contact the excavated material and must be installed in such a way to prevent wind from entering over the leading edge of the trailer rim.
4. Following the soil excavation, a geotextile marker barrier will be installed prior to backfilling the excavated area with clean fill material. The geotextile barrier will minimize any visible dust generation from this soil layer during backfilling activities.
5. The Contractor shall conduct operations and maintain the Site as to minimize the creation and dispersion of visible dust. Clean water, provided by the Contractor, shall be applied to the Site as necessary to prevent dust during excavation, loading/unloading, and backfilling activities. Excavation areas and on-site roadways will be kept damp, as necessary, without creating ponding or mists that travel beyond the defined boundaries of the work. The watering operations shall be sufficient to control fugitive dust. Tanker trucks will be utilized to provide and apply clean water as needed.
6. Water shall be applied in a manner to prevent runoff. As a contingency measure, the Contractor will have erosion and sedimentation controls, such as silt fencing, sediment logs, or manhole silt screens, installed as necessary to manage runoff.
7. Transfer points refer to any time material is loaded or unloaded during removal activities. For the purposes of this project, the primary transfer points of concern will be the transfer of soil material from the excavator or processing area to a waiting truck. The secondary transfer points of concern will be the unloading of the clean soil for use in backfilling of excavated areas. At all transfer points, the following guidelines will be maintained:
8. During loading of impacted soil, the material must be moist during the transfer, and the transfer shall be into an overhead truck trailer only. The material drop into the trailer must not exceed 4 feet.
9. All trucks entering and leaving the Site will adhere to the posted speed limit, which shall be no more than 8 miles per hour (mph).
10. All trucks shall adhere to the established tarping policy.
11. All trucks leaving unpaved areas to paved areas of the public ROW (i.e., sidewalk or street), whether full or empty, will be visually inspected for loose material. Stabilized construction exits (e.g., 3- to 6-inch cobblestone or rip rap placed on top of a geotextile) will be used to assist with cleaning of truck tires as the vehicles leave unpaved areas. Any loose material is to be removed and placed into the truck trailer.
12. In order to keep roadways clean and free of accumulation, the Contractor will coordinate with the Town of Islip and the local waste disposal facility for routine street sweeping during removal activities. The street sweeper must be equipped with a water spray and vacuum system to prevent fugitive dust. Street sweeping must be completed at the end of every day or as needed, but at a minimum of once a day.
13. Sidewalks and rights of way and public, where trucks will need to cross the sidewalk to enter/exit the Site, will be maintained in a "broom clean" condition at all times by using a skid

steer loader (e.g., BobCat) equipped with a power broom or manual tools (e.g., push broom, shovels, etc.).

14. All trucks are to take the most efficient and direct route to the disposal facility as possible.
15. Spraying dusty wastes with water as they are unloaded.
16. Ensuring that street sweeping operations use enough water to avoid kicking up dust.

G. Turbidity:

1. Best Management Practices (BMP) are the actual practices--including the forms, procedures, charts, software references, etc.--actually used by dredgers to minimize consequences of dredging and disposal on water quality. Common BMPs include Silt Curtains, Gunderbooms, and Operational Controls.
2. Silt curtains are intended to allow suspended sediment at a dredging site to settle out of the water column in a controlled area, minimizing the area that is affected by the increased suspended sediment usually present at a dredging site. A silt curtain is an impermeable barrier. They are constructed of a flexible reinforced thermoplastic material. The upper hem has floatation material and the lower hem has ballast material. Silt curtains are most effective when used on a project where they are not opened and closed to allow equipment access to the dredging or disposal area. Silt curtains are also limited to project locations with less than 1-2 knot currents.
3. There are three fundamental controls possible with mechanical dredges:
 - a. Increase cycle time. Longer cycle time reduces the velocity of the ascending loaded bucket through the water column, which reduces potential to wash sediment from the bucket. However, limiting the velocity of the descending bucket reduces the volume of sediment that is picked up and requires more total bites to remove the project material. The majority of the sediment resuspension, for a clamshell dredge, occurs when the bucket hits the bottom.
 - b. Eliminate multiple bites. When the clamshell bucket hits the bottom, an impact wave of suspended sediment travels along the bottom away from the dredge bucket. When the clamshell bucket takes multiple bites, the bucket loses sediment as it is reopened for subsequent bites. Sediment is also released higher in the water column, as the bucket is raised, opened, and lowered.
 - c. Eliminate bottom stockpiling. Bottom stockpiling of the dredged sediment in silty sediment has a similar effect as multiple bite dredging; an increased volume of sediment is released into the water column from the operation.
4. There are three fundamental controls possible with hydraulic dredges:
 - a. Reduce cutterhead rotation speed. Reducing cutterhead rotation speed reduces the potential for side casting the excavated sediment away from the suction entrance and resuspending sediment. This measure is typically effective only on maintenance or relatively loose, fine grain sediment.
 - b. Reduce swing speed. Reducing the swing speed ensures that the dredge head does not move through the cut faster than it can hydraulically pump the sediment. Reducing swing speed reduces the volume of resuspended sediment. The goal is to swing the dredge head at a speed that allows as much of the disturbed sediment as possible to be removed with the hydraulic flow. Typical swing speeds are 5-30 feet/minute.
 - c. Eliminate bank undercutting. Dredgers should remove the sediment in maximum lifts equal to 80% or less of the cutterhead diameter.
5. There are three controls possible with dredges and barges:
 - a. Eliminate or reduce hopper overflow. Eliminating or reducing hopper overflow reduces the volume of fine material which flows from the hopper in the overflow. One caution is that

this control may significantly reduce project production for hopper dredges or when hydraulic dredging into a barge.

- b. Lower hopper fill level. Lowering the hopper fill level in rough sea conditions can prevent material loss during transport.
 - c. Recirculation system. Water from the hopper overflow can be recirculated to the draghead and is used to transport more material into the hopper.
6. Pneuma Pump. The Pneuma pump is used primarily for removal of fine-grained sediment. The Pneuma pump offers high solids concentration (up to 90%) in the dredge slurry, with minimal turbidity.
 7. Closed or environmental bucket. Specially constructed dredging buckets designed to reduce or eliminate increased turbidity of suspended solids from entering a waterway.
 8. Large capacity dredges. Larger than normal dredges designed to carry larger loads. This allows less traffic and fewer dumps, thereby providing less disturbance at a disposal site.
 9. Precision Dredging. Dredging utilizing special tools and techniques to restrict the material dredged to that specifically identified. This may mean thin layers, either surficial or imbedded, or specific boundaries.

H. Disruptive Lighting:

1. Light Trespass. The lighting system shall be designed to effectively light the work area without spilling over to adjoining property. When, in the opinion of the Engineer, the lighting is disturbing adjoining property, the Contractor shall modify the lighting arrangement or add hardware to shield the light trespass.
2. Every effort should be made to control artificial light escaping from a site for example the fitting of diffusers/guards, ensuring there is no light overspill into neighboring properties.
3. All lighting shall be designed, installed, and operated to avoid glare that affects traffic on the roadway or that causes annoyance or discomfort for residences. The Contractor shall locate and aim lighting fixtures to provide the required level of illumination and uniformity in the work zone without the creation of objectionable light trespass.

I. Odor:

1. Proper Drainage: Standing water is a potential source of odors. The operations area will be on a surface that is sloped to facilitate drainage and prevent standing water. The grade will be maintained to prevent ponding. General spill control programs and curbing will be in place as appropriate. The material handling areas are covered by a canopy and protected from storm water if needed to control ponding of water which has been in contact with contaminated sediments.
2. Personnel training: Personnel will be trained in the proper use of equipment. Potential hazards and safety features will be stressed as well as handling procedures to minimize the potential production of odors, such as leaving stockpiled sediments uncovered unnecessarily.
3. Some of the operating procedures that can help reduce odors include:
 - a. "First-in, first-out" waste handling practices that keep waste on site only for short periods of time.
 - b. Removing all waste from loading areas by the end of each operating day so that these surfaces can be swept clean and washed down as needed.
 - c. "Good housekeeping" measures, including regular cleaning and disinfecting of surfaces if appropriate and equipment that come into contact with waste.
 - d. Water misting and/or deodorizing systems.
4. Below are the activities that can cause odor nuisances on-site along with Reasonable Available Control Measures & Methods to help reduce potential odors:
 - a. Movement of Transport Trucks Entering/ Exiting Site - Hauling materials in properly tarped or watertight containers to prevent odor; Limit haul trucks to 3 minutes idle time; and

- Applying foam suppressant such as BioSolve.
- b. Equipment Operating On-Site -Turning off equipment that is not in active use; Limiting the amount of equipment used at one time while on-site; and Applying foam suppressant such as BioSolve.
 - c. Excavated Materials - Limiting amount of exposed areas or amount of time materials are exposed to the open atmosphere; and Applying foam suppressant such as BioSolve.
 - d. Soil/Debris moved by equipment to Stockpile Areas - Limiting amount of exposed areas or amount of time materials is exposed to the open atmosphere; Turning off equipment that is not in active use; Limiting the amount of equipment used at one time while on-site; and Applying foam suppressant such as BioSolve.
 - e. Stockpiles - Covering stockpiles and material after activity ceases with Poly Sheeting & securing with sandbags (or equivalent); and Applying foam suppressant such as BioSolve.
 - f. Removed water prior to treatment or disposal - Setting up site drainage & preventing standing water.
 - g. Work Zones (Exclusion Zone) -Performing Housekeeping; Daily cleaning up (Free of trash, garbage, & debris); Properly disposing of any odorous material; and Applying foam suppressant such as BioSolve.

3.5 CORRECTIVE MEASURES

- A. Nuisance conditions which represent a potential health and safety concern and/or migration of contaminated materials (e.g., visible dust or visible contrast from turbidity) will result in an immediate stoppage of the work.
- B. Following a work stoppage, appropriate corrective measures as determined by Engineer will be implemented prior to work resuming.
- C. Chronic or repeated incidents of nuisance issues will result in the disallowance of a day of compensation for site services and health and safety.
- D. A written corrective measures plan will be submitted for any work stoppage, or chronic or repeated incidents of nuisance issues, if requested by the Engineer.

++ END OF SECTION ++

SECTION 01 77 19

CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL

- A. Scope:
1. Close-out procedures shall conform with General Conditions, Section VIII, Article 13 for:
 - a. Substantial Completion.
 - b. Final inspection.
 - c. Request for final payment and acceptance of the Work.

1.2 SUBSTANTIAL COMPLETION

- A. Substantial Completion – General:
1. Prior to requesting Substantial Completion, perform the following for the substantially completed Work:
 - a. Materials and equipment for which Substantial Completion is requested shall be fully ready for their intended use, including full operating and monitoring capability in automatic and manual modes.
 - b. Complete field quality control Work, including testing at the Site, indicated in Specifications Sections for individual materials and equipment items. Submit results of, and obtain ENGINEER's acceptance of, field quality control tests required by the Contract Documents.
 - c. Submit and obtain ENGINEER's acceptance of final operations and maintenance manuals.
 - d. Obtain and submit to ENGINEER all required permits, inspections, and approvals of authorities having jurisdiction for the substantially completed Work to be occupied and used by DEPARTMENT.
 - e. Complete other tasks that the Contract require be completed prior to Substantial Completion.
 2. Procedures for requesting and documenting Substantial Completion are in the General Conditions, Section VIII, Article 13.6 .
 3. Sample letter for CONTRACTOR to request inspection for Substantial Completion is attached to this Specifications Section. Use the model language of the sample letter, modified to suit the Project.
 4. Unless decided otherwise by DEPARTMENT and ENGINEER, form of certificate of Substantial Completion will be EJCDC® C-625, "Certificate of Substantial Completion" (2013 edition), prepared by ENGINEER.
 5. Refer to the General Conditions, Section V111, Article 13.8, for requirements regarding consent of surety to partial release of or reduction in retainage.

1.3 FINAL INSPECTION

- A. Final Inspection shall be performed in accordance with General Conditions, Article 13.9:
1. Prior to requesting final inspection, CONTRACTOR verify that all of the Work is fully complete and ready for final payment. A checklist for this purpose is attached to this Specifications Section.
 2. Sample letter for CONTRACTOR to request final inspection is attached to this Specifications Section. Use the model language of the sample letter, modified to suit the Project.
 3. Procedures for requesting and documenting the final inspection are in the General Conditions, as may be modified by the Supplementary Conditions, and as augmented in this Section.

1.4 REQUEST FOR FINAL PAYMENT AND ACCEPTANCE OF THE WORK

- A. Procedure:
1. Submit request for final payment in accordance with the Agreement and General Conditions, as may be modified by the Supplementary Conditions, and using procedure specified in Section 01 29 76, Progress Payment Procedures, and this Section.
 2. Acceptance of the Work:
 - a. Upon ENGINEER's receipt of the final Application for Payment, accompanied by other required Contract closeout documentation in accordance with the Contract Documents, ENGINEER will issue to DEPARTMENT and CONTRACTOR a notice of acceptability of the Work, in accordance with the General Conditions, as may be modified by the Supplementary Conditions.
 - b. Nothing other than receipt of such notice of acceptability from ENGINEER constitutes acceptance of the Work.
 - c. Unless decided otherwise by DEPARTMENT and ENGINEER, form of acceptance will be EJCDC® C-626, "Notice of Acceptability of Work", (2014 edition).
- B. Request for final payment shall include:
1. Documents required for progress payments in accordance with Contract Section VIII Article 13, Payments to Contractor.
 2. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.
 3. List of all disputes that CONTRACTOR believes are unsettled.
 4. Consent of Surety to Final Payment:
 - a. Acceptable form includes AIA® G707™, "Consent of Surety to Final Payment" (1994 or later edition), or other form acceptable to DEPARTMENT.
 5. Releases or Waivers of Lien Rights:
 - a. When submitting releases or waivers of Lien rights, furnish release or waiver by CONTRACTOR and each Subcontractor and Supplier that

- provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling \$1,000.00 or more for the Contract.
- b. Furnish final list of Subcontractors and Suppliers, using the form included in Section 01 29 76, Progress Payment Procedures, indicating final amount of the associated subcontract or purchase order for each. Include on the list all lower-tier Subcontractors and Suppliers retained by Subcontractors and Suppliers with direct subcontract or purchase order with CONTRACTOR.
 - c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver of Lien, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.
 - d. Release or waiver of Lien may be conditional upon receipt of final payment.
6. Affidavits:
- a. In lieu of the release or waiver of Liens, CONTRACTOR may submit the following, for CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling \$1000 or more, to DEPARTMENT's satisfaction:
 - 1) Affidavit of payment of debts and claims. Acceptable form includes AIA® G706™, "Contractor's Affidavit of Payment of Debts and Claims" (1994 or later edition), or other form acceptable to DEPARTMENT, and;
 - 2) Affidavit of release of Liens. Acceptable form includes AIA® G706A™, "Affidavit of Release of Liens" (1994 or later edition), or other form acceptable to DEPARTMENT.
 - b. Affidavits and supporting documents furnished under this Paragraph 1.4.B.6 shall comply with the requirements of the General Conditions, as may be modified by the Supplementary Conditions.
 - c. Each affidavit furnished shall be signed by an authorized representative of the entity furnishing the affidavit, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.
7. Evidence satisfactory to DEPARTMENT that all title issues have been resolved such that title to all Work, materials, and equipment has passed to DEPARTMENT free and clear of Liens or other title defects or will so pass upon final payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The documents listed below, following this Section's "End of Section" designation, are part of this Specifications Section:
1. Sample letter for CONTRACTOR's use in requesting inspection for Substantial Completion (two pages).
 2. Sample partial checklist to identify readiness for final inspection (four pages).
 3. Sample letter for CONTRACTOR's use in requesting final inspection (one page).
- B. In the model language of the attached sample letters for the CONTRACTOR to request inspection for Substantial Completion and the final inspection, italicized language in brackets, e.g., "[*insert date*]" indicates instructions to the drafter of the letter and often indicates specific information to be inserted by CONTRACTOR; do not include bracketed, italicized text in the final version of the letter(s) prepared for the Project. Non-italicized language in brackets is optional language; use the appropriate language to complete the actual letter for the Project and edit where required to suit the specific circumstances.

+ + END OF SECTION + +

**SAMPLE LETTER FOR CONTRACTOR’S USE IN REQUESTING
INSPECTION FOR SUBSTANTIAL COMPLETION**

**SENT VIA E-MAIL AND U.S. CERTIFIED MAIL/RETURN RECEIPT
REQUESTED**

[Date]

[Name of Engineer’s contact person]

[Engineer’s Name]

[Street address]

[City, state, postal code]

Subject:

[Project name, Contract designation]

Request for Inspection for Substantial Completion

Dear [addressee]:

In our opinion, [all of] [or] [a portion of] the Work under the above-referenced Contract is substantially complete as of [insert month, day, year on which Substantial Completion was achieved]. [The specific portion of the Work that we believe is substantially complete is [insert identification of that portion of the Work that is substantially complete].]

Enclosed is our listing of uncompleted Work items (“punch list”). In accordance with the General Conditions, we hereby request: 1) That the Engineer schedule and perform the inspection for Substantial Completion as soon as possible, and 2) Issuance of the certificate of Substantial Completion.

In accordance with the General Conditions, upon Substantial Completion, we propose the following relative to apportionment of responsibilities between the DEPARTMENT and the CONTRACTOR:

1. Security, Protection, Insurance:

- a. Site Security: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for security of the Site].
- b. Protection of the Substantially Completed Work: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for protection].
- c. Property Insurance: [insert proposal; typically DEPARTMENT assumes responsibility for property insurance upon Substantial Completion]

2. Operation and Maintenance:

- a. Operation: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for operating the substantially completed Work].

- b. Maintenance: *[insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for maintaining the substantially completed Work]*.
- 3. Utilities: *[for each of the following, indicate whether DEPARTMENT or CONTRACTOR will be responsible for utilities and services, or whether responsibility will be shared; if shared, indicate proposed cost-sharing]*
 - a. Electricity: *[insert proposal]*.
 - b. Natural Gas/Fuel/Heating: *[insert proposal]*.
 - c. Water Supply: *[insert proposal]*.
 - d. Wastewater: *[insert proposal]*.
 - e. Communications (Telephone, Internet, Video): *[insert proposal]*.

In accordance with the General Conditions, we understand that the Contract's correction period for the Work covered by the certificate of Substantial Completion commences on the Substantial Completion date documented in said certificate

Should you have questions or comments regarding this notice, please contact [the undersigned] *[or] [insert other contact person's name]*, at *[insert telephone number and e-mail address]*.

Sincerely,

[CONTRACTOR's company name]

[Signatory name]

[Signatory's title]

Attachments:

Preliminary list of uncompleted Work items ("punch list"; [##] pages)

Copies:

[DEPARTMENT's project manager]

SAMPLE CHECKLIST TO IDENTIFY READINESS FOR FINAL INSPECTION

Project: _____

Contract: _____

Contractor: _____

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
1. All Shop Drawings, Samples, and Submittals approved by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
2. Final services completed by Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
3. Final Work completed by Subcontractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
4. Permits closed out and regulatory compliance transitioned from construction to operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
5. All outstanding change issues are addressed and all Change Proposals submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
6. All Claims are resolved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
7. All defective Work of which Contractor is aware has been corrected in accordance with the Contract Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
8. Issues related to Constituents of Concern and potential Hazardous Environmental Condition have been fully addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
9. All spare parts, tools, and extra stock materials have been furnished in accordance with the Contract Documents, and documentation thereof submitted to Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
10. All final Operations & Maintenance manuals have been submitted and accepted by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
11. Manufacturer warranties and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
software license(s) furnished						
Remarks:						
12. Instruction and training of operations and maintenance personnel is complete and records of training submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
13. MBE/WBE/DBE compliance report(s) submitted (when applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
14. All field engineering submittals, including survey data, furnished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
15. All Work on "punch list" is complete in accordance with the Contract Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
16. All record documents submitted to and accepted by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
17. Contractor is fully demobilized from Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
18. All Site restoration is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
19. Final cleaning of all work areas is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
20. Lien waivers or affidavits of payment obtained from Subcontractors and Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
21. Evidence of Contractor liability insurance furnished for correction period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
22. All other required Contract closeout documents obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						

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**SAMPLE LETTER FOR CONTRACTOR'S USE IN REQUESTING
FINAL INSPECTION**

**SENT VIA E-MAIL AND U.S. CERTIFIED MAIL/RETURN RECEIPT
REQUESTED**

[Date]

[Name of Engineer's contact person]

[Engineer's Name]

[Street address]

[City, state, postal code]

Subject:

[Project name, Contract designation]

Request for Final Inspection

Dear [addressee]:

In our opinion, all of the Work under the above-referenced Contract is complete and ready for final payment as of [insert month, day, year on which final completion was achieved]. In accordance with the General Conditions, we hereby request that the Engineer schedule and perform the final inspection as soon as possible. Upon successful completion of the final inspection, we will submit our final Application for Payment accompanied by the required Contract closeout documentation in accordance with the Contract Documents.

Should you have questions or comments regarding this notice, please contact [the undersigned] [or] [insert other contact person's name], at [insert telephone number and e-mail address].

Sincerely,

[Contractor's company name]

[Signatory name]

[Signatory's title]

Attachments:

None

Copies:

[DEPARTMENT's project manager]

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SECTION 01 77 23

INSPECTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes requirements for the Substantial Completion, Final Completion, and any specified Warranty inspections and is coordinated with the payment provisions of the General Conditions, Section VIII, Articles 13.6 through 13.13.
 2. 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 specified is substantially complete. Within a reasonable time thereafter, not to exceed 30 days, DEPARTMENT, CONTRACTOR and ENGINEER shall make an inspection of the Work, or portion thereof, to determine status of completion. A tentative certificate of Substantial Completion shall fix the date of Substantial Completion, with an attached list of items to be completed or corrected prior to final payment.
 3. Shortly before the end of the Substantial completion period required under the General Conditions, ENGINEER will schedule with DEPARTMENT and CONTRACTOR the inspection and will advise DEPARTMENT and CONTRACTOR in writing of the date and time for the inspection.
- B. CONTRACTOR's project manager shall attend the inspection.
- C. Upon written notice from CONTRACTOR that the entire Work or agreed portion is complete, ENGINEER will make a final inspection with DEPARTMENT and CONTRACTOR. ENGINEER will notify CONTRACTOR in writing of all particulars in which this inspection reveals that work is either accepted or incomplete or defective.
- D. After the final inspection, CONTRACTOR shall submit "final" Application for Payment in accordance with the final Application for Payment procedures of the General Conditions, as may be modified by the Supplementary Conditions, and the Specifications, including furnishing all required Contract closeout documentation and completion of all Work except for the inspection and associated correction Work (if any). DEPARTMENT will release remaining retainage withheld for the inspection following the inspection and completion of correction Work (if any), in accordance with progress payment procedures of the Contract, except that consent of surety to final payment shall accompany the last Application for Payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes requirements for Project record documents, to supplement the requirements of the Section VI Agreement including the General Conditions, as may be modified by the Supplementary Conditions.
2. CONTRACTOR shall provide all labor, materials, equipment, and services to maintain and submit to ENGINEER Project record documents in accordance with the Contract Documents.
3. Supplemental requirements to those stated in Section VIII, Article 5.19 for recording of field modifications made during construction, to be marked on a clean set of Contract documents by the Contractor (As-Built Documents) and for preparing Supplemental Record Drawings by the Surveyor to be submitted to the DEPARTMENT and ENGINEER. The As-Built Documents and Supplemental Record Drawings shall constitute the Project Record Documents.

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, Addenda, written amendments, Change Orders, Proposed Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications 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. All changes from the contract which are made in the work, or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes.
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*TM used for organizing the Project Manual, unless otherwise accepted by ENGINEER.
3. Promptly make record documents available for observation and review upon request of ENGINEER or DEPARTMENT. Requirements for review of record documents status as a condition precedent to progress payments in conformance with Section VIII, Article 13.
4. Maintain in Contractor's field office in clean, dry, legible condition complete sets of the following:

- a. Drawings
 - b. Specifications
 - c. Addenda
 - d. Approved Shop Drawings
 - e. Samples, Photographs
 - f. Change Orders
 - g. Other modifications to Contract Documents
 - h. Test Records
 - i. Survey Data
 - j. Field Orders
 - k. Other documents pertinent to Contractor's work
 - l. Contractor Daily Work Reports
- 5. Do not use record documents for any purpose other than serving as Project record. Do not remove record documents from CONTRACTOR's field office without ENGINEER's approval.
 - 6. Make documents available at all times for inspection by ENGINEER and DEPARTMENT.

1.2 SUBMITTALS

- A. Closeout Submittals: Submit the following:
 - 1. Preliminary Record Documents:
 - a. The Contractor shall prepare As-Built Documents and the Surveyor shall prepare Supplemental Record Drawings. These documents (Project Record Documents) shall be submitted to the ENGINEER following substantial completion of the work (within 7 calendar days) for review and approval.
 - b. These documents shall be neat, legible and accurate.
 - c. If upon review, the documents are found to contain errors and/or omissions, they shall be returned to the Contractor and or Surveyor for corrections.
 - d. The Contractor and/or Surveyor shall complete the corrections and return the drawings to the ENGINEER within 10 calendar days for subsequent review.
 - e. Submit certified PDF electronic files.
 - f. Submit both printed record documents and electronic record documents, in accordance with Section 01 31 26, Electronic Communication Protocols.
 - g. Submit record documents with transmittal letter on CONTRACTOR letterhead in accordance with requirements in Section 01 33 00, Submittal Procedures.
 - 2. Certifications:
 - a. 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 Project record documentation in accordance with the General Conditions and Supplementary Conditions, Section 01 78 39, Project Record Documents, and other elements of Contract Documents, for the New York State Department of Environmental Conservation, Town of Glenville, Schenectady County, New York, In-Situ Thermal Remediation (ISTR) Remedial Action – Former Kenco Chemical Company, Inc., Operable Unit No. 2: Source Area, State Superfund Project, Site No. 447039. 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]”

1.3 RECORDING CHANGES

A. Recording Changes – 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 consistent with the progress of the Work. 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 for Project record documents.
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 in portable document format (“.PDF”).
 - c. Date each entry on record documents.
 - d. Indicate 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 a copy of the Drawings is unacceptable.
2. Record changes on plans, sections, elevations, schematics, schedules, and details as required for clarity, making reference dimensions and elevations (to Project datum) for complete record documentation.
3. Record actual construction including:
 - a. Installations of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
 - b. The location and dimensions of any changes within the design features of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
 - c. Correct grade or alignment of roads, structures, utilities, or project components.
 - d. Correct elevations.
 - e. Changes in details or dimensions.
 - f. The topography and grades of all drainage structures installed or affected as part of the project construction.
 - g. Additional information obtained from working drawings.
 - h. Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the As-Built Documents.
 - i. Additional work ordered by the ENGINEER or DEPARTMENT.
 - j. Depths of various elements of foundation in relation to datum.
 - k. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
 - l. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - m. The Surveyor retained by the Contractor shall prepare Supplemental Record Drawings (see Section 01 71 23, Field Engineering). A topographic survey of the site prior to and following earthwork. The survey should, at a minimum, show ground surface elevations on the specified grid and at all grade changes and also indicate the thickness of cover layers. The survey should adequately extend beyond the limits of work to properly overlap existing conditions. Locations and elevations of all groundwater monitoring wells and survey control points.
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 the Project record documents all revisions to schematics on the 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 Drawings. Show and indicate actual locations of equipment, lighting fixtures, in-place grounding system, and other pertinent data.

- c. When dimensioned plans and dimensioned sections or elevations 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 each item of the Work by accurate notations such as “cast iron drain”, “rigid electrical conduit”, “copper waterline”, and similar descriptions.
 - 2) Show by symbol or by note the vertical location of each item of the Work; for example, “embedded in slab”, “under slab”, “in ceiling plenum”, “exposed”, and similar designations. For piping not embedded, also indicate elevation dimension relative to Project elevation datum.
 - 3) Descriptions shall be sufficiently detailed to be related to the Specifications.
- d. ENGINEER may furnish written waiver of requirements relative to schematic layouts shown on plans, sections, and elevations when, in ENGINEER’s judgment, dimensioned layouts of Work shown schematically will serve no useful purpose. Do not rely on such 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 Project record documents submitted by CONTRACTOR. Supplemental record drawings shall include drawings or sketches that are part of Change Orders, Work Change Directives, and Field Orders and that cannot be incorporated into the Drawings because of space limitations.
- b. Supplemental drawings submitted 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 accordance with Section 01 31 26, Electronic Communication Protocols, as part of record drawing submittal. Label such files, “Supplemental Record Drawings”, including with CONTRACTOR’s name, Project name, and Contract designation.

C. Specifications and Addenda:

- 1. Mark each Specifications Section to record:
 - a. Manufacturer, trade name, catalog number, and Supplier of each material and equipment item actually provided.

- b. Changes made by Addendum, Change Orders, Work Change Directives, and Field Orders.

1.4 ELECTRONIC FILES FURNISHED BY ENGINEER

- A. CADD files of the Drawings will be furnished by ENGINEER upon the following conditions:
 - 1. CONTRACTOR shall submit to ENGINEER a letter on CONTRACTOR letterhead requesting CADD files of the Drawings and indicating specific definition(s) or description(s) of how such files will be used, and specific description of benefits to DEPARTMENT (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 the provisions of such 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 01 89 29

GREEN REMEDIATION PRACTICES

PART 1 - GENERAL

1.1. 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.

1.2. 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.

1.3. 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.

1.4. 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.

1.5. 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 - MATERIALS

2.1. GENERAL

- 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

3.1. GENERAL

- 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++

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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

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.

Date

Contractor

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SECTION XI

Supplementary Specifications

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SECTION XI – SUPPLEMENTARY SPECIFICATIONS

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SECTION 02 62 18**In-Situ Thermal Remediation (ISTR)****PART 1 GENERAL****1.1 SUMMARY**

The Contractor shall provide all personnel, equipment, supplies, facilities, transportation, tools, materials, supervision, utility connections, and other items necessary to perform in-situ thermal remediation (ISTR) at the Site as defined in this specification and associated sections of the Contract Documents. The Contractor shall be responsible for selecting the appropriate ISTR technology or combination of technologies to be applied within the thermal treatment zone, in order to achieve the ISTR treatment objectives as described below. The ISTR treatment zone is depicted on the Contract Drawings.

The ISTR scope of work includes the permitting, equipment and materials procurement, installation, start-up and testing, and operation of the ISTR system for the project in accordance with the performance requirements specified in this section.

The Contractor shall be responsible for the implementation of its selected ISTR approach. The Contractor shall prescribe the means and methods (e.g., heating duration, temperature, equipment) and overall schedule necessary to achieve the ISTR treatment objectives.

1.1.1 ISTR Treatment Objectives

The specific ISTR treatment objectives are the applicable Restricted Use Soil Cleanup Objectives (SCOs) for protection of groundwater at 6 NYCRR Part 375. The ISTR treatment objectives are shown in **Table 1-1** at the end of this specification.

1.2 DEFINITIONS

In-Situ Thermal Remediation (ISTR): ISTR consists of the application of heat to the subsurface to remove contaminants of concern (COCs) from soil and groundwater within the thermal treatment zone. A variety of methods may be applied to generate heat, including, but not limited to, electrical resistance heating (ERH) and thermal conduction heating (TCH). The subsurface is heated to temperatures at or above the boiling points of the COCs to achieve COC volatilization. Extracted liquids and vapors are collected, condensed and separated into aqueous and non-aqueous phases for treatment, discharge or disposal. Remaining non-condensable vapors are collected and treated prior to release to the atmosphere.

Heating Element: Heating Element shall mean any equipment used to deliver energy to the subsurface for the purpose of ISTR, such as a heater well or electrode.

1.3 MEASUREMENT AND PAYMENT

Measurement and payment for items described in this section shall be in accordance the bid forms and corresponding bid items descriptions provided in the Contract Documents. Refer to Contract Section XII – Measurement for Payment.

1.4 SEQUENCING AND SCHEDULING

The sequencing and scheduling of the work (including the ISTR equipment procurement and other pre-mobilization activities, mobilization, ISTR well-field and treatment systems construction, ISTR operations, site restoration, and demobilization) shall be provided in a detailed project progress schedule included with the Work Plan (refer to Section 01 32 16 Progress Schedule). The progress schedule shall include specific tasks and timeframes for the ISTR system construction, system commissioning and start-up, heating operations, confirmation sampling to support shutdown, and post-shutdown cool down period as applicable.

If ISTR treatment is proposed in a phased approach or using a sequential shut-down approach (i.e., including heating and/or shut-down of portions of the well-field in a sequenced approach), the phasing of ISTR treatment shall occur in a manner that does not allow recontamination of treated sections of the ISTR treatment zone, based on continued heating and treatment of adjacent sections.

A subsurface sheet pile wall shall be installed around the perimeter of the ISTR treatment zone to reduce the impact of groundwater flow in the ISTR area during heating operations. To mitigate the potential for contaminant migration during well-field installation activities, the subsurface perimeter sheet pile wall shall be installed prior to the ISTR well-field installation (i.e., drilling operations). Details regarding placement and depth of sheet piles are shown on the Contract Drawings and described in Section 31 62 16 – Steel Sheet Piling.

1.5 SUBMITTALS

Submit the following in accordance with Section 01 33 00 – Submittal Procedures.

1.5.1 Work Plan

The Contractor shall prepare and submit for approval a Revised Work Plan. The Revised Work Plan shall address all items as discussed in this specification and shall include a project schedule in accordance with Section 31 00 01 Work Plan and Section 01 32 16 Progress Schedule. The Revised Work Plan shall also include the ISTR implementation means and methods (refer to Section 1.5.2), a Sampling Plan, and QAPP (refer to Section 1.5.4).

1.5.2 ISTR Implementation Means and Methods

The Contractor shall prepare and submit their Revised Work Plan, providing a detailed description of the ISTR technology, equipment specifications, construction procedures, and operations approach, as well as all associated field activities to complete the scope of work. The Revised Work Plan shall address all items as discussed in this specification and other relevant specifications (also refer to Section 31 00 01 Work Plan), including the following information, at a minimum:

- a. The Contractor's rationale for the selected ISTR equipment and approach, including targeted heating temperature, heating element layout and spacing, and basis for vapor and liquid treatment equipment,
- b. Estimates of energy needs for temperature increase and duration necessary to achieve the ISTR treatment objectives,
- c. Equipment sizing and supporting rationale,
- d. Well-field layout (number, spacing, depths of heating elements, and all other well-field components),
- e. Vapor and liquid collection and treatment systems layout plans and equipment specifications and details,
- f. ISTR cap construction and details,
- g. Process piping and instrumentation diagrams,
- h. Electrical one-line diagrams,
- i. Component process flow diagrams,
- j. The estimated amount of energy, water, fuel, and other consumable materials (e.g., granular activated carbon) necessary to operate the ISTR system throughout the duration of the treatment period,
- k. Estimated process wastewater flow rates (e.g., blow-down, condensate) from each process component, as well as aggregate flow rates (including peak flow rates),
- l. Other information as required to describe the approach for the Contractor's procurement, construction, and operation of the ISTR system to implement the remediation in accordance with the Contract Documents.

1.5.3 Permits

The Contractor shall be responsible for obtaining and complying with all permits, permit equivalencies, or approvals necessary to complete the ISTR work (e.g., drilling permits, water discharge permit, air emission permit). Refer to the permit requirements presented in Section 1.7 below. Also refer to Contract Section VIII, Article 5.13 and the Supplementary Conditions.

1.5.4 Sampling Plan

The Contractor's Work Plan shall include a Sampling Plan (SP) and Quality Assurance Project Plan (QAPP). The SP shall provide at a minimum the detailed field sampling and analysis procedures for the Contractor's ISTR process monitoring, soil verification sampling, and any permit and/or permit equivalency compliance monitoring (e.g., air emissions, wastewater

discharges). The SP shall also include the field sampling and analysis procedures required for characterization of anticipated waste materials.

1.5.5 Site-Specific Health and Safety Plan (SSHASP)

The Contractor shall prepare a site-specific Health and Safety Plan (SSHASP) which will describe the potential hazards which may be encountered as part of the work, and the means and methods by which these hazards will be mitigated. The HASP will primarily focus on the health and safety of the Contractor's personnel but will also address health and safety considerations which may affect other workers and the public. The HASP will address general site control and security measures, worker personal protective equipment (PPE), and work area air monitoring requirements. The HASP will also address potential work hazards based on the nature of the impacted materials to be handled during the work, as well as other hazards (e.g., physical, biological) as applicable. The HASP will include emergency response procedures, evacuation plans, communications and reporting procedures. Refer to Section 01 35 29 Contractor's Health and Safety Plan for additional details.

1.5.6 Process Monitoring Results

The Contractor shall submit ISTR process monitoring reports to the Engineer and the Department on a weekly basis during the ISTR start-up, testing, operation, and maintenance phases of the project to document monitoring of the treatment process. The reports shall include presentation and narrative description and evaluation of monitoring results and data in PDF, tabular format (e.g., Microsoft Excel), and graphical format as appropriate. Analytical laboratory results shall also be submitted in electronic data deliverable (EDD) format suitable for database (e.g., Equis) upload by the Department. The process monitoring data shall include the following parameters at a minimum, tabulated with a short text description:

- a. Power and energy input and usage during period,
- b. Temperatures at each measurement point and depth,
- c. Pressures at each measurement point and depth,
- d. Pressure and flow rates from each vapor recovery well and through the entire system,
- e. Vapor VOC measurements at each location monitored,
- f. Mass (discrete and cumulative) of total VOCs removed,
- g. Running mass (discrete points and cumulative total) of VOC emissions from the well-field,
- h. Running indication of vapor treatment removal efficiency,
- i. Amount of process wastewater generated and discharged during the period,
- j. Description of any wastes generated during reporting period and their disposition,
- k. System run-time hours, and down-time log with description of reasons and corrective actions, and
- l. Any other data (soil, groundwater, soil gas, etc.) obtained during the period.

Sampling results shall be generated and submitted in accordance with the procedures and scheduling as detailed in the Revised Work Plan and QAPP.

1.5.7 ISTR Completion Report

Upon completion of the project, the Contractor shall prepare and submit for approval an ISTR Completion Report. The ISTR Completion Report shall include, but not be limited to the following:

- a. Narrative description of the activities completed, including mobilization, site preparation, ISTR well-field and treatment systems installation, start-up and testing, heating operations, operations monitoring activities conducted and results, permit compliance monitoring and results, soil verification sampling activities and results, site restoration, and demobilization.
- b. Soil excavation quantities and off-site transportation and disposal quantities and records.
- c. Summary of ISTR heating operations including overall duration, power usage, wastewater discharged, and mass removed,
- d. “As-built” drawings of the ISTR well-field and treatment system(s), reflecting any changes to these implemented during the project.
- e. Evaluation of ISTR effectiveness relative to treatment objectives,
- f. Any deviations from the Revised Work Plan and SP, and rationale for each,
- g. Wastes generated and disposition (including characterization analysis of wastes),

1.6 QUALITY CONTROL

The Contractor shall be responsible for project quality control and shall establish and maintain an effective Quality Control (QC) system. The QC system shall include plans, procedures, and organization necessary to complete the work, and shall be included as part of the Revised Work Plan.

The Revised Work Plan shall include the Contractor’s QC procedures and requirements applicable to all aspects the ISTR implementation, including, but not limited to, the following:

- a. Procurement of the ISTR equipment and other pre-construction activities
- b. Permitting
- c. Mobilization
- d. Site preparation work
- e. ISTR well-field installation
- f. Liquid and vapor recovery and treatment systems installation
- g. System startup and testing
- h. Site restoration
- i. Equipment decontamination and residuals management
- j. Demobilization

1.7 REGULATORY REQUIREMENTS

The Contractor shall commence remedial construction on-site only after the relevant permits and permit equivalencies have been acquired and other project approvals are obtained to allow the work to proceed, and the documentation copies are made available to the Department. All remedial activities shall comply with federal, state, and local regulations., and the conditions of any applicable permits. Permits and/or permit equivalents that may be required include, but are not limited to, the items listed below. Also refer to Contract Section VIII, Article 5.13.

1.7.1 Well Drilling and Abandonment Permits

The Contractor shall obtain drilling permit(s) as required prior to the installation and abandonment of the wellfield components (e.g., heating elements; groundwater, multi-phase, or vapor extraction wells; temperature and pressure monitoring points). Drilling permit(s) shall also be obtained prior to completion of other soil borings or well abandonments, as applicable. The permit application(s) shall be submitted to applicable agencies for approval. Site-wide permit equivalencies for groupings of similar equipment shall be obtained to the extent practicable.

1.7.2 Air Permit Equivalent for Emissions and Off-Gas Treatment

The Contractor is not required to obtain an air permit prior to construction of the ISTR equipment; however, the Contractor shall comply with the equipment specifications and performance obligations identified in this Section.

Within 90 days of start-up, the Contractor shall demonstrate that the system's vapor treatment equipment achieves a minimum 99.9% destruction removal efficiency (DRE) for volatile organic compounds (VOCs) using the methods identified in Section 3.4.3. In the event that inlet VOC emissions do not allow the Contractor to demonstrate compliance with the DRE requirements cited above, an alternate compliance method shall be to demonstrate that PCE emissions to atmosphere do not exceed 0.054 lb/hr, as measured using the methods identified in Section 3.4.3.

Within 90 days of start-up, the Contractor shall also demonstrate that the vapor treatment equipment achieves a minimum 99% removal efficiency (RE) for hydrochloric acid (HCl), if HCl emissions are generated by the Contractor's vapor treatment equipment. In the event that inlet HCl concentrations do not allow the Contractor to demonstrate compliance with the RE requirements cited above, an alternate compliance method shall be to demonstrate that HCl emissions to atmosphere do not exceed 0.47 lb/hr, as measured using the methods identified in Section 3.4.3.

1.7.3 Wastewater Discharge Permits and/or Permit Equivalents

The Contractor shall obtain ISTR process wastewater discharge permit(s) and/or equivalent(s) as necessary to include all process wastewater and residuals treatment equipment and discharge points associated with the ISTR system. Two discharge locations have been identified for the ISTR process wastewater, as follows:

1. Preferred discharge location: Process wastewater treatment and discharge to the City of Schenectady POTW, via the installation of a new lateral and service connection from the Contractor's ISTR equipment to an existing sanitary sewer owned and operated by the Town of Glenville, as shown on the Contract Drawings.
2. Alternative discharge location: Process wastewater treatment and discharge to surface water (specifically, to a tributary to Horstman Creek located approximately 1,000 feet west of the site) via an existing 6-inch diameter buried PVC discharge line. The discharge line formerly conveyed treated discharges from a small groundwater pump-and-treat system at the Site. The Contractor shall ensure that this surface water discharge approach is prepared for the Contractor's use in the event that POTW discharge is not allowed, or in the event that POTW discharge must be temporarily interrupted (e.g., based on storm events, POTW process upset conditions, or as otherwise directed by the POTW), or if elected for use by the Contractor.

The Contractor shall obtain the required wastewater discharge permit(s) and/or equivalent(s) for both discharge approaches in conjunction with the Revised Work Plan preparation and other pre-mobilization activities, including any submittals required to be prepared by a NY-licensed Professional Engineer (e.g., construction drawings, equipment specifications, narrative materials/report) as required to support the permit and/or equivalency applications. Also refer to Part 1.9.7 of this section.

1.7.4 Local Building Permits

The Contractor shall obtain permit equivalents as required based on their proposed system configuration and infrastructure requirements, including construction trailers. In addition, the Contractor shall accommodate requests for construction documents and construction inspections by the authority having jurisdiction as required. All construction permit documents must be prepared by a professional engineer licensed in the State of New York, and/or New York licensed plumber(s) and electrician(s), as required based on the nature of the specific building permit(s) required.

1.7.5 Stormwater

The Contractor shall obtain all permit equivalents as required for stormwater management as it relates to construction and operation of the ISTR system. Based on the size of anticipated soil disturbance for the project (4-5 acres), the project will be required to follow the substantive requirements of applicable stormwater discharge permitting provisions in

accordance with New York's State Pollutant Discharge Elimination System (SPDES) program. The Contractor's Work Plan will be required to include a Stormwater Pollution Prevention Plan (SWPPP) and housekeeping practices in accordance with the SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-20-001) requirements.

The Contractor shall also include provisions in their Work Plan to segregate and containerize construction water that comes into contact with contaminated soils, in order to avoid potential discharges of impacted construction water from the site. Management of construction water shall be completed in accordance with Section 31 23 19 Construction Water Management.

1.7.6 Spill Plans

Contractor shall evaluate applicability and prepare all necessary spill plans, such as a Spill Prevention, Control and Countermeasure Plan, if it determines that it will be storing quantities of petroleum products, oils, or hazardous substances in excess of threshold quantities that trigger such plans. Also refer to Section 01 35 43.13 Environmental Procedures for Hazardous Materials.

1.7.7 Wetlands Permitting

The Contractor shall be responsible for complying with permits associated with the disturbance of delineated wetlands (as shown on the Contract Drawings). This includes a general wetlands disturbance permit (referred to as Nationwide Permit-38: Cleanup of Hazardous and Toxic Waste, or NWP-38) which is available from the United States Army Corps of Engineers (USACE). NWP-38 requires the submittal of a Pre-Construction Notification (PCN) package to USACE. The Engineer will prepare and submit the PCN application and NYSDEC permit equivalency applications on behalf of NYSDEC.

The ISTR contractor will be required to implement the wetlands mitigation as part of site restoration work (refer to Section 32 72 00 Wetlands Restoration) and comply with other conditions of the NWP-38 and/or NYSDEC wetlands permit equivalency as applicable.

1.7.8 Noise Requirements

The Contractor shall be responsible for conducting ISTR construction and operations in accordance with applicable noise requirements and ordinances, including the following:

- Town of Glenville code, articles 270-89 through 270-92
- NYSDEC Program Policy Memorandum DEP-00-1

The Contractor shall provide details in their Work Plan identifying how noise levels will be monitored and managed to ensure noise levels associated with the site will not be exceeded. Also refer to Section 01 76 50 Nuisance Controls.

1.8 PROJECT SITE CONDITIONS

1.8.1 ISTR Treatment Zone Characteristics

The Contractor shall implement the ISTR treatment within the treatment zone areas and to the depths below ground surface (bgs) as depicted on the Contract Drawings. The top of the ISTR treatment zone extends to the ground surface (and also includes any additional soils placed to create the subgrade surface beneath the ISTR thermal insulating cap, as depicted on Sheet C-106 of the Contract Drawings).

The ISTR treatment zone area has a footprint of approximately 95,750 square feet (SF) and extends from ground surface to depths ranging between 32 to 53 feet bgs, representing an overall treatment volume of approximately 148,600 cubic yards (CY).

1.9 IN SITU THERMAL REMEDIATION REQUIREMENTS

1.9.1 Selection of Thermal Treatment

The Contractor shall be responsible for the selection and implementation of the ISTR technology (e.g., resistive heating, conductive heating) and specific means and methods that the Contractor identifies as appropriate and cost-effective for the project, in accordance with the requirements of this specification.

1.9.2 VOC Mass Estimate

For bidding purposes, the Contractor shall assume an estimated 470,000 lb of volatile organic compounds (VOCs, primarily tetrachloroethene [PCE]) is present within the ISTR treatment zone (this estimate is based primarily on soil sampling data). However, the Contractor shall be responsible for developing their own estimate of the VOC mass as part of the Revised Work Plan development (refer to Part 1.5.1), including the basis for their mass estimate calculations, and for appropriately selecting, procuring, installing, and operating all required ISTR equipment accordingly. The Contractor shall include an evaluation of the potential range in the mass estimate based on the degree of uncertainty in their calculations, and a discussion of the factors of safety incorporated into their process (e.g., equipment sizing and selection) to accommodate the potential range in estimated mass. In addition, the Contractor shall be responsible for providing all other equipment and operational measures required to address other relevant ISTR treatment zone characteristics (e.g., metals constituents, soil total organic content and moisture content) and other relevant site conditions (e.g., groundwater flow), as obtained through available site data/historical reports, that may affect their ISTR operations or compliance with associated air emissions and liquid discharge permit equivalency requirements.

1.9.3 ISTR Operating Temperature

The Contractor shall operate the ISTR system such that temperatures throughout the ISTR treatment zone are achieved and maintained sufficient to achieve the specified ISTR treatment objectives (refer to Part 1.1.1 of this section and **Table 1-1**).

1.9.4 ISTR Construction Means and Methods

Locations, numbers and construction details of heating elements, monitoring wells, extraction wells, and monitoring points (e.g., temperature, pressure) shall be provided by Contractor in site plans and detail drawings included with their Revised Work Plan. These documents shall also include the specifications and construction details for other ISTR system components, including liquid and vapor treatment systems, thermal insulating cap, etc. The Revised Work Plan shall also describe the means and methods to allow for safe and effective monitoring of vapor concentrations, air pressures, air flows, liquid flows, and subsurface temperatures throughout the duration of the ISTR heating operations. Also refer to Parts 1.5.1 and 1.5.2 of this section.

1.9.5 Utilities

The Contractor shall be solely responsible for all utility costs, including installation of all utility connections required to support their work and as specified in the Contract, as well as all utility usage costs associated with energy, water, fuel, voice and data communications, and other consumable materials.

1.9.5.1 Electrical Service

The Contractor shall be responsible for the procurement, and installation of the primary power service to supply all required electric power for the Contractor's selected operations, including all required coordination with and submittals to the local power utility company (National Grid). The electric power service installation shall include all infrastructure required to connect to an existing overhead line described below, and to bring the required power to the Contractor's ISTR equipment, including furnishing and installation of all conductors, conduits, trenching work, transformers, metering equipment, primary and secondary power distribution equipment, and grounding, fencing, or other safety and security measures. The electric power service shall include separate service metering as required to allow for tracking of the Contractor's power usage and costs. The Contractor is advised that the permitting, procurement, and installation of the power service may require an extended time period, and that the scheduling for these activities shall be incorporated into the pre-construction period in the Contractor's project schedule.

Based on information obtained from the local electrical utility (National Grid), up to 11 MW (10,000 kVA at 0.9 p.f.) will be available to provide temporary power to the ISTR remedy from an existing 34.5 kV subtransmission line located approximately 0.25 mile from the Site (based on input from National Grid, the existing 13.2 kV service and line located directly in front of the Site on Freemans Bridge Road does not have sufficient capacity to support an anticipated ISTR demand). National Grid will be responsible for providing the new 11 MW

power service from the 34.5 kV substation to a location adjacent to the site at a charge, as shown on the Contract Drawings. The ISTR contractor shall be responsible for preparing all required new 34.5 kV overhead service application materials and other related submittals to National Grid required to secure the power service, and for payment to National Grid for the power service installation. The Contractor's bid for the project shall include all required coordination with National Grid and the preparation of submittals to secure the power service. A service plan is available from National Grid that describes the utility's expected provisions for a new 34.5 kV service to the proposed installation shown in the Contract Drawings.

The ISTR Contractor will be responsible for the on-site power service entrance permitting and construction and all downstream electrical components (e.g., on-site overhead wires and poles, transformers, etc.), as shown on the Contract Drawings. All such costs shall be included in the Contractor's bid. In addition to the requirements on the Contract Drawings, the ISTR Contractor is required to procure and install the service connection facilities according to National Grid's electric system bulletins (ESB) 750, 751, and 753, and ESB 759B may be used as a guide for the on-property electric distribution pad-mounted transformer installations (RE: <https://www.nationalgridus.com/ProNet/Technical-Resources/Electric-Specifications>).

1.9.5.2 Natural Gas/Propane Service

The Contractor shall be responsible for the procurement and installation of a fuel gas service (e.g., natural gas or propane) to supply all required fuel gas for the Contractor's operations, if needed, including all required coordination with and submittals to the local utility company (National Grid). The service shall include separate service metering as required to allow for tracking of the Contractor's fuel gas usage and costs.

Based on information obtained from the local natural gas utility (National Grid), up to 69 MMBTU per hour is available to provide natural gas service to the ISTR remedy, to be supplied approximately 380 ft from the 12-inch diameter gas main located along Freemans Bridge Road in front of the Site. The Contractor shall be responsible for applying for and providing all required submittals to National Grid to secure the natural gas service for the project, and for coordination with National Grid to construct the connection to the gas main and install a service lateral for connection to the Contractor's equipment, including all applicable National Grid construction fees and charges for the work.

National Grid will be responsible for providing the new natural gas service from the 12-inch diameter gas main to a location on the site at a charge, as shown on the Contract Drawings. The ISTR Contractor will be responsible for the natural gas service trenching and termination provisions for National Grid's underground lateral, meter, and regulator and for all downstream gas requirements, as needed by the ISTR Contractor. A service plan is available from National Grid that describes the utility's provisions for a new natural gas service to the proposed installation shown in the Contract Drawings. The ISTR Contractor is required to furnish and install the service lateral trenching and termination facilities according to National Grid's Bluebook Specifications and Requirements for Gas Installations in Upstate New York

and their supplemental Gas Engineering requirements specific to the project (RE: <https://www.nationalgridus.com/media/pronet/bluebook-uny-2016.pdf>).

1.9.5.3 Process Water Supply

The Contractor shall be responsible for the procurement and installation of the water service to supply all required potable water for the Contractor's selected operations (as applicable), including all required coordination with and submittals to the local water utility provider. The water service installation shall include all infrastructure required to bring the required water to the Contractor's ISTR equipment, including furnishing and installation of all piping, trenching work, metering equipment, on-site water distribution lines, grounding, or other safety and security measures. The water service shall include separate service metering as required to allow for tracking of the Contractor's water usage and costs.

Based on discussions with the local water supply provider (Town of Glenville), water service can be provided to the ISTR project via connection to an existing 12-inch diameter water main located along Freemans Bridge Road in front of the site.

1.9.5.4 Communications Service

The Contractor shall be responsible for ordering and installing temporary voice and data communications service as required to provide remote connectivity for control and monitoring of the ISTR equipment operations.

1.9.6 Hydraulic Control

The Contractor shall be responsible for the procurement and installation of a groundwater hydraulic control barrier to provide hydraulic control of groundwater flow through the ISTR treatment zone during heating operations. Sheet piles shall be installed along the ISTR treatment zone perimeter (as shown on the Contract Drawings) and driven to depths as indicated on the Contract Drawings. The Contractor shall be responsible for the selection of the specific sheet pile make and model based on the Contractor's proposed means and methods for the work (e.g., proposed sheet pile installation methods and equipment, proposed ISTR thermal insulating cap construction approach). Also refer to Section 31 62 16 Steel Sheet Piling.

Inactive utilities crossing the perimeter of the ISTR treatment zone (e.g., existing water and natural gas service laterals along the shoulder of Freemans Bridge Road, 6-inch PVC discharge line from the conex box area to the west) shall be properly abandoned in accordance with local codes and utility company requirements, and cut and capped at locations outside the ISTR treatment zone, in coordination with utility providers as required. These utilities will be addressed prior to or in conjunction with sheeting installation. Also refer to Contract Section III, Article 14.

Based on the proximity of existing features (e.g., utilities, railway, structures) to the planned sheet pile installation work and other potential vibration-inducing activities, the Contractor shall retain a NY-licensed Professional Engineer to prepare a site-specific Vibration Minimization and Monitoring Plan for the project, based on the Contractor's proposed means and methods for the work. The Contractor shall be responsible for the implementation of the Vibration Minimization and Monitoring Plan throughout the work. Refer to Section 31 62 16 Steel Sheet Piling for additional information.

1.9.7 Process Wastewater Discharges

The Contractor will furnish, install, test, and operate, all equipment/facilities required to treat process wastewater discharges based on its selected ISTR technology and means and methods. Also refer to Part 1.7.3 of this section.

Based on discussions with the City of Schenectady POTW and the Town of Glenville, treated wastewater discharges from the ISTR project may be discharged to the City of Schenectady publicly owned treatment works (POTW) via the Town of Glenville sanitary sewer system. An existing 12-inch diameter PVC sanitary sewer is located along the western shoulder of Freemans Bridge Road in front of the Site. The selected Contractor will be responsible for the application for and permitting and installation of the process wastewater service connection, in coordination with the City of Schenectady and Town of Glenville requirements. The contractor shall also be responsible for the operation and maintenance of the process wastewater discharges throughout the project duration, and for complying with the sampling and reporting requirements and other conditions of the applicable City of Schenectady wastewater discharge permit. Anticipated permit compliance criteria for this discharge approach are included in the Limited Site Data Document. In addition, all ISTR process wastewater liquids shall be cooled to a temperature of 140°F or less (or as otherwise required by City of Schenectady POTW or Town of Glenville requirements), prior to discharge to the sanitary sewer located along Freemans Bridge Road. Refer to Part 3.4.3 of this section for ISTR process wastewater discharge permit compliance monitoring requirements.

The Contractor shall also obtain a surface water discharge permit equivalency for the process wastewater discharges. Surface water discharge of treated ISTR process wastewater may be required in certain cases when temporary weather conditions (e.g., high rainfall events) require that treated ISTR process wastewater discharges be directed to surface water. Treated ISTR wastewater can be discharged to surface water utilizing an existing 6-inch diameter PVC buried discharge line which was previously installed as part of IRM activities for the Site (refer to the Contract Drawings for the line location). The current condition of the line is unknown. The Contractor shall be responsible for evaluating the integrity of the line (e.g., camera inspections), confirming its suitability for conveying treated ISTR process wastewater discharges to surface water, and/or repair and replacement of the line as necessary for this purpose. The contractor shall also be responsible for the operation and maintenance of the process wastewater discharges throughout the project duration, and for complying with the sampling and reporting requirements and other conditions of the applicable surface water discharge permit equivalency. In addition, all ISTR process wastewater liquids shall be

cooled sufficiently to comply with NYSDEC thermal discharge criteria for surface water at 6-CRR-NY 704. Refer to Part 3.4.3 of this section for ISTR process wastewater discharge permit equivalency compliance monitoring requirements.

Discharge of ISTR process wastewater to the ground surface (e.g., for re-wetting of electrodes) will not be allowed.

If the POTW discharge approach for ISTR process wastewater becomes temporarily unavailable, and if there are any components of the ISTR process wastewater generated that cannot be cost-effectively treated sufficient to meet applicable surface water discharge criteria (e.g., acid gas scrubber blow-down containing high chloride concentrations), the Contractor shall provide for segregation of such wastewater and emergency containerization of the liquids, until such time as the POTW discharge option becomes available again. For bidding purposes, the Contractor shall assume a minimum containerization storage capacity to allow for up to 4 days of continuous ISTR operations. Also refer to Part 2.1.5 of this section.

1.9.8 Secondary Containment

All non-treated liquid storage and treatment equipment shall be secondarily contained within impermeable surfaces suitable to contain a spill or release of the largest liquid vessel within the containment areas, plus an additional containment allowance of up to 6 inches of rainfall. Impermeable means having a maximum permeability for any hazardous substance that is being contained of 1.0×10^{-7} centimeters/second at the maximum anticipated hydrostatic pressure. Any liquids captured within secondary containment (including rainwater) shall be promptly removed and treated through the ISTR liquid treatment system.

1.10 SITE PHOTOGRAPHS

The Contractor shall photographically record the work in accordance with Section 01 32 33 – Photographic Documentation. Construction progress photos shall be taken by the Contractor throughout the work to document all key construction activities. Construction activities to be photo-documented include, but are not limited to, the following:

- a. Existing (pre-construction) site conditions, including nearby buildings, roadways, and other features adjacent to the work areas.
- b. Mobilization
- c. Site preparation (e.g., wells and utilities abandonment and/or re-location, vegetation removal, site grading)
- d. Hydraulic control (i.e., sheet pile) installation
- e. Well-field drilling operations, wellfield components installation and vapor cover installation
- f. Above-grade piping and electrical installation
- g. Vapor and liquid treatment equipment installation
- h. Utilities installation (e.g., power, water service)
- i. Treated wastewater discharge piping and outfalls installation

- j. Equipment start-up and testing activities
- k. Full-scale ISTR operations and maintenance activities
- l. Soil verification sampling activities
- m. System shut-down, decontamination, and decommissioning
- n. Site restoration and demobilization

PART 2 PRODUCTS

2.1 EQUIPMENT

The following equipment are common components of ISTR systems and have been included here with common applicable requirements. The Contractor's proposed equipment and approach shall be described in detail in the Contractor's Revised Work Plan, including equipment manufacturer data and specifications as applicable.

It shall be the Contractor's responsibility to procure, construct, operate, and monitor the ISTR equipment and components as one complete and compatible system. The Contractor shall include any additional components and appurtenances not specified below which are required for a complete and operable system.

The Contractor shall ensure that all components of the system are constructed of materials that are acceptable and chemically inert and compatible to the contaminants expected to be present in the recovered soil gas and liquids at the concentrations expected based on the site data provided. All equipment shall be rated for the environment and location where it will be operating, to include the potential for hazardous locations, in accordance with local and national codes.

2.1.1 ISTR Well-Field Components

The Contractor shall provide the labor, equipment, materials, tools, and supplies to install all required elements (subsurface and aboveground components) of the ISTR well-field and thermal insulating cap/cover, which may include, but are not limited to:

- a. Heating elements (e.g., heater wells, electrodes)
- b. Temperature and pressure monitoring points
- c. Vapor recovery extraction wells
- d. Groundwater extraction wells
- e. Multi-phase extraction wells
- f. Thermal insulating cover
- g. Extraction piping for vapor and liquids capture and conveyance to above-grade vapor and liquid treatment equipment systems.

The specific selection of all components shall be determined by the Contractor and described in the Revised Work Plan, based on the Contractor's proposed ISTR technology and construction means and methods.

2.1.2 Knock-out Tank and Moisture Separator Equipment

Provide knock-out tank and moisture separator equipment with capabilities to separate, demist and condense significant moisture from the influent soil vapor and groundwater being recovered. The separator shall have sufficient holding capacity to allow constant operation without shutdowns of the overall system. Equipment shall be constructed of suitable material for its intended purpose and incorporate the necessary gauges, piping, valves, sensors, and level control switches, or equivalent, to allow its effective and continuous functioning.

2.1.3 Vacuum Blower Equipment

Provide vacuum blower(s) with motors properly sized and sheaved to accommodate sufficient negative pressure and air flow rate (plus a safety factor) for recovering soil gas from the subsurface. The blower(s) shall be engineered for continuous long-life operation in an equivalent soil vapor extraction mode. The blower(s) shall be equipped with motor starters, variable speed drives, inlet filters, check valves, silencers, relief valves, or equivalent and other components recommended by the manufacturer for its intended use. Contractor shall provide soundproofing as necessary to comply with local noise ordinances.

2.1.4 Heat Exchangers and Cooling Towers

Provide heat exchangers and cooling towers necessary to provide proper heat exchange, condensing and cooling needs for the recovered vapors and other process treatment components of the ISTR system. System blowdown and any additives shall be adequately treated prior to discharge to comply with applicable wastewater discharge limitations, including temperature.

2.1.5 Liquid Treatment Equipment

Provide liquid equalization, separation, handling and treatment equipment properly sized to accommodate the range of expected flows and contaminant concentrations in order to meet applicable discharge criteria. Contractor shall incorporate redundancy or provisions of spare equipment to avoid unplanned shutdown of the ISTR system due to equipment failure.

If the POTW discharge approach for ISTR process wastewater becomes temporarily unavailable (refer to Part 1.9.7 of this section for additional details), and if there are any components of the ISTR process wastewater generated that cannot be cost-effectively treated sufficient to meet applicable surface water discharge criteria (e.g., acid gas scrubber blow-down containing high chloride concentrations), the Contractor shall provide for segregation of such wastewater and contingency containerization of the liquids, until such time as the POTW discharge option becomes available again. For bidding purposes, the Contractor shall assume a minimum containerization storage capacity to allow for up to 4 days of continuous ISTR operations.

2.1.6 Vapor Treatment Equipment

Provide vapor handling and treatment equipment properly sized to accommodate the range of expected flows and contaminants to meet applicable vapor emission limitations. Contractor shall incorporate redundancy or provisions of spare equipment to avoid unplanned shutdown of the ISTR system due to equipment failure. Discharge stack(s) shall be properly sized, secured for stability and shall terminate not less than 25 feet above grade. Equipment and stack height(s) shall also be in accordance with local zoning height restrictions as applicable. Discharge stack(s) shall also be furnished with all required appurtenances (e.g., suitably-sized and configured sampling ports, ladder and platform with railing for testing personnel access) to allow for the performance testing requirements specified in Section 3.4.3.

2.1.7 Instrumentation

Provide instrumentation (indicators, sensors, transmitters, recorders, alarms, auto dialers, etc.) and controls necessary to monitor and operate the equipment continuously, remotely, and safely, and allowing for operations adjustments to be made as required. Such equipment shall sense, monitor, record, and control key operating parameters (e.g., liquid levels, equipment and air temperatures, gas and liquid flow rates, pressures, etc.).

The ISTR system control panel(s) shall contain all local control devices, circuit breakers, power control transformers, system disconnect switches, and alarm components, as necessary to operate the system effectively and safely. The control system shall provide all functions required for complete automatic and manual operation of the system, including the following:

- System shutdown and alarm on high liquid level conditions in moisture separator and other liquid handling equipment,
- Manual start/stop for blowers,
- System shutdown and alarm on low or “no flow” in system, and
- Automatic call-out and notification in the event of an alarm.

The control system shall also be furnished with a means to allow for remote, real-time access to monitoring data for the Engineer and the Department.

The Contractor shall provide emergency back-up power for operation of all instrumentation and monitoring systems in the event of a utility power interruption (refer to Section 3.3.4 for details).

PART 3 EXECUTION

3.1 WORKING HOURS

Working hours during ISTR construction and site restoration activities shall be consistent with those stated in the Supplementary Conditions. ISTR heating/treatment operations will be on a 24-hour per day basis, from heating commencement through completion. The Contractor

shall conduct the heating operations in compliance with all applicable local ordinances (e.g., noise, lighting).

3.2 SITE PREPARATION

The Contractor shall establish the required work areas that will be used for the ISTR remedial action, including the treatment zone, staging and equipment areas, on-site access routes and site ingress and egress points, materials stockpiling areas, and other support zones as required.

The Contractor will be responsible for control of the ISTR work areas, including the establishment of controlled access points to the work areas, personnel sign-in and sign-out procedures, safety briefings and escort as required, installation and maintenance of perimeter security fencing around the work areas, and other measures as required to prevent unauthorized access.

A work area layout plan defining these areas will be developed by the Contractor and included as part of the Revised Work Plan.

3.2.1 Site Surveying

Site surveying shall be conducted by the Contractor throughout the remedial action construction work to establish and maintain control of site grading and elevations and to document the progress of the remedial action. The ISTR contractor will retain a New York-licensed Professional Land Surveyor to perform the surveying work.

In addition to the key progress surveys that will be required to document the remedial action at a minimum, the ISTR contractor will be responsible for conducting all other site control (e.g., grading and staking) surveys to maintain horizontal and vertical control of the work as needed.

All surveys shall be completed in accordance with Section 31 22 01 – Site Survey and Stakeout.

3.2.2 Utility Clearances and Management

Prior to invasive site work (e.g., excavation), the Contractor shall perform a utility mark-out to identify underground utilities at the Site. The contractor will contact Dig Safely New York (DSNY) to locate utilities.

The Contractor shall also retain a qualified private utility locator firm to identify potential utilities in areas where invasive activities will be conducted. The identified subsurface utilities will be marked at the ground surface using stakes, paint, or flags, and the identified utilities will be incorporated into the site surveying deliverables.

The Contractor shall employ measures to protect identified subsurface utilities from damage as necessary (e.g., the sanitary sewer along Freemans Bridge Road is located approximately 10 feet from the eastern edge of the treatment zone), including the use of slower, surgical excavation techniques with conventional equipment or soft-dig methods, if needed.

Inactive or non-essential piping, conduits, or infrastructure within the ISTR treatment zone may provide unwanted cooling or preferential pathways for vapor and/or liquid migration. Therefore, these structures should be identified and removed by the Contractor or otherwise properly abandoned (e.g., grouted) prior to ISTR operations. Known/suspected inactive utilities and piping located within the ISTR treatment zone that shall be abandoned and removed are identified on the Contract Drawings.

Inactive utilities crossing the perimeter of the ISTR treatment zone (e.g., natural gas and water service laterals along the shoulder of Freemans Bridge Road, 6-inch PVC discharge line from the Conex box area to the west) shall be properly abandoned and cut and capped at locations outside the ISTR treatment zone, in coordination with utility providers as required. The cutting and capping of these utilities shall be conducted prior to or in conjunction with the perimeter barrier installation (sheet-pile wall) for groundwater hydraulic control.

3.2.3 Monitoring Well Abandonment

All monitoring wells within the ISTR treatment zone which are not compatible with ISTR operations shall be abandoned in accordance with local and state requirements, and in a manner that is compatible with ISTR system operational pressures and temperatures. At a minimum, the PVC monitoring wells specified on the Contract Drawings shall be abandoned in accordance with NYSDEC well abandonment guidelines (i.e., NYSDEC Commissioner Policy CP-43).

3.2.4 Soil Erosion and Sediment Controls

The Contractor shall furnish and implement soil erosion and sediment control measures in accordance with the requirements identified on the Contract Drawings, the *New York State Standards and Specifications for Erosion and Sediment Control* (November 2016), and Section 31 25 14 Erosion and Sediment Control.

3.2.5 Site Clearing and Grubbing

The Contractor shall perform site clearing and grubbing as needed where vegetative cover is present within the ISTR treatment zone. Refer to Sheet C-104 of the Contract Drawings for additional details.

3.2.6 Removal and Sizing of Concrete

As part of site preparation, the Contractor shall remove intact concrete slabs or pads and similar impervious surfaces within the ISTR treatment zone to eliminate potential obstructions

that could interfere with ISTR operations. The removed concrete and concrete debris piles will be disposed off-site at a permitted Subtitle D landfill selected by the Contractor (with review and concurrence by the Engineer and the Department). The concrete materials shall be sized and otherwise prepared sufficient to meet the selected disposal facility's acceptance criteria. Also refer to Section 31 23 16 Earthwork.

3.2.7 Earthwork

The Contractor shall perform selected earthwork (materials excavation and re-grading) to prepare the subgrade surface on which the ISTR equipment and cap will be installed, as specified in Section 31 23 16 Earthwork.

3.3 ISTR SYSTEM INSTALLATION

3.3.1 ISTR Well-Field

The Contractor shall provide the labor, equipment, materials, tools and supplies to install all required components of the ISTR system which may include, but are not limited to: heating elements, temperature and pressure monitoring points, vapor recovery extraction wells, groundwater extraction wells, and multi-phase extraction wells.

Heating elements, wells, and monitoring points shall be suitable for the Contractor's selected thermal technology and shall be constructed and installed in accordance with the Contractor's proposed means and methods. The Contractor shall retain the services of a qualified licensed NYS drilling firm to perform the well-field installation work, and obtain all required drilling and well installation permits prior to the commencement of these activities. The Contractor shall also complete all required utility clearances (i.e., Dig Safely New York) prior to invasive subsurface work.

Drill cuttings and other waste generated during installation work shall be placed in a designated location within the ISTR treatment zone footprint for thermal treatment with the other soils to be remediated. If certain drill cuttings cannot be placed within the ISTR footprint and treated with the other soils planned for remediation, the cuttings shall be containerized and disposed off-site in accordance with waste management procedures described in Section 31 23 16 – Earthwork. All equipment shall be decontaminated prior to leaving the site.

Installation of the ISTR well-field components shall be conducted in accordance with the Contractor's Revised Work Plan. Any deviations from the Revised Work Plan shall be reviewed with the Engineer and the Department prior to implementation. The Contractor shall survey the locations of all well-field components and equipment following installation. Surveying shall be completed by a professional land surveyor licensed in the State of New York, and all surveys shall be in accordance with Section 31 22 01 – Site Survey and Stakeout.

3.3.2 Liquid and Vapor Recovery and Treatment Equipment

Liquid and vapor treatment equipment shall be installed in a designated location adjacent to the ISTR treatment zone, in accordance with the Revised Work Plan. Contractor shall furnish and install appropriate equipment foundation / support and secondary containment systems. Liquid and vapor recovery and treatment systems shall be appropriately sized to provide effective operations and treatment in compliance with air emissions and wastewater discharge criteria based on the anticipated site conditions, including the types of constituents present (both VOCs and other analytes) and their concentrations, estimated mass of VOCs to be treated, and other relevant site conditions. The sizing of liquid and vapor treatment equipment shall also incorporate factors of safety, in consideration of the potential variability in site conditions (e.g., uncertainties in the VOC mass estimate). The Contractor shall provide the layout/arrangement and details of the liquid and vapor treatment systems equipment as part of the Revised Work Plan, including allowances for spare or contingency equipment to promote uninterrupted ISTR treatment operations. The equipment locations, shall be coordinated with the required utility service connections, access roads, and other staging areas according to the Revised Work Plan.

All liquid and vapor extraction piping and equipment interconnection piping and other lines shall be constructed in such a manner (sloped) to prevent any media from condensing or collecting where it would not be recovered or otherwise interfere with effective operations. All piping and other materials of construction shall meet the anticipated pressures, temperatures and pH levels in that part of the system or those specified by manufacturers of component equipment, particularly those after the vacuum blower or oxidation and scrubber units, if present. Contractor shall ensure that the installed piping, hoses, and orifices are of sufficient size to transmit soil vapor, groundwater, process water, blow-down, treated air, and other media without any significant pressure drop or restriction to the system. Conveyance and equipment interconnection piping shall be furnished with sampling ports as required to facilitate the anticipated operations process monitoring and sampling activities during the ISTR operations, including all required permit or permit equivalency compliance sampling. All piping and connections shall be installed, properly supported, and maintained in a neat and workmanlike manner. When completed, the system construction details shall be submitted to the Engineer and the Department as part of as-built drawings.

3.3.3 Thermal Insulating Cap

The Contractor shall include in the Revised Work Plan the details of the thermal insulating cap or cover for the proposed ISTR implementation (including thickness, materials of construction, etc.). The cap materials and construction shall address the following requirements:

- The cap shall have sufficient insulating characteristics to prevent unintended cooling of the ISTR treatment zone during heating operations, and to allow the targeted heating temperatures to be maintained in all portions of the treatment zone (including those

portions directly below the cap surface and along the treatment zone perimeter) during heating operations.

- The cap shall be sufficiently impermeable to prevent infiltration of precipitation into the underlying treatment zone.
- The cap shall have a generally smooth surface, with proper grading and sloping as necessary to prevent ponding of stormwater on the cap surface. The cap materials and construction shall also be integrated with the general site grading conditions and other stormwater infrastructure to promote effective stormwater runoff control throughout the work areas (refer to the Contract Drawings for cap subgrade surface grading, stormwater swale, culverts, and other stormwater management components), and to prevent excessive stormwater runoff to or flooding of surrounding properties and features (e.g., Freemans Bridge Road, the property immediately south of the ISTR treatment zone's southern boundary).
- The cap shall allow for effective pneumatic control of the ISTR treatment zone during heating operations, and for effective collection of generated vapors to preclude the potential for the release of fugitive emissions from the ISTR treatment zone.
- The cap shall be sufficiently stable and firm to facilitate routine inspections and maintenance activities, and to allow for safe and unencumbered access for drilling equipment and personnel to conduct post-treatment verification soil borings and sampling activities.

Any imported borrow materials used for the ISTR insulating cover construction shall meet the definition of certified clean fill and other applicable requirements.

3.3.4 ISTR Equipment Power, Instrumentation and Controls

The Contractor shall be responsible for furnishing and installing all necessary power distribution and instrumentation and controls equipment for their proposed ISTR system, inclusive of equipment foundation and support systems. Power and controls wiring shall be in accordance with local, state, and national codes as applicable, and the Contractor shall apply for and secure local building permits and approvals as required for the work. The Contractor's work shall include all power and controls wiring and cabling, conduits, lighting, ventilation fans, heaters, disconnects, instrumentation, controls, and interconnections necessary for a fully operable system.

The Contractor shall provide a source of back-up or secondary power (i.e., generator) to allow the ISTR vapor and liquid recovery and treatment equipment and all monitoring systems and controls to continue uninterrupted operation in the event of a loss in primary utility power (back-up power for the well-field heating elements is not required). The back-up power source shall be furnished with a fuel source to allow for a minimum of 24 hours of operation without the need for re-fueling. The Contractor shall be responsible for obtaining applicable

permit(s) for the back-up power source and for performing testing and operations and maintenance of the back-up power equipment as required.

All work outdoors and in wet conditions shall be weatherproof. All material, equipment, and installations in hazardous locations shall meet National Electrical Code (NEC), National Fire Protection Association (NFPA), UL, NEMA, and Occupational Safety and Health Association (OSHA) requirements for hazardous locations. Proper electrical grounding shall be installed for all equipment as applicable.

3.4 IN-SITU THERMAL REMEDIATION SYSTEM OPERATIONS

3.4.1 Safety and Environmental Monitoring

Safety and environmental monitoring activities conducted during the ISTR operations (and other construction activities as noted below) shall include but not limited to the following:

- a. **Fugitive Emissions:** The Contractor shall ensure that no excessive vapor pressure is created in the subsurface during the ISTR operations that may allow for unintended release of vapors from the ISTR treatment zone. The Contractor shall operate the ISTR system in a manner that minimizes the potential for migration of the impacted groundwater plume, and effectively captures soil gas vapors within the Contractor's established heating area. The Contractor shall perform daily inspections and photoionization detector (PID) and visual monitoring along the well-field perimeter to ensure there are no surface expressions of steam or fugitive emissions during the well-field operations (this frequency may be adjusted with concurrence from the Engineer and the Department). The results of all such monitoring shall be reported to the Engineer and the Department. If steam or fugitive emissions are identified, the Contractor shall implement corrective measures to address.
- b. **Stray Voltage:** The Contractor shall conduct monitoring for stray voltage along the well-field perimeter and in other locations as applicable based on the ISTR means and methods. Stray voltage shall remain below 15 Volts within the work area boundaries and there shall be no detectable stray voltage outside the work area boundaries. The instruments and means and methods for this monitoring shall be included in the Contractor's Revised Work Plan. Stray voltage monitoring shall be conducted initially as part of ISTR operations start-up and testing, and weekly thereafter (this frequency may be adjusted with concurrence from the Engineer and the Department). The results of all such monitoring shall be reported to the Engineer and the Department. If stray voltages are identified above applicable thresholds, the Contractor shall implement corrective measures to address.
- c. **Combustible Gas:** The Contractor shall conduct combustible vapor monitoring using a portable combustible gas meter (e.g., commercially available four-gas meter with lower explosive limit [LEL] monitoring capability, programmed to alarm upon detection of vapor conditions reaching 10% of the LEL). Monitoring shall be performed at locations

adjacent to ISTR vapor and liquid process equipment and piping, and other locations where combustible vapors may be expected to accumulate. The Contractor shall perform daily inspections and combustible gas monitoring initially upon ISTR operations start-up, and on a weekly basis thereafter at a minimum (this frequency may be adjusted with concurrence from the Engineer and the Department). The results of all such monitoring shall be reported to the Engineer and the Department. If LEL alarm conditions (or LEL readings approaching such conditions) are identified, the Contractor shall implement immediate corrective measures to address (e.g., identification and repair of equipment or piping leaks).

- d. **Community Air Monitoring:** The Contractor shall conduct community air monitoring using real-time monitoring instruments in accordance with the Community Protection Plan (CPP) developed as part of the Contractor's HASP. Refer to Section 01 35 29 Contractor's Health and Safety Plan. Community air monitoring shall be conducted during the ISTR site preparation and construction activities, the ISTR heating operations, and the site restoration activities as follows:
- Upon mobilization and throughout the site preparation and ISTR system construction work – VOCs and airborne particulates (i.e., dust) monitoring during all activities.
 - Upon ISTR heating operations start-up and throughout the heating operations period – VOCs monitoring.
 - Throughout site restoration activities until demobilization – VOCs and airborne particulates (i.e., dust) monitoring during all activities.

The CPP monitoring parameters and frequencies may be adjusted with concurrence from the Engineer and the Department.

- e. **Groundwater Monitoring:** The Contractor shall collect groundwater samples from selected existing monitoring wells located outside of and downgradient and/or side-gradient from the ISTR treatment zone. The locations of these wells are noted on Sheet C-107 of the Contract Drawings. Groundwater temperature measurements will also be collected as part of the sampling activities. Samples will be submitted for laboratory analysis for VOCs (Method 8260, target compound list). The purpose of the groundwater monitoring is to assess groundwater conditions in the vicinity of the ISTR treatment zone during ISTR operations.

A round of groundwater samples will be collected prior to the commencement of ISTR heating operations, and subsequent rounds of groundwater samples will be collected approximately every 2 months thereafter (total of 5 rounds anticipated). The final round of groundwater samples will be collected following shut-down of the ISTR heating operations.

- f. The Contractor shall conduct the ISTR operations in a manner consistent with local and state ordinances and regulations, and to minimize impacts to quality of life for residents in the vicinity of the site (air quality, lighting, odor, noise, traffic, working hours).

3.4.2 ISTR Process Monitoring

ISTR process monitoring shall be performed by the Contractor to evaluate ISTR system operations performance and progress toward meeting the ISTR treatment objectives (refer to Part 1.1.1 and **Table 1-1** of this section). Process monitoring shall be performed by the Contractor throughout the ISTR operations period, including but not limited to the items listed below. Process monitoring information shall be presented in bi-weekly summary reports to the Engineer and the Department. In addition, any unexpected operating conditions or excursions in anticipated monitoring parameters shall be reported to the Engineer and the Department on the same day that such conditions are noted. Description, evaluation, and resolution of such conditions shall be included in daily reports submitted to the Engineer.

- a. **Temperature:** The Contractor shall monitor the temperature of the ISTR treatment area on a continuous basis. Temperature monitoring equipment shall be as specified in the Contractor's Revised Work Plan. At a minimum, at least one temperature monitoring point shall be installed for every 1,600 square feet (SF) of ISTR treatment area footprint (additional temperature monitoring points shall be specified by the Contractor in accordance with the Revised Work Plan, if deemed appropriate by the Contractor to provide effective temperature monitoring). At each temperature monitoring point, temperature monitoring shall be conducted at discrete vertical intervals (minimum one temperature monitoring sensor every 3 vertical feet throughout the treatment zone depth, or more frequently as specified in the Contractor's Revised Work Plan). Temperature monitoring points and sensors shall be positioned laterally and vertically to provide temperature monitoring data at locations where the ISTR treatment zone temperatures would be expected to be lowest (e.g., at the centroids between heating elements, along the treatment zone perimeter, and near the top and bottom of the treatment zone). The locations and numbers of temperature monitoring locations may be adjusted based on the Contractor's review of the specific targeted heating area geometry and depth variations.
- b. **Well-Field Pressure:** Pressures shall be monitored continuously via pressure monitoring points located throughout the ISTR treatment zone. The specific number, locations, and construction of the pressure monitoring points shall be based on the Contractor's Revised Work Plan. The pressure monitoring points shall be of sufficient number(s) and locations(s) to demonstrate pneumatic control (i.e., negative pressure readings) throughout the full extent of the ISTR treatment zone for the duration of the ISTR operations.
- c. **Heating Duration and Utilities Usage:** The Contractor shall maintain a record of the number of heating operations days from the start-up through shut-down of heating operations. The Contractor shall also include notes in the operations record of any interruptions in heating operations due to regional power grid outages, ISTR equipment failure or maintenance activities, etc.

The Contractor shall track the instantaneous and cumulative usage of utilities (e.g., power, natural gas, potable water, and ISTR process wastewater discharges) throughout the ISTR operations period, using metering equipment installed for the utility connections or other means as specified in the Revised Work Plan.

- d. **Recovered Vapor and Liquid Flows:** The Contractor shall operate vapor recovery system components to optimize removal of water vapor and volatilized VOCs from the subsurface based on its selected ISTR technology. Pressures and flow rates shall be monitored and managed to maximize mass removal from the subsurface and preclude migration of contaminants outside of the designated ISTR treatment area. PID measurements of extracted vapors from the ISTR treatment area shall be collected (on a weekly basis at a minimum) as required to monitor the removal of VOCs, both at discrete times and cumulatively.

The flow rates and cumulative volumes of all recovered liquids from the ISTR treatment zone (e.g., separate-phase liquids [LNAPL or DNAPL], extracted groundwater) shall be monitored and recorded by the Contractor, to facilitate VOC mass removal tracking and other systems operations reporting as applicable. The Contractor shall conduct analytical sampling of the recovered free liquids as necessary to support mass removal estimates for ISTR treatment progress tracking and reporting.

The Contractor shall also monitor the flow rates and cumulative volumes of process wastewater generated from the ISTR equipment operations (e.g., scrubber and other process blow-down liquids, steam condensate) for process wastewater tracking purposes and as indicators of water mass balance.

3.4.3 Permit and/or Permit Equivalency Compliance Monitoring

As described in Parts 1.7.3, and 1.9.7 of this section, required regulatory permits and approvals are expected to include a discharge permit approval from the City of Schenectady POTW for the discharge of treated ISTR process wastewater and a SPDES discharge permit equivalency from NYSDEC for the discharge of treated ISTR process wastewater to surface water. The Contractor shall conduct the ISTR operations in compliance with all permit and permit equivalency requirements, and the Contractor shall be responsible for all monitoring and sample collection activities, record-keeping and reporting required by permit conditions. For bidding purposes, the Contractor shall assume the permit compliance monitoring and sampling and reporting activities listed in the tables below will be required relative to the above-noted permits.

The Contractor shall be responsible for all permit annual maintenance fees, as well as any discharge fees or reporting fees. In addition, the Contractor shall be responsible for providing properly trained and licensed personnel for management of the wastewater treatment and discharge equipment in compliance with all permit and/or permit equivalency requirements.

The Contractor shall be solely responsible for any permit or discharge violations resulting from their operations.

TABLE 3-1
Air Emissions Permit Equivalency Minimum Monitoring Requirements

Activity	Method	Location(s)	Frequency	Data Use and/or Compliance Requirement
VOC DRE demonstration	USEPA Reference Method 25A	Simultaneous testing at the inlet and outlet of VOC air emissions treatment equipment	Three 1—hour test runs at each sampling location are to be performed within 90 days of startup	The operating temperature of the VOC air emissions treatment system shall be monitored during each test run; Contractor shall continue to operate the equipment at or above the minimum average temperature recorded during the testing event.
PCE emission rate	USEPA Reference Method 18 or equivalent	Outlet of the air emissions treatment equipment	Three 1-hour test runs within 90 days of startup	The operating temperature of the VOC air emissions treatment system shall be monitored during each test run; Contractor shall continue to operate the equipment at or above the minimum average temperature recorded during the testing event.
HCl RE or emission rate demonstration	USEPA Reference Method 26A	Simultaneous testing at the inlet and outlet of HCl air emissions treatment equipment	Three 1—hour test runs at each sampling location are to be performed within 90 days of startup	Contractor shall monitor the pertinent operating parameter of the HCl air emissions treatment system (e.g., water flow rate in a scrubber, or sorbent injection rate for a dry system) during each test run; Contractor shall continue to operate the equipment at or above the maximum operating parameter rate observed during testing

TABLE 3-2

ISTR Process Wastewater – POTW Discharge Permit Minimum Monitoring Requirements

Activity	Method	Location(s)	Frequency	Data Use and/or Compliance Requirement
Treated wastewater analytical sampling	Various standard wastewater methods (e.g., EPA Method 624 for VOCs, EPA Method 625 for SVOCs). Expedited 3-day turn-around time for results	Process wastewater treatment equipment treated effluent	One sample each 2-week period at treated effluent location	POTW Discharge permit compliance tracking – refer to the Limited Site Data Document
Treated wastewater flow rate and pH Monitoring	Properly calibrated effluent flow meter; properly calibrated and maintained pH meter/probe	Process wastewater treatment equipment treated effluent	Continuous	POTW Discharge permit compliance tracking – refer to Limited Site Data Document (assume maximum instantaneous flow rate no higher than 60 gpm)

* For bidding purposes, assume that the POTW discharge approach will be used throughout the ISTR operations period.

TABLE 3-3

ISTR Process Wastewater – Surface Water Discharge Permit Equivalency Minimum Monitoring Requirements*

Activity	Method	Location(s)	Frequency	Data Use and/or Compliance Requirement
Treated wastewater analytical sampling	Various standard wastewater methods (e.g., EPA Method 624 for VOCs, EPA Method 625 for SVOCs). Expedited 3-day turn-around time for results	Process wastewater treatment equipment treated effluent	One sample each 2-week period at treated effluent location	POTW Discharge permit compliance tracking – refer to Limited Site Data Document for compliance criteria

Activity	Method	Location(s)	Frequency	Data Use and/or Compliance Requirement
Treated wastewater flow rate and pH Monitoring	Properly calibrated effluent flow meter; properly calibrated and maintained pH meter/probe	Process wastewater treatment equipment treated effluent	Continuous	POTW Discharge permit compliance tracking – refer to Limited Site Data Document for compliance criteria (assume maximum instantaneous flow rate no higher than 60 gpm)

* For bidding purposes, assume that the surface water discharge approach will be needed for 4 weeks during the ISTR operations period.

3.5 VERIFICATION SOIL SAMPLING AND SYSTEM SHUT DOWN

3.5.1 Verification Soil Sampling

The Contractor shall collect post-treatment verification soil samples throughout the ISTR treatment zone extents to confirm that residual concentrations of VOCs in the ISTR treatment zone soils are compliant with the ISTR treatment objectives (refer to Part 1.1.1 of this section and **Table 1-1**). The Contractor shall be responsible for determination of the timing to initiate collection of verification soil samples based on review and evaluation of the ISTR process monitoring data. The Contractor shall review the relevant process monitoring data (e.g., VOC concentrations in well-field vapors, temperature data) and rationale for the initiation of sample collection (e.g., declining or asymptotic trends in VOC removal) with the Engineer and the Department prior to proceeding with samples collection.

Soil borings for post-treatment soil samples collection shall be installed at a minimum frequency of one boring for every 1,600 square feet of well-field footprint. Based on this minimum frequency and also considering the ISTR treatment zone geometry, a planned total of 66 soil borings are shown on Sheet C-107 of the Contract Drawings. The boring locations shown are approximate and will be revised based on the ISTR Contractor's final well-field and equipment layout. Specific soil boring locations will be biased to the locations in the well-field where temperatures are expected to be lowest, such as: the mid-points or centroids between adjacent heating elements; along the bottom, perimeter and top of the treatment zone; or where temperature monitoring data indicate cooler or less-sustained temperatures. Boring locations will also be biased toward locations where historical sampling results indicate elevated VOC impacts in soils. Final determination of soil sampling locations and depths will be at the discretion of the Engineer and the Department. A NY-licensed drilling firm shall be retained by the Contractor to perform the soil borings work. The Contractor shall be responsible for facilitating safe and unencumbered access to the soil boring locations for

drilling equipment and personnel, and for adjusting heating operations as required to facilitate personnel health and safety.

The Contractor shall install soil borings and collect soil verification samples from the ground surface to the bottom of the treatment zone for each location. A minimum of one soil sample shall be collected for each 5-foot vertical interval or portion thereof. The specific soil sampling location shall be biased toward the location of the highest PID screening measurement within the interval (or toward visual indications of soil impacts, if present). If no elevated PID readings or visual impacts are noted, the soil sample shall be collected from the middle of the 5-foot interval.

Soil cores shall be retrieved and soil samples shall be collected and managed using hot soil sampling protocols to be included in the Revised Work Plan and associated documents (SP, QAPP). Soil samples shall be submitted to a NY-certified laboratory and analyzed for VOCs via USEPA Method 8260 (target compound list). Also refer to Section 01 45 29.13.

The Contractor shall also collect and provide split samples to the Engineer if requested. The Engineer shall submit the split samples for independent analysis by a NY-certified laboratory.

The Contractor may elect to collect soil samples at certain time(s) prior to the timing of the post-treatment verification soil sampling, for the purpose of assessing interim treatment progress and need for operational adjustments. All such sampling shall be at the Contractor's sole discretion and cost. The Contractor shall notify the Engineer and the Department prior to any sampling activities.

The Contractor shall use a licensed NY driller and obtain permits for the soil boring work as required. All borings shall be grouted to the ground surface (using heat-resistant grout appropriate for the temperatures involved) upon completion of sampling.

If initial post-treatment verification soil sampling results do not meet the ISTR treatment objectives (refer to **Table 1-1** in this section), heating operations in the subject portions of the well-field shall be continued (including operational adjustments if deemed necessary by the ISTR contractor), and re-sampling will be conducted by the Contractor until the ISTR treatment goals have been met. The additional heating operations and re-sampling activities shall be conducted at no additional cost to the Department.

3.5.2 Shutdown

The Contractor may cease applying further thermal energy to the ISTR treatment zone (or portions thereof) upon receipt of analytical data demonstrating that all post-treatment verification soil samples collected within the ISTR treatment zone (or portion that is sampled) meet the ISTR treatment objectives. The Contractor may shut-down operations based on their assessment that preliminary results meet the performance criterion; however, final Department concurrence is contingent upon review of final validated analytical results.

If the Contractor wishes to shut-down one or more portion(s) of the ISTR treatment zone (where supported by the post-treatment verification soil sampling results) while thermal treatment is continued in other portions of the ISTR treatment zone, the Contractor shall request such shut-down in writing to the Engineer and the Department. The shut-down request will only be approved if it is clear (in the Department's sole opinion) that the continued ISTR operations will not result in the potential for re-contamination of the portion(s) of the ISTR treatment zone proposed for shut-down.

Contractor shall continue operating the vapor and liquid handling and treatment equipment after de-energizing the ISTR treatment zone until such time it can be demonstrated that any residual fugitive emissions do not pose a risk at the Site or to the surrounding community.

3.6 SITE RESTORATION AND DEMOBILIZATION

3.6.1 ISTR Well-Field Abandonment

Following ISTR operations shut-down/cool-down, all heating elements, temperature monitoring points, vapor recovery wells, pressure monitoring points, and liquid extraction wells shall be abandoned. The Contractor shall decommission/abandon all well-field components in accordance with NYSDEC well abandonment guidelines (i.e., NYSDEC Commissioner Policy CP-43). In addition, the upper 10 feet of all well-field components (e.g., steel casings) shall be removed, to mitigate the potential for subsurface interferences relative to future re-development.

3.6.2 Site Restoration and Demobilization

All equipment, materials, structures, and temporary facilities furnished and installed by the Contractor shall be decontaminated as required and removed from the site, and the work areas shall be restored to pre-construction conditions or better except where specifically noted otherwise. Refer to Sheet C-110 of the Contract Drawings. Nothing shall be abandoned in place except for the well-field components as described in Part 3.6.1. Following completion of the site restoration work, the Contractor shall decontaminate and demobilize all remaining equipment and materials from the site.

The Contractor shall provide all labor, materials and equipment necessary for the off-site transportation and disposal of any ISTR treatment system residuals or other wastes remaining upon completion of the ISTR operations. All hazardous and non-hazardous wastes shall be transported and disposed at properly permitted off-site disposal facilities in accordance with Section 31 23 16 – Earthwork. Anticipated waste materials include liquids or solids generated from decontamination activities, or residual liquids or solids removed from the ISTR treatment equipment.

END OF SECTION

SECTION 02 62 18 - In-Situ Thermal Remediation (ISTR)

Table 1-1

ISTR Treatment Objectives

Former Kenco Chemical Company, Inc. Site - Glenville, NY

Contaminant	ISTR Treatment Objective (mg/kg)
1,1-Dichloroethane (1,1-DCA)	0.27
1,1-Dichloroethene (1,1-DCE)	0.33
1,2-Dichlorobenzene	1.1
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
2-Butanone (MEK)	0.12
Acetone	0.05
Chloroform	0.37
Methyl tert-Butyl Ether	0.93
Methylene Chloride	0.05
Tetrachloroethene (PCE)	1.3
Toluene	0.7
Trichloroethene (TCE)	0.47
Vinyl Chloride	0.02
cis-1,2-Dichloroethene	0.25
trans-1,2-Dichloroethene	0.19

Notes:

mg/kg - milligrams per kilogram

The ISTR Treatment Objectives are based on the Soil Cleanup Objectives (SCOs) for Protection of Groundwater from New York State Code of Rules and Regulations (NYCRR) 6 CRR-NY 375-6.8.

SECTION 31 00 01**WORK PLAN****PART 1 - GENERAL****1.1 SUMMARY**

Development and implementation of a Work Plan for the duration of the project, prepared in accordance with the requirements of this section and other Contract Documents requirements as applicable.

1.2 SUBMITTALS

- A. Work Plan submitted with the “five day” bid submittals as detailed in Section 3, Article 5, Item b) of the Contract Documents.
- B. Revised Work Plan submitted following Contract award, including supplemental information such as equipment specifications, ISTR equipment layout plans and details, process flow diagrams, and other drawings and details based on the Contractor’s proposed means and methods for the project.
- C. Any other modifications to the Revised Work Plan as required throughout the duration of the project.

PART 2 - EXECUTION**2.1 WORK PLAN**

The Work Plan (refer to Part 1.2, Item A above) shall provide the details of the Contractor’s proposed approach for execution of the work. The Work Plan shall include a narrative and supporting figures at a level of detail sufficient to convey an understanding of the detailed scope of work in the Contract Documents, as well as the Contractor’s proposed sequencing and scheduling of the project activities. The Work Plan shall include the following information at a minimum:

- A. A project organization chart identifying the names of the project manager, site superintendents and foremen, and any subcontractors or licensed professional support staff proposed for the project.
- B. A general site plan layout drawing showing the proposed location(s) of all staging areas, on-site traffic routes and ingress and egress locations, ISTR equipment (e.g., ISTR liquid and vapor treatment equipment, thermal well-field layout, utilities, decontamination facilities, construction trailers).
- C. Layout of all utilities required to support the project, including those needed for all proposed equipment and on-site facilities (e.g., electricity, water, sanitary facilities, telephone), and description of the means by which the required utilities shall be supplied to the project. All utilities and sanitary facilities shall be furnished in accordance with applicable federal, state and local regulations/code requirements, as well as applicable utility company requirements. The Work Plan shall indicate the Contractor’s plan for obtaining all required permits and approvals for temporary facilities and utilities from local agencies.

- D. A detailed project schedule (Microsoft Project or similar format – also refer to Section 01 32 16 Progress Schedule) presenting the sequence and duration for the various project activities including all phases of the work from pre-mobilization activities through final demobilization. The schedule shall show any critical path linkages between dependent activities. The schedule shall depict the dates for all key completion milestones, including but not limited to: ISTR procurement, permitting, and other pre-mobilization activities; mobilization; site preparation; installation of required utilities; ISTR well-field and equipment installation; start-up and testing; ISTR operations; site restoration; and de-mobilization.
- E. Description of the ISTR technology proposed for the project (e.g., thermal conduction heating, electrical resistance heating) and rationale for selection.
- F. An ISTR well-field layout, showing and noting the locations and spacing of heating elements, vapor extraction points, temperature and pressure monitoring points, and other well-field components (e.g., multi-phase extraction points).
- G. Description of the proposed well-field drilling and installation techniques required for the well-field components.
- H. Description of the proposed perimeter subsurface sheet pile wall materials and specifications (e.g., sheet pile type) and installation techniques.
- I. Description of the proposed ISTR cap construction materials and details.
- J. Listing of proposed off-site transportation firms and disposal facilities proposed for disposal of all waste materials required to be disposed off-site. Also include estimated waste material quantities, including but not limited to the following:
 - 1. Estimated quantity of soil cuttings and drilling fluids to be generated from the ISTR well-field installation.
 - 2. Estimated quantity of separate-phase liquids (e.g., non-aqueous phase liquids) to be generated from the ISTR treatment.
- K. Description of the air and liquid treatment equipment proposed for meeting the applicable air emissions criteria/requirements and process wastewater discharge criteria for the ISTR operations.
- L. Mass and energy balance for the project, including the estimated quantities of all process wastewater to be generated (peak and average flow rates, and total cumulative volumes over the duration of ISTR operations).
- M. Outline of the Contractor's proposed monitoring during the ISTR operations, including safety and environmental monitoring, ISTR process monitoring, and permit and/or permit equivalency monitoring.
- N. Estimates of electric power usage, natural gas usage, potable water usage, and wastewater discharge quantities for the project, including peak demands and total cumulative usages over the project duration. Also provide the unit rates for electrical usage (dollars per kW-hr) and natural gas usage (dollars per MMBTU) used in developing the pricing for these items. Also provide the unit rate (dollars per gallon of treated ISTR wastewater discharged) for discharge fees paid to the City of Schenectady POTW for discharge of treated ISTR wastewater to their facility.

- O. Proposed hot soil core retrieval and sample collection protocols to be used for the post-treatment verification soil sampling to demonstrate compliance with the ISTR treatment objectives.

2.2 REVISED WORK PLAN

The following information shall be included in the Revised Work Plan (or otherwise submitted in accompanying documents) for all operations, including but not limited to: site preparation; in-situ thermal remediation (ISTR) construction, and operations; excavation, transportation and disposal activities; hydraulic control barrier (i.e., sheet piles) installation; construction water management; and site restoration. The Revised Work Plan shall include all the details listed in Part 2.1 of this section at a minimum. The Revised Work Plan and accompanying documents shall also include:

- A. A detailed site plan layout drawing showing the proposed location(s) of all staging areas, on-site traffic routes and ingress and egress locations, ISTR equipment (e.g., ISTR liquid and vapor treatment equipment, thermal well-field layout, utilities, decontamination facilities, construction trailers).
- B. Layout of all utilities required to support the project, including those needed for all proposed equipment and on-site facilities (e.g., electricity, water, sanitary facilities, telephone), and the means by which the required utilities shall be supplied to the project. All utilities and sanitary facilities shall be furnished in accordance with applicable federal, state and local regulations/code requirements, as well as applicable utility company requirements. The Work Plan shall indicate the Contractor's plan for obtaining all required permits and approvals for temporary facilities and utilities from local agencies. If temporary generators are required to provide power for the proposed equipment/facilities, the Revised Work Plan shall indicate their type, number and size (kW rating).
- C. A detailed project schedule (Microsoft Project or similar format – also refer to Section 01 32 16 Progress Schedule) presenting the sequence and duration for the various project activities including all phases of the work from pre-mobilization activities through final demobilization. The schedule shall show any critical path linkages between dependent activities. The schedule shall depict the dates for all key completion milestones, including but not limited to: ISTR procurement, permitting, and other pre-mobilization activities; mobilization; site preparation; installation of required utilities; ISTR well-field and equipment installation; start-up and testing; ISTR operations; site restoration; and de-mobilization.
- D. Specific means and methods and labor/equipment resources for each activity.
- E. An adverse weather contingency plan detailing the proposed preventative measures to eliminate or reduce the impact of adverse weather on the work (e.g., covering exposed materials, sequencing of operations).
- F. Detailed ISTR drawings and description based on the Contractor's proposed means and methods, including drawings, calculations and narrative addressing: the ISTR technology selected by the Contractor and rationale for the selection; detailed ISTR well-field layout plans and equipment details for all well-field components; ISTR cap details; liquid and vapor treatment equipment details and specifications; and mass and energy balance demonstrating the required energy and time for ISTR treatment, ISTR

wastewater peak flow rates and total volumes as applicable. Also refer to Section 02 62 18 In-Situ Thermal Remediation for additional requirements.

- G. Proposed materials and installation approach for the subsurface sheet pile wall to be used as a groundwater hydraulic control barrier during the ISTR operations. Also refer to Section 31 62 16 Steel Sheet Piling.
- H. A sampling plan that addresses all required monitoring and sampling activities and protocols for the project, including ISTR process monitoring, permit compliance sampling, and post-treatment verification soil sampling. Also refer to Section 02 62 18 In-Situ Thermal Remediation.
- I. An operations and maintenance (O&M) plan addressing required O&M activities during the ISTR system operations period.
- J. A typical daily report that the Contractor has recently used for a project of this type.
- K. Traffic control plan describing how construction traffic will be controlled throughout the work, including descriptions of signage and other traffic safety measures at ingress/egress points onto public roadways. Note that the traffic control plan may be required for submittal to local agencies for coordination of traffic and safety planning activities. The traffic control plan shall incorporate all input and additional requirements from local agencies as applicable.
- L. A site-specific health and safety plan for the project. Also refer to Section 01 35 29 Contractor's Health and Safety Plan.
- M. Proposed methods for dust suppression throughout the duration of the work, including equipment installation, excavation, stockpiling, loading, and transportation.
- N. Proposed methods for odor suppression, in the event that these measures are needed.
- O. Provide method(s)/ equipment for particulates (i.e., dust) and volatile organic compounds (VOCs) for community air monitoring during the work (also refer to Section 02 62 18 In-Situ Thermal Remediation Section 01 35 29 Contractor's Health and Safety Plan).

END OF SECTION

SECTION 31 05 16

AGGREGATES FOR EARTHWORK

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This Section includes select fill materials used as backfill, including aggregates and other borrow materials imported to or re-used on-site for the work, as specified or as directed by the Engineer.

1.2 REFERENCES

- A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. ASTM International – D422 – Method for Particle-Size Analysis of Soil
 - 2. ASTM International – D4318 – Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 - 3. ASTM International – D4972 - Standard Test Methods for pH in Soils
 - 4. AASHTO T 194 – Standard Method of Test for Determination of Organic Matter in Soils by Wet Combustion
 - 5. AASHTO T 88 – Standard Method of Test for Particle Size Analysis of Soils

1.3 SUBMITTALS

- A. Submit the following:
 - 1. The name and proposed borrow source location for each material.
 - 2. Samples and test reports of each material, including gradation/sieve analyses and type of material.
- B. All borrow materials brought to the site as part of the work shall also be subject to the following requirements:
 - 1. The Contractor shall submit an affidavit from the owner of the source of each type of borrow material stating that to the best of their knowledge, the site of the source material was never used as a dump site for chemical, toxic, hazardous or radioactive materials and it is not now nor ever has been listed as a suspected depository for chemical, toxic, hazardous or radioactive materials by any federal, state or governmental agency, department, or bureau.
 - 2. The Contractor shall provide documentation of the source of fill to the Engineer for approval in accordance with NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation* dated May 2010 (DER-10) as revised and amended, which should include the following:
 - a. The name of the person providing the documentation and relationship to the source of the fill;
 - b. The location where the borrow material was obtained

AGGREGATES FOR EARTHWORK

- c. Identification of any state or local approvals as a borrow source; and
 - d. If no prior approval is available for the source, a brief history of the use of the property which is the source of the borrow material.
 - e. Bills of lading shall be provided to the Engineer to document that the borrow materials delivered are from Department-approved source(s).
 - f. Analytical test results as described below.
3. The Contractor shall sample each different type of off-site material incorporated into the work at the location or locations identified by the Engineer as identified herein and in Section 5 of DER-10. The Contractor shall perform analyses for Target Compound List (TCL) volatile organic compounds (VOCs) on 2 grab samples, TCL semi volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide (total and amenable), polychlorinated biphenyls (PCBs), herbicides, pesticides, 1,4-dioxane and PFAS for one composite sample of the first 100 cubic yards from each source identified as a virgin mine or borrow pit. If the source is not 'virgin', then additional analyses will be required based on volume at the frequency identified in Table 5.4(e) of DER-10. Laboratory data shall be submitted to the Engineer for review, on the Department's behalf, immediately upon receipt and prior to use of the material on-site. The Engineer shall be the sole judge as to what constitutes each different type of material; however, the definition of "different" shall include, but not necessarily be limited to, variances in the physical properties of the same material, as well as the same material derived from separate borrow sources or separate areas in the same borrow pit. The Department may require additional sampling at the Department's discretion.
4. NYSDEC has clarified their imported soil requirements to address emerging contaminants. All imported material for use on a NYSDEC remedial site as a soil cap, soil cover, or as backfill must be tested for 1,4-dioxane and PFAS contamination in conformance with DER-10, section 5.4(e). Soil samples must be analyzed for 1,4-dioxane using EPA Method 8270 as well as the full list of PFAS compounds using EPA Method 537.1 (modified). For 1,4-dioxane, soil exceeding the Unrestricted SCO of 0.1 ppm must be rejected per DER 10: Appendix 5 - Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e). If PFOA or PFOS is detected in any sample at or above the guidance values, then the source of backfill should be rejected, unless a site-specific exemption is provided by the Department based on Synthetic Precipitation Leaching Procedure (SPLP) testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required..
5. If any borrow materials are found to be unacceptable by the Engineer following their delivery to the site, the Contractor shall remove and properly dispose of the materials in accordance with all applicable Federal, State and local laws and regulations at the Contractor's expense and liability.

PART 2 - PRODUCTS**2.1 SELECT FILL MATERIALS****A. Stone Backfill****1. Run of Crusher Stone**

- a. Imported ¾-inch nominal size clean crushed stone which shall meet specifications defined by AASHTO #57 stone.
- b. Crushed stone shall have the following gradation by weight:

% Passing	Sieve
100	1½-inch
95-100	1-inch
25-60	½-inch
0-10	No. 4
0-5	No. 8

B. Soil Backfill (Common Fill)**1. Certified Clean Fill**

- a. Hard, durable sand, gravel, silt, and clay, free of organic matter, surface coatings, and other deleterious materials.

Certified clean fill shall have the following gradation by weight:

% Passing	Sieve
100	3-inch
80-100	¾-inch
50-100	No. 4
5-60	No. 200

- b. The clean fill shall meet the following liquid and plastic limits, when tested according to ASTM D 4318:

Liquid limit <50

Plastic limit <20

C. Washed Sand

- a. Washed coarse sand having the following gradation by weight:

% Passing	Particle Size
100	3/8- inch
95-100	No. 4
80-100	No. 8
50-85	No. 16
25-60	No. 30
10-30	No. 50
2-10	No. 100

D. NYSDOT No. 1 Stone

- a. NYSDOT No. 1 Stone shall have the following gradation by weight:

% Passing	Particle Size
100	1-inch
90-100	½-inch
0-15	¼-inch
0-1.0	No. 200

E. NYSDOT Item 733-2102 (Light Stone Filling)

- a. NYSDOT Item 733-2102 shall have the following gradation by weight

% Passing	Particle Size
90-100	Lighter than 100 lbs
50-100	Larger than 6 in.
0-10	Smaller than ½ in.

F. NYSDOT Item 733-2101 (Fine Stone Filling)

- a. NYSDOT Item 733-2101 shall have the following gradation by weight

% Passing	Particle Size
90-100	Smaller than 8 in
50-100	Larger than 3 in.
0-10	Smaller than No. 10 Sieve

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Install backfill materials in accordance with Section 31 23 16 Earthwork and the Contract Drawings.

3.2 MATERIAL TESTING

- A. Provide clean fill certifications and testing results for all materials specified herein, for Department review prior to use.

3.3 SETTLEMENTS

- A. The contractor shall repair all settlements. No additional cost will be made for settlement repair.

END OF SECTION

SECTION 31 11 00
CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section covers the clearing of area(s) as indicated on the Contract Drawings or as required by the Work. The Contractor shall coordinate with the Engineer to determine the extent of removals and clearing to be performed.

1.2 PROTECTION

- A. The Contractor shall maintain and protect all bench marks, monuments, and reference points. If the bench marks, monuments, or reference points are disturbed or destroyed, they shall be replaced to the satisfaction of the Engineer, at the Contractor's expense.
- B. The Contractor shall protect and barricade, where necessary, existing trees, shrubs, drainage swales, pavement, and other features from damage during the construction work.
- C. The Contractor shall protect existing trees and other vegetation located outside the limits of the work or otherwise indicated to remain in place against unnecessary cutting, breaking, or skinning of roots, skinning and bruising of bark, or smothering of trees by stockpiling of materials within dripline.

1.3 REGULATORY AGENCIES

- A. State and local requirements shall govern the disposal of materials from all clearing operations.
- B. The Contractor is prohibited from burning on or off the job site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. None Required.

PART 3 - EXECUTION

3.1 SITE CLEARING

- A. The limits of clearing shall be as indicated on the Contract Drawings or as otherwise required to complete the Work. The Contractor shall verify these limits with the Engineer in the field prior to the start of work.
- B. All trees regardless of caliper and brush shall be cut and/or removed unless specifically directed to remain within clearing limits. All trees shall be cut 8" above grade, all stumps are to be left in place except those required to be removed to suit excavation or other earth grading/re-grading requirements.
- C. No stump removal outside of earthwork areas is required.

- D. Trees and other miscellaneous features damaged or removed during the performance of the Work that are not designated for removal shall be replaced by the Contractor to the satisfaction of the Engineer at no cost to the Department.

3.2 GRUBBING

- A. The limits of grubbing shall coincide with the clearing limits as indicated on the Contract Drawings or as otherwise required to complete the Work.
- B. The Contractor shall remove and dispose of all stumps, including roots and matted roots, to suit excavation or earth grading/re-grading requirements only. The removal shall be to a depth not less than 18 inches below original ground level, as required. Unless further excavation is required, depressions made by grubbing shall be filled and compacted with common earth to the density of the surrounding soil such that the surface conforms to the contour of the adjacent ground.
- C. All stumps shall be completely removed when located within the limits of excavations, earth grading/re-grading areas, pipe/utility trenches, or as otherwise required to complete the Work.
- D. Topsoil located in non-contaminated areas shall be removed to its full depth, stockpiled separately from other excavated materials, and preserved for reuse.
- E. The Contractor shall provide silt fence as shown to control water-borne sediments.

3.3 TRIMMING

- A. None Required.

3.4 REMOVALS

- A. Cleared trees, branches, and brush may be chipped/shredded and used as mulch on-site in a separate area to be designated by the Department.
- B. All other cleared and grubbed material (e.g., below-grade materials such as roots) shall be disposed of off-site to an approved location by the Contractor.

3.5 DISPOSAL

- A. Timber and other material not suitable for chipping/shredding resulting from clearing operations shall be removed from the site and legally disposed.
- B. Materials to be removed from the site shall be removed daily as they accumulate.
- C. Burning of waste materials is prohibited both on-site and off-site.
- D. The Contractor shall obtain all required permits for off-site disposal and submit copy of permit(s) to the Engineer. Unless indicated otherwise, legally dispose of material removed during clearing to an off site location.
- E. Solvents, oils, and other materials used in the course of the Work which may be harmful to the environment shall be properly disposed of in appropriate containers and removed from the site. Any soils contaminated by the Contractor's operations shall be removed and replaced with topsoil at the Contractor's expense. Such materials and contaminated soils shall be disposed of in accordance with state and local requirements.

END OF SECTION

SECTION 31 22 01

SITE SURVEY AND STAKEOUT

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. All equipment, labor and materials for performing all site surveying for payment tracking, site grading control, and required project documentation, in accordance with the Contract Documents.
- B. The Contractor shall be responsible for all survey and control needed for the work. The Contractor shall set and maintain all necessary intermediate points, lines, grades, and elevations, and provide slope stakes, offset stakes, and other such items as required for control and completion of the work.
- C. Final limits of each excavation area or regraded area shall be surveyed.

1.2 SUBMITTALS

- A. Field monuments (i.e., GPS points, etc.) shall be established across the site and used for the surveys as necessary to achieve the required vertical and horizontal control. The calculated location (referenced to New York State Plane Coordinate System [NYSPCS] Eastern Zone, using North American Datum [NAD] of 1983) and elevation (North American Vertical Datum [NAVD] of 1988) for each field monument shall be clearly identified on the applicable survey plot, along with a physical description of the monument. All field monuments, GPS locations, and other items established for providing survey control, shall be located in areas that will not be disturbed as a result of the construction activities.
- B. Plot scale shall be 30 ft per 1 inch; maximum sheet size shall be 30" x 42".
- C. Contractor shall submit a draft electronic copy of each required survey for review.
- D. Contractor shall submit five (5) signed and sealed prints, and one electronic copy for each final surveying deliverable following Engineer's review of draft prints.
- E. Electronic deliverables shall be AutoCAD Civil 3D, 2020 Release or later compatible format files together with complete database/points files (including point, database, coordinate geometry, etc.).
- F. The accuracy of the Contractor's survey is the sole responsibility of the Contractor, and the submittal of the required surveys to the Department does not constitute a transfer of responsibility for checking.
- G. The final submittal shall be stamped with the seal of a New York State licensed Land Surveyor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. None Required.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall subcontract with a New York licensed Land Surveyor to complete the required surveys. The Contractor's selected surveying firm shall be identified in the Work Plan.
- B. The level of horizontal and vertical precision for survey work shall be second order or better.
- C. All survey work shall be tied to the same vertical and horizontal control.

3.2 REQUIRED SURVEYS

- A. Initial Site Stake-out and Control
 - 1. Establish work areas, construction access and staging areas layout, demarcate limits of concrete removal, soil excavation, and in situ thermal remediation (ISTR) treatment zone limits.
- B. Pre-Construction Survey
 - 1. Depict pre-construction site conditions and features relative to the horizontal limits of all planned soil excavation areas, concrete removal areas, and other work areas, including all existing site features and topographic contours (prior to the commencement of excavation work) within a 50-foot perimeter of the work areas. Surveying shall be of sufficient precision/accuracy to allow depiction of topographic contours at a 1-foot contour interval, with spot elevations also shown on a 20-ft grid and at all key changes in grading.
- C. Construction Progress Surveys
 - 1. The Contractor shall complete additional progress surveys as required to maintain/re-establish control throughout the Work, facilitate determination of progress payments, and to document the Work for record-keeping purposes, including but not limited to the following:
 - a. Topographic/site features survey following site clearing, and prior to and following all soil excavations as shown on the Contract Drawings.
 - b. Topographic survey of the completed ISTR subgrade surface, prior to the ISTR cap installation.
 - c. Topographic survey of top of the completed ISTR cap, including locations of ISTR heating wells, as well as monitoring points and other well field components. As-built locations and elevations of all contractor installed utilities and equipment shall also be included. The locations and elevations of all installed sheet piling shall also be included.
 - 2. The above-noted progress surveys shall be completed using the same precision/accuracy (e.g., contour intervals, spot elevations) as the pre-construction survey at a minimum, with additional spot elevations as required to accurately depict the work at each stage.

D. Post-Construction Survey

1. A post-construction survey shall be completed to depict final site restoration conditions, including horizontal and vertical limits of all restored soil excavation and concrete removal areas, and including all site features and topographic contours of the thermal treatment area following ISTR cap removal and regrading activities, and restoration of disturbed wetland areas to pre-construction grades. Surveying shall be of sufficient precision/accuracy to allow depiction of topographic contours at a 1-foot contour interval, with spot elevations also shown on a 20-ft grid and at all key changes in grading.
2. Post-construction surveying shall be conducted as required based on the Contractor's excavation sequencing/schedule. The Engineer and the Department shall be notified prior to the completion of any excavation documentation surveys.

END OF SECTION

SECTION 31 23 16**EARTHWORK****PART 1 - GENERAL****1.1 WORK INCLUDED**

The work under this section shall consist of furnishing all labor, equipment, and materials for performing all operations for excavation, on-site soils and materials handling, grading, and transportation of the soil from the areas as described in the Specifications and shown on the Contract Drawings.

1.2 APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS

Materials, installation, operations and restoration/demobilization shall be in accordance with the latest revisions of the following codes, standards, and specifications, except where more stringent requirements have been specified herein:

- A. American Society for Testing and Materials (ASTM):
 - ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil using Standard Effort
 - ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil using Modified Effort
 - D1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
 - D2922 Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
 - A328 – Specification for Steel Sheet Piling (if used)
 - D1760 – Specification for Pressure Treatment of Timber Products (if used)
- B. Occupational Safety and Health Administration (OSHA):
 - 29 CFR 1926
- C. Other:
 - Standards as applicable to the Contractor's proposed materials and equipment.

1.3 DEFINITIONS**Excavation Work**

- A. Grubbing, stripping, removing, storing and re-handling of all materials of every name and nature necessary to be removed for all purposes incidental to the construction and completion of all the work under construction.
- B. All sheeting, sheet piling, bracing and shoring, and the placing, driving, cutting off and removing of the same (as necessary for the work).
- C. The supporting and protecting of all tracks, rails, buildings, curbs, sidewalks,

pavements, overhead wires, poles, trees, vines, shrubbery, pipes, sewers, conduits or other structures or property in the vicinity of the work, whether above-grade or underground, and the restoration of the same in case of settlement or other injury.

1.4 SUBMITTALS

- A. The Contractor shall prepare and submit as part of the Work Plan, a section to discuss the excavation approach and sequencing, and use of temporary earth support system(s) as required to complete the work in the Contract Documents. The Work Plan shall include a discussion of the proposed means and method(s) for support and protection of the excavations (i.e., slope lay-backs, benching, etc.), if required, with a description of the considerations for design and installation, including but not limited to the following:
 1. The proposed temporary earth support systems shall comply with all applicable OSHA requirements (including requirements for excavations at 29 CFR 1926, Subpart P) at a minimum. Note that temporary earth support is required for all excavations 5 feet or more in depth, or for excavations less than 5 feet in depth where evaluation by a competent person indicates the potential for instability, where employees need to enter excavations.
- B. The design, installation, and maintenance of all proposed temporary earth support systems shall incorporate considerations for all the required work of the Contract, including but not limited to the following:
 1. The safe completion of all required excavation work, based on the Contractor's proposed means and methods, equipment, and operations.
 2. Suitable dewatering of all proposed excavations (i.e., no standing water in bottom of excavation), in conjunction with the Contractor's specified dewatering system(s).
 3. Access of the Contractor's proposed personnel and equipment to the excavation for the proper completion of the work.
 4. Access of personnel and equipment into the excavation areas for post-excavation sampling and other sampling/testing activities as required.
- C. The proposed temporary earth support systems design and installation shall consider all applicable factors that may affect slope stability, including but not limited to the following:
 1. Surface and/or ground water infiltration and seepage through the excavation walls or bottom.
 2. Rainfall ponding and/or surface runoff into excavation via overland flow.
 3. Potential earth support system interferences such as subsurface structures and utilities, buried debris, or other items that may be present within the limits of the work. The earth support system design, installation and maintenance shall allow for adequate protection of all surface and sub-surface features that are not to be disturbed or damaged by the work (e.g., existing monitoring wells, buildings, roadways). In addition, the proposed installation methods for earth support systems shall consider potential overhead interferences such as power lines, etc.
 4. All surcharges, vibrations, and other additional loads or forces imposed by the Contractor's selected equipment and operations (i.e., heavy equipment operations, staging of materials in the vicinity of excavation areas, personnel proximity to

side-walls, etc.).

5. Nearby features or structures (e.g., roadways, concrete slabs) that may apply additional loads or forces that may affect excavation slope and/or sidewall stability
- D. The temporary earth support system section of the Work Plan shall also identify the name(s) of the Contractor's proposed Competent Person(s) (in accordance with 29 CFR 1926), that will be conducting required daily and other evaluation inspections of excavations, adjacent areas, and protective systems. Resume(s) of individuals identified shall be provided to demonstrate the individuals' training and experience with soils analysis, installation and use of earth support systems, and the applicable requirements of 29 CFR 1926, Subpart P.

PART 2 - PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

Excavation Support Systems

- A. If used, portable, temporary trench shielding systems (i.e., trench boxes) shall be specified by the Contractor and shall be of appropriate dimensions for completion of the work as required by the Contract Documents.

Shielding systems shall be designed in accordance with 29 CFR 1926.650-652.

- B. Following the completion of the Contract work, the excavation support systems shall be decontaminated and removed from the site.

PART 3 - EXECUTION

3.1 GENERAL

- A. During excavation activities the Contractor shall have contingency measures in place for management of storm water and other water that may enter excavations in accordance with the requirements of Section 31 23 19 Construction Water Management.
- B. The Contractor shall provide erosion and sediment control measures for the work areas in accordance with the Contract Drawings.
- C. The excavation means and methods shall be in accordance with the Contractor's proposed approach in the Work Plan, and with the requirements identified in the Contract Documents.
- D. The Contractor shall protect or relocate any utilities encountered in the excavation areas in accordance with the requirements of the appropriate utility provider, the Department, and/or any other authorities having jurisdiction.
- E. The Contractor shall protect structures, utilities, sidewalks, pavements, and other facilities located in the vicinity of the excavations from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- F. The Contractor shall protect monitoring wells and associated protection bollards throughout the work as shown on Contract Drawings. If damaged due to the Contractor's activities, the monitoring wells and/or bollards shall be repaired/replaced at the Contractor's expense.

- G. The Contractor shall protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
- H. Health and Safety Considerations
 - 1. All excavations shall be in compliance with “Excavating and Trenching Operations,” (latest revision) manual, issued by the U.S. Department of Labor, OSHA 2226.
 - 2. The Contractor shall provide at least one person who is specifically trained and qualified as a Competent Person in excavation/trenching safety, pursuant to 29 CFR 1926.
 - 3. Regardless of the excavation option chosen, materials should not be staged alongside the excavation(s) at a distance less than the adjacent excavation depth to avoid the imposition of additional loads, unless temporary excavation support systems are designed for such a surcharge. The Contractor shall identify minimum set-back distances for heavy equipment operating in proximity to exposed excavation edges, to minimize additional earth pressures or loads that may contribute to excavation collapse. The contractor shall describe the procedures for use of a “spotter” or other measures, to facilitate the excavator operator’s safe completion of the excavations without damage to existing structures.
 - 4. As part of the Work Plan, the Contractor shall provide procedures for the excavation/trenching Competent Person to monitor the stability of the excavations throughout the progress of the work, and to evaluate whether work is safe to continue.
 - 5. The Contractor shall include the means and methods in the Work Plan to address the general aspects of fall protection for work around open excavations, including appropriate work area controls/communication to prevent accidental falls based on the Contractor’s proposed approach.
 - 6. As defined in OSHA Subpart P 1926.651(g)(1)(i), “where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen), or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavation in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than 4 feet (1.22 m) in depth.” In addition, activities conducted within confined or enclosed spaces shall meet the confined space requirements of 29 CFR 1910.146 as applicable for the required work based on the Contractor’s proposed approach. The Contractor shall provide in the Work Plan a discussion of the anticipated confined spaces based on the proposed approach and the procedures that will be used to address the applicable health and safety requirements during related activities.
 - I. The Contractor shall cease excavation operations immediately in the event that the structural integrity of any adjacent structures or features appears to be compromised.
 - J. The Contractor shall provide for control of air emissions, odors, and dust as necessary during excavation activities, or as otherwise directed by the Engineer. Control methods and measures shall be reviewed by the Engineer prior to use (also refer to Section 01 35 29 Contractor’s Health and Safety Plan).
 - K. In the event that the Contractor encounters unanticipated mechanical, electrical, or structural elements, or other site conditions that would otherwise interfere with the

safe and effective completion of the work, the Contractor shall notify the Engineer and the Department immediately and coordinate with the Department to facilitate completion of the work using alternative means as necessary.

- L. Explosives shall not be used during the execution of the Work.
- M. Whenever excavations are carried beyond or below the lines and grades shown on the Contract Drawings, or as directed by the Engineer or the Department, all such excavated space shall be refilled with imported clean fill or other materials as the Engineer or Department may direct. All refilling of unauthorized excavations shall be at the Contractor's expense.
- N. All material which slides, falls or caves into the established limits of excavations due to the Contractor's operations, shall be removed and disposed of at the Contractor's expense and no extra compensation will be paid to the Contractor for any materials ordered for refilling the void areas left by the slide, fall or cave-in.

3.2 DSS-25 AREA EXCAVATION

- A. Excavation of soils in the DSS-25 area shall be completed to the limits indicated on the Contract Drawings (refer to Sheet C-104). Excavated soils shall be placed and compacted within the ISTR treatment zone footprint for treatment with other soils as part of the ISTR remediation.
- B. Post-excavation verification soil samples shall be collected from the excavation side walls and bottom as indicated on the Contract Drawings, to confirm that residual concentrations of VOCs are compliant with the ISTR treatment objectives (refer to Part 1.1.1 and **Table 1-1** of Section 02 62 18 In-Situ Thermal Remediation).
- C. Soil samples shall be submitted to a NY-certified laboratory and analyzed for VOCs via USEPA Method 8260 (target compound list) using expedited (24-hour or best available turn-around time). Also refer to Section 01 45 29.13.
- D. If initial post-excavation verification soil sampling results do not meet the ISTR treatment objectives, additional excavation and post-excavation verification sampling shall be conducted as directed by the Engineer, until post-excavation verification soil sampling results meet the ISTR treatment objectives.
- E. The completed excavation shall be backfilled with imported clean fill (common fill as specified in Section 31 05 16 Aggregates for Earthwork) to grades matching pre-construction conditions.

3.3 DEMOLITION OF CONCRETE BUILDING SLABS

- A. The concrete to be addressed under the contract includes select concrete building foundations and slabs as specified on the Contract Drawings.
- B. The Contractor shall remove the above and below-grade portions of concrete structures (e.g., slabs and footings) as shown on the Contract Drawings. The Contractor shall use appropriate means, methods, and equipment to complete the safe removal of these structures and avoid damage or disturbance to other structures and existing on-site features that are designated to remain. The Contractor shall employ controlled removal methods to mitigate the potential for dust generation.
- C. The Contractor shall use removal methods that provide smooth and flat or flush finished surfaces without jagged, exposed edges or reinforcement.
- D. The Contractor will complete waste classification sampling and profiling for concrete

- and masonry materials as required based on the Contractor's selected disposal facilities (as reviewed with and approved by the Engineer and the Department). The Contractor shall be responsible for preparation of all materials (e.g., size reduction, dewatering, debris segregation) as required to secure acceptance at the Contractor's selected disposal facilities, and for load-out and transportation of the materials.
- E. The Contractor shall coordinate with the Department to prepare profiles for materials, and obtain all required permits and approvals required for off-site transportation and disposal (T&D).

3.4 BACKFILL AND COMPACTION

- A. The Contractor shall backfill the excavation areas using imported clean fill (either common fill or other materials as specified on the Contract Drawings) and topsoil as required to grades as shown on the Contract Drawings, or as otherwise directed by the Engineer or the Department. The Contractor shall select backfill materials according to the specifications provided in Section 31 05 16 Aggregates for Earthwork. The Engineer and the Department shall review the Contractor's proposed imported materials source, and shall reserve the right to direct the Contractor to modify any imported material source at the Department's sole discretion.
- B. The Contractor shall not backfill any excavation until the final excavation limits have been reviewed with the Engineer.
- C. Backfill materials shall be placed in lifts, not to exceed a loose thickness of one (1) foot for material compacted with heavy compaction equipment, and not to exceed a loose thickness of four (4) inches for material compacted by hand-operated tampers.
- D. For backfill using native soils or imported common fill, each layer of placed backfill shall be compacted to a minimum of ninety percent (90%) of the maximum dry density as determined by ASTM Test Method D1557, Modified Proctor, unless a different compaction effort is required based on the Contractor's proposed means and methods. In-place density shall be determined by the methods of ASTM D1556 or ASTM D2922 and shall be expressed as a percentage of maximum dry density. To assure adequate compaction, in-place density tests shall be made by an approved testing laboratory retained by the Contractor, at a minimum frequency of one test per 5,000 square feet per lift of in-place fill during backfill and compaction activities. The Contractor's Work Plan shall include the proposed compaction testing program details (i.e., test methods, frequencies, equipment, etc.).
- E. The compaction equipment shall be suitable for the material encountered and the Contractor shall use appropriate means, methods, and equipment to complete backfill and compaction of the materials without damage or disturbance to existing structures and features.
- F. Where required to obtain the optimum moisture content, the Contractor shall add sufficient water during compaction to assure the specified maximum density of the backfill. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.
- G. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of backfill.
- H. Frozen earth shall not be used for backfilling. In addition, the Contractor shall not place backfill material upon a frozen surface, nor shall snow, ice, or frozen material

be incorporated into the backfill materials.

- I. Any settlement occurring in the backfilled excavations shall be refilled and compacted.
- J. Stones, pieces of rock or other debris greater than 4 inches in any single dimension shall not be used in any portion of the backfill. All other stones or pieces of rock shall be distributed through the backfill and alternated with earth backfill in such a manner that all interstices between them shall be filled with earth.
- K. Use a geotextile wrap to separate clean crushed stone backfill from other finer-grained on-site re-use soils/imported clean fill used for excavation backfill.

3.5 REMOVAL OF WATER

- A. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the execution of the work or the safety or stability of the Contractor's specified excavation support systems.
- B. Water pumped or drained from the excavations shall be containerized and managed in a suitable manner (refer to Section 31 23 19 Construction Water Management).

3.6 ON-SITE TRANSPORTATION AND STOCKPILING

- A. Materials shall be transported on-site in accordance with the Contractor's site layout and on-site traffic routes included in the Work Plan.
- B. All on-site stockpiled materials shall be furnished with covers to prevent water infiltration due to precipitation, and airborne dust due to wind erosion. All stockpiles of soils or materials that are impacted with contaminants (or suspected as such) shall also be furnished with underlying liners to prevent contact between impacted materials and non-impacted underlying soils. Stockpile details are shown on the Contract Drawings.
- C. No staging or stockpiling of excavated materials shall be allowed outside of the work area as specified on the Contract Drawings.
- D. All on-site staged and/or stockpiled materials shall be segregated and managed according to their physical type (e.g. concrete materials, debris, soils, etc.) and whether they are impacted with contaminants or not.

3.7 OFF-SITE TRANSPORTATION AND DISPOSAL

- A. Unless otherwise specified on the Contract Drawings, the Contractor shall dispose of all excavated materials off-site, using the Contractor's selected disposal facilities and transportation firms. The Contractor shall indicate all proposed off-site transportation and disposal facilities/firms in the Work Plan, with a description as to how each facility is suitably permitted and/or licensed to accept the intended materials for disposal (provide waste acceptance criteria for each as applicable).
- B. Materials loaded in dump trailers, trucks, roll-offs, or other containers shall be covered by the Contractor prior to transport in a manner that prevents loss of materials, visible dust, or fugitive odors during transport. In addition, odors and dust shall be controlled via the use of wetting agents (e.g., water spray) or temporary coating agents (e.g., odor suppression foams), as necessary.

- C. The Contractor shall decontaminate all vehicles entering and leaving controlled work areas on-site, and shall decontaminate all vehicles as necessary prior to leaving the site. At a minimum, decontamination of vehicles prior to leaving the site shall include wire brushing or other means to remove soil clods and gross contamination from the vehicle tires and other exterior surfaces, followed by pressure washing to further remove visible soils from all vehicle exterior surfaces.
- D. The Contractor shall clean any debris or spills from on-site or off-site roadways immediately following any spill or release. The Contractor shall immediately report any on-site or off-site spills or releases to the Engineer and the Department and shall coordinate external agency notifications and reporting and spill response measures with the Department's representatives.
- E. The Contractor shall be responsible for ensuring that all materials transported off-site are sufficiently prepared to allow for transportation and receipt at the Contractor's selected disposal facilities, and in accordance with federal, state, and local requirements. In addition, all vehicles leaving the site shall be appropriately covered to prevent dust and to mitigate fugitive or nuisance odors.
- F. The Contractor shall ensure that project vehicle traffic entering or leaving the site does not cause congestion on local streets, and shall stage trucks within the work areas, as acceptable to the Engineer and the Department. The Contractor shall follow all local traffic routes and requirements by the local municipalities, and shall maintain compliance with all applicable vehicle weight, height, and size restrictions. The Contractor shall develop, submit, and maintain compliance with a project-specific traffic plan to address travel on local and county roads, as required by local authorities.
- G. The Contractor's transporters shall proceed directly from the site to the designated receiving facility. Temporary staging or storage of materials at intermediate locations between the site and the receiving facility is prohibited. No other materials shall be added to the truck, dump trailer, or roll-off container upon leaving the limits of the work area(s).
- H. The Contractor shall obtain all applicable manifests and/or bills of lading and other paperwork, documenting the weight and condition of the materials in each truck-load upon arrival at the intended disposal facilities. The Contractor shall obtain and submit to the Engineer and the Department, the disposal facility truck scale weight readings and vehicle license plate/ID numbers (i.e., bills of lading or other documentation) for all vehicles disposing materials off-site.
- I. The Contractor shall track on a daily basis, and record in the Daily Reports, the volume of material excavated, staged in temporary soil stockpiles, and disposed off-site, as well as the disposal facilities receiving materials transported off-site.

END OF SECTION

SECTION 31 23 19

CONSTRUCTION WATER MANAGEMENT

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Development of a Construction Water Management Plan detailing the handling, characterization, storage, treatment (if necessary), and disposition of all construction water. The Construction Water Management Plan shall be included as part of the Contractor's Work Plan.
- B. Provide all labor, materials, and equipment required for implementing the Construction Water Management Plan including the handling and disposition of construction water in accordance with the Contractor's Construction Water Management Plan.

1.2 DEFINITIONS

Construction water shall be defined as any water associated with construction activities that comes into contact with soils in active excavations or other areas where impacted soils (or soils suspected to be impacted) are being disturbed, or which otherwise comes into contact with materials containing (or suspected to contain) contaminants (e.g., rainfall falling into soil excavations or onto exposed stockpiled soils). Construction water may also include groundwater and surface water entering active excavations. Construction water removed from active excavations in order to complete the work may not be discharged to the ground surface, and shall be collected, containerized, and either treated on-site (as reviewed with the Engineer and the Department), or disposed off-site.

Construction water may also include any liquids generated from decontamination activities or from drilling operations within the ISTR treatment zone footprint. Such liquids may be more impacted than other types of construction water generated from locations outside the ISTR treatment zone footprint, and shall be segregated and managed separately from these other types of construction water.

Any other precipitation, runoff, or groundwater that does not come into contact with active excavations, stockpiles, or otherwise disturbed contaminated soils may be managed as non-impacted storm water. Storm water may be discharged to the ground surface in locations designated by the Contractor (and reviewed with the Engineer and the Department), provided that such discharges do not result in flooding, erosion, or other unsuitable conditions.

1.3 SUBMITTALS

- A. Construction Water Management Plan
 - 1. The Contractor shall submit the proposed plan for handling construction water. The plan shall include, but not be limited to, the Contractor's proposed method of construction water handling, storage, treatment (if necessary) and disposition. If on-site treatment of construction water is planned, the proposed means and methods for on-site treatment shall be described in detail.
 - 2. The plan shall include the capacity of the individual removal/treatment systems to

be utilized (if necessary) and the estimated quantities of each type of construction water anticipated to require management. The plan shall also include any measures proposed by the Contractor for minimizing the volumes of construction water requiring management.

Construction water shall be containerized and transported and disposed off-site. The Contractor shall be responsible for pre-treatment (if necessary), waste characterization sampling and profiling, and disposition of the construction water off-site at a properly licensed and permitted facility selected by the Contractor (as reviewed with the Engineer and the Department).

3. As an alternative to the above, the Contractor may collect and containerize construction water on-site, for subsequent treatment and discharge via the Contractor's ISTR process wastewater treatment equipment. If such discharge is proposed, the Contractor shall furnish and install any additional pre-treatment facilities (e.g., suspended solids removal measures) that may be required for effectively treating the construction water in conjunction with the ISTR process wastewater treatment equipment, and the additional pre-treatment facilities shall be detailed in the Construction Water Management Plan.
- B. The Contractor shall be solely responsible for complying with all permits and/or approvals required for construction water management and disposition.
- C. The Contractor shall obtain and submit to the Engineer all applicable manifests/bills of lading and other paperwork for each shipment of liquids transported off-site, documenting the volumes transported and disposal facilities where all liquids were received. Copies of all waste profiling forms and associated characterization sampling shall also be submitted.
- D. Shop drawings and test results associated with the design and operation of the construction water handling facilities shall be submitted to the Engineer.

PART 3 - EXECUTION

3.1 WORK INCLUDED

- A. The construction, operations and maintenance, and removal of dewatering and construction water management systems, including pumps, wells, conveyance lines, and related equipment needed to maintain effective execution of the work.
- B. The maintenance of ditches and swales (if used and/or constructed by the Contractor).
- C. The furnishing and operation of pumps and related equipment needed to remove accumulated water from managed stockpile covers as necessary throughout the work.

3.2 CONSTRUCTION WATER MANAGEMENT

- A. The Contractor shall at all times provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the execution of the work. All water removed from active excavations shall be managed as construction water, and shall be containerized for off-site disposal. Construction water shall not be discharged to the ground surface.
- B. The construction water storage and treatment equipment capacities shall also include allowances for sudden rainfall events that may result in short-term higher-than-expected construction water volumes that must be expeditiously removed from any soil

excavations.

- C. The Contractor shall collect waste characterization samples and prepare profiles required based on the Contractor's selected off-site disposal facilities.
- D. The Contractor shall obtain all applicable manifests/bills of lading and other paperwork, documenting volumes of liquids in each delivery upon arrival at the intended disposal facilities. Complete transportation/disposal documentation shall be provided to the Engineer.
- E. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.
- F. The Contractor shall employ appropriate measures to minimize sediments and solids prior to containerization and subsequent disposition.
- G. Prior to pumping of presumed non-impacted water from stockpile covers, the Contractor shall perform a visual inspection for color and sheen to confirm lack of impacts, as verified by the Engineer, prior to discharge. Water with any visually apparent color or sheen shall be containerized and managed consistent with other impacted construction water.
- H. The Contractor shall make every effort to minimize the generation of construction water, and to prevent runoff of impacted water to adjacent areas. Appropriate methods to minimize generation of construction and contaminated water include, but are not limited to, use of temporary berms, use of low permeability tarpaulins or suitable means to cover exposed contaminated areas, limiting the amount of exposed contaminated areas, grading to control run-on and run-off, engineering controls on construction activities to minimize contact of personnel and equipment with contaminated areas thus minimizing the amount of decontamination required, and other appropriate methods.
- I. Construction water shall be handled using equipment compatible with anticipated contaminants that may be present.
- J. The Contractor shall be solely responsible for on-site construction water management system(s) set up, debugging, operations, testing, shut-down, and decontamination. The Contractor shall complete waste characterization sampling and profiling for residual material and spent media (i.e., activated carbon, particulate filters) as applicable. The Contractor shall be responsible for all equipment dismantling and removal, including removal of all materials incidental to the management system operations.

END OF SECTION

SECTION 31 23 33

TRENCHING AND BACKFILLING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes excavation and backfill as required for excavations or trenches, and removal and disposal of water as required in the Contract Documents.

PART 2 - PRODUCTS

NOT USED

PART 3 - PRODUCTS

3.1 EXCAVATION

- A. The trench excavation(s) shall be located as shown on the Contract Drawings or as otherwise specified by applicable utility provider(s). Trenching shall be by open cut from the ground surface, or by other method(s) as required by site conditions or by applicable utility provider(s) – for example, tunneling beneath roadways if needed.
- B. Trenches shall be excavated to maintain the depths as shown on the Contract Drawings or as otherwise specified by applicable utility provider(s).
- C. The alignment and depth shall be determined and maintained by the use of a string line installed on batter boards above the trench, a double string line installed along side of the trench or a laser beam system.
- D. Open trenches shall be protected and barricaded as required.
- E. Bridging across open trenches shall be constructed and maintained where required.

3.2 STORAGE OF MATERIALS

- A. Where work is required in or adjacent to public roadways, traffic shall be maintained at all times in accordance with required road and/or highway permits obtained for the work and in accordance with applicable traffic control plans. Where no other specific requirements apply to the work, at least one-half of the roadway must be kept open for traffic.
- B. Where conditions do not permit storage of excavated materials adjacent to the trench, the excavated materials shall be staged by the Contractor in a designated location in the work area(s). Excavated materials may be used to backfill the trench (provided they are suitable for use as backfill), unless otherwise specified on the Contract Drawings. Excess material unable to be used as backfill shall be removed and staged in a designated location within the work areas, as specified on the Contract Drawings.

- C. Excess material unable to be used as backfill shall be managed on-site as specified on the Contract Drawings or as directed by the Engineer, or alternatively these materials shall be disposed of as spoil.

3.3 REMOVAL OF WATER AND DRAINAGE

- A. The Contractor shall provide and maintain proper and satisfactory means and devices for the removal of all water entering the trench and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work.
- B. The removal of water shall be in accordance with Section 31 23 16 Earthwork. All water removed from excavations shall be containerized and managed in accordance with Section 31 23 19 Construction Water Management.

3.4 BACKFILL

- A. Trenches shall be refilled with backfill materials as specified on the Contract Drawings.
- B. Where trenches are within the ditch-to-ditch limits of any street or road or within a driveway or sidewalk, or shall be under a structure, the trench shall be refilled in horizontal layers not more than 8 inches in thickness and compacted to obtain 95% maximum density as determined in accordance with ASTM 1557 "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort."
- C. Where trenches are in open fields or unimproved areas outside of the ditch limits of roads, the trench shall be refilled in horizontal layers not more than 8 inches in thickness and compacted to obtain 90% maximum density as determined in accordance with ASTM 1557 "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort."
- D. Hand tamping shall be required around buried utility lines or other subsurface features that could be damaged by mechanical compaction equipment.
- E. Backfilling of trenches beneath, across or adjacent to drainage ditches and water courses shall be done in a manner such that water will not accumulate in unfilled or partially filled trenches and the backfill shall be protected from surface erosion by adequate means.
- F. Where trenches cross waterways, the backfill surface exposed on the bottom and slopes thereof shall be protected by means of stone or concrete rip-rap or pavement, or other means as specified on the Contract Drawings, or as otherwise reviewed with the Engineer.
- G. All settlement of the backfill shall be refilled and compacted as it occurs.
- H. Surfaces shall be restored to pre-construction conditions or as otherwise specified in the Contract Drawings.

END OF SECTION

SECTION 31 25 14

EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 WORK INCLUDED

The work specified herein shall consist of the construction and maintenance of Soil Erosion and Sediment Control Measures in accordance with the following requirements and as specified on the Contract Drawings.

1.1 RELATED SECTIONS

- A. Section 31 00 01 – Work Plan
- B. Section 31 23 16 – Earthwork

1.2 REGULATORY REQUIREMENTS

- A. "New York State Standards and Specifications for Erosion and Sediment Control," (November, 2016), by the New York State Department of Environmental Conservation.
- B. Soil Erosion and Sediment Control Measures shall also be in compliance with applicable Schenectady County Soil Conservation District requirements, and as shown on the Contract Drawings.

1.3 SUBMITTALS

- A. Product data, manufacturer's cut sheets, and installation instructions for all manufactured erosion and sedimentation control measures indicated on the Contract Drawings and as otherwise used by the Contractor.
- B. The Contractor shall include in their Work Plan (refer to Section 31 00 01 Work Plan) a schedule of implementation of Soil Erosion and Sediment Control Measures. The Contractor will be required to incorporate all erosion control measures at the earliest practicable time as outlined in the Contractor's schedule.

PART 2 - PRODUCTS

2.1 SILT FENCING

- A. The Contractor is responsible for providing, installing, and maintaining all silt fencing as shown on the Contract Drawings and as required by these specifications.
- B. Excavate a 6-inch by 6-inch trench along the lower perimeter of the excavation.
- C. Fence posts shall be spaced 8 feet center-to-center or closer. Posts shall extend at least 2 feet into the ground and 2 feet aboveground.
- D. A metal fence with 6-inch or smaller openings and at least 2 feet high, fastened to the fence posts, shall be installed to reinforce the silt fence in areas with steeper slopes, where heavier sediment loading is anticipated, or as otherwise required by the local soil conservation district or the Department.
- E. The bottom 1-foot of the fabric filter, recommended for such use by the manufacturer, shall be buried in the 6-inch wide and deep trench and tamped. The filter fabric shall

extend at least 2 feet above the ground.

- F. The Contractor shall maintain the silt fences periodically by inspecting and repairing damage and removing accumulated sediment after each rainfall. When the silt fences are no longer required, the Contractor shall remove all materials, fill in depressions, and restore the area.

2.2 STABILIZED CONSTRUCTION ENTRANCE

The Contractor shall construct and maintain a stabilized construction entrance on temporary work area roadways and ingress/egress routes, to prevent the tracking of mud, dirt, or sediment onto public roadways. Sections include:

- A. Stone size - Use ASTM C-33, Size No. 2 or 3; use crushed stone.
- B. Length - As effective, but not less than 50 feet.
- C. Thickness - Not less than 6 inches.
- D. Width - Not less than 20 feet, or the full width of all points of ingress or egress, whichever is greater.
- E. Geotextile - A layer of TC Mirafi 500X or approved equivalent filter fabric shall be placed on the ground prior to placing stone.
- F. Piping - Piping of surface water under entrance shall be provided as required. If piping is not feasible, a mountable berm with 5:1 slopes will be permitted.
- G. Washing - When necessary, wheels of vehicles that have been decontaminated or only entered non-exclusion areas, shall be cleaned to remove sediment prior to entrance onto public roads or the site entrance road. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards, or other approved methods. The stabilized construction entrance shall not be used as a decontamination area for any vehicle.
- H. Maintenance - The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto roadways. This may require periodic top dressing with additional stone or additional length as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto roadways (public or private) must be removed immediately by the Contractor at no cost to the Department.

2.3 COMPOST FILTER SOCK

- A. Compost filter socks shall consist of a photodegradable mesh tube filled with a coarse compost filter media.
- B. Socks shall be anchored in place with wood or metal stakes at the intervals recommended by the manufacturer for the size of sock indicated.
- C. Compost sock fabric shall meet the following minimum standards:

Material Type	Multi-Filament Polypropylene	Heavy Duty Multi-Filament Polypropylene
Material Characteristics	Photodegradable	Photodegradable
Mesh Opening	3/8"	1/8"
Tensile Strength	44 psi	202 psi

UV Stability (ASTM G-155)	100% at 1000 hrs	100% at 1000 hrs
Minimum Functional Longevity	1 year	2 years

- D. Compost shall be a well-decomposed, weed-free organic matter derived from agriculture, food, stump grindings and yard or wood/bark organic matter sources. The compost shall be aerobically composted and possess no objectionable odors and shall be reasonably free of manmade foreign matter (1% or less by weight). The compost product should not resemble the raw material from which it was derived. Wood and bark chips, ground construction debris or reprocessed wood products are not acceptable as the organic component of the mix.
- E. Compost shall meet the following minimum standards:
 - 1. Organic matter content: 80% to 100% (dry weight basis)
 - 2. Organic portion: Fibrous and elongated
 - 3. pH: 5.5 to 8.0
 - 4. Moisture content (at time of installation): 35% to 55%
 - 5. Particle Size: 98% passing a 1" screen
 - 6. Soluble salt concentration: 5.0 dS/m (mmhos/cm) maximum

2.4 PUMPED WATER FILTER BAG

- A. Pumped water filter bags (if used) for excavation dewatering shall consist of high volume filter bags made from non-woven geotextile material sewn with high strength, double-stitched "J" type seams. They shall be capable of trapping particles larger than 150 microns.
- B. The requirements of this Section do not apply to geotextile tubes for dredged sediment dewatering.
- C. Filter bag materials shall meet the following minimum standards:
 - 1. Average wide width tensile strength (ASTM D-4884): 60 lbs/in
 - 2. Grab tensile strength (ASTM D-4632): 205 lbs
 - 3. Puncture strength (ASTM D-4833): 110 lbs
 - 4. Mullen burst strength (ASTM D-3786): 350 psi
 - 5. UV resistance (ASTM D-4355): 70%
 - 6. AOS % retained (ASTM D-4751): No. 80 Sieve
- D. Pumping rate shall be no greater than 750 gpm or one half of the maximum specified by the filter bag manufacturer, whichever is less.
- E. Filter bag installation shall be in accordance with manufacturer's instructions.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. The Contractor shall maintain copies of the approved Erosion and Sedimentation Control Plan at all times. The Contractor shall review the conditions of the approved plans and shall be responsible for compliance with the plan conditions.
- B. Construction shall be performed in accordance with the sequence of construction indicated on the Contract Drawings. Earthwork shall not be initiated at a given location until all required and specified Soil Erosion and Sediment Control measures are in place.
- C. Stabilized construction entrances shall be installed at the locations indicated on the Contract Drawings, and in other locations where necessary based on the Contractor's specific on-site construction routes and site ingress/egress locations. All construction traffic must enter and exit the project site through a stabilized construction entrance.
- D. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the Contractor shall implement additional erosion and sediment control measures to minimize the potential for erosion and/or sediment pollution.
- E. Staging areas for construction vehicles, equipment, and supplies shall be established by the Contractor in the areas indicated on the Contract Drawings or as approved by the Department.
- F. The site shall be cleared and grubbed within the limits of work only. Cleared vegetation shall be staged in the areas indicated on the Contract Drawings or as reviewed with the Engineer and the Department.
- G. Topsoil shall be stripped and stockpiled in areas indicated on the Contract Drawings or as reviewed with the Engineer and the Department.
- H. Exposed soil shall be stabilized, seeded, and mulched as indicated in the Specifications and on the Contract Drawings.
- I. Until stabilization of the site and approval of final site inspection, temporary erosion and sedimentation control measures shall not be removed.
- J. If activities are to cease for a period of 60 days or more, temporary seeding shall be installed in accordance with the applicable guidelines unless otherwise directed by the Department.

3.2 STABILIZATION

- A. Temporary and permanent seeding shall be implemented in accordance with the approved Soil Erosion and Sediment Control plans and the New York State Standards and Specifications for Erosion and Sediment Control, or as otherwise indicated on the Contract Drawings.
- B. Establishing permanent vegetation requires 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once. Also refer to the Contract Drawings and to Section 32 93 13 Topsoil and Seeding.

3.3 MAINTENANCE

- A. The Contractor shall be responsible for the proper installation and maintenance of all erosion and sedimentation controls throughout the work until the work is completed and the work area(s) are adequately restored to the satisfaction of the Department.
- B. In the event that areas of the site cannot be adequately stabilized during the seeding season, the Contractor shall maintain the erosion and sedimentation controls and stabilize the site until the next seeding season.
- C. The Contractor shall inspect all erosion and sedimentation controls after each storm event and on a regular weekly basis. A checklist shall be kept by the Contractor defining those controls requiring clean-out, repair, or replacement. The Contractor shall then rectify the noted deficiencies by the end of the working day.
- D. The Contractor shall maintain all controls as specified and remove accumulated sediment as directed by the Department, and/or to provide proper functioning of these controls. Accumulated sediment originating from or otherwise impacted by soils/sediments from the excavation areas, will be collected and disposed consistent with the soils/materials designated for off-site disposal.

3.4 RESTORATION

The Contractor shall restore the site as indicated in the specifications and Contract Drawings, and remove temporary drainage, erosion, and sedimentation controls after completion of the work and stabilization of the site with the approval of the Department.

END OF SECTION

SECTION 31 62 16
STEEL SHEET PILING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The work of this section consists of furnishing all labor, equipment and materials for the installation and/or removal of steel sheet piles. The work shall also include all anchors, walers, struts, and miscellaneous hardware associated with the steel sheet pile installation or removal.
- B. The steel sheet pile installation is for use as a temporary subsurface groundwater cut-off wall around the perimeter of the ISTR treatment zone, as shown on the Contract Drawings. Following completion of ISTR operations, the sheet piles shall be removed from the ground, decontaminated, and removed from the Site by the Contractor.
- C. The steel sheet pile installation shall achieve sufficient reduction in groundwater flux through the ISTR treatment zone to allow for required ISTR treatment objectives and operational parameters to be achieved (refer to Section 02 62 18 In-Situ Thermal Remediation), based on the Contractor's proposed means and methods detailed in the Contractor's Work Plan and ISTR design. The specific make and model of sheet piles and installation method(s) shall be determined by the Contractor, based on the Contractor's proposed means and methods for the ISTR treatment.
- D. The Department and the Engineer make no warranty, expressed or implied, of the site and subsurface conditions or the potential impact of subsurface conditions on the Contractor's performance or schedule.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. 02 62 18 In-Situ Thermal Remediation
- B. 31 23 16 Earthwork
- C. 31 23 33 Trenching and Backfilling

1.3 REFERENCES

- A. All work shall be performed in compliance with the Contract Documents unless otherwise approved in writing by the Engineer or the Department.
- B. Materials and installation shall be in accordance with the latest revisions of the following codes, standards, and specifications except where more stringent requirements have been specified herein.
 - 1. American Society for Testing and Materials (ASTM)
 - a. ASTM A328, Steel Sheet Piling.

- C. Tests performed on the specified materials shall conform to the American Society for Testing and Materials (ASTM) and the American Welding Society (AWS) latest edition standards referenced below:
 - 1. American Welding Society (AWS)
 - a. D 1.1, Structural Welding Code.

1.4 SUBMITTALS

A. Steel Sheet Pile Installation Plan

1. The Contractor shall prepare and submit a Steel Sheet Pile Installation Plan to discuss the steel sheet pile materials selection, installation and removal work. Steel sheet piling and shoring/bracing system calculations and details shall be signed and sealed by a Professional Engineer licensed to practice in the State of New York retained by the Contractor. The Contractor shall submit lists and descriptions of sheet pile material, alignment, depth, driving and removal equipment. Materials, shop drawings, sheet pile driving records, and other required submittals shall be submitted to the Engineer for review.

The sheet pile installation plan shall include the proposed means and methods for the sheet pile installation, including equipment proposed for use and required field layout (considering required or recommended working and safety clearances based on the field equipment selected). The plan shall include complete piling dimensions and details (include fabricated sections details as appropriate), driving sequence, and pile configuration. Detail drawings shall also include dimensions of templates and other temporary guide structures for installing piling, interlock sealant specifications (if used), protection caps and other installation appurtenances. The plan shall also include the methods of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

2. The Steel Sheet Pile Installation Plan and design shall also include or be accompanied by a Vibration Minimization and Monitoring Plan as detailed below. Also refer to Section 02 62 18.
3. Material test certificates shall be submitted for each shipment and identified with specific lots prior to installing piling. Identification data shall include piling type, dimensions, chemical composition, mechanical properties, section properties, heat number and mill identification mark.
4. The contractor shall provide written notification to the Engineer and the Department of the scheduled date for commencement of sheet pile installation, at least one week prior to that date.
5. Records of the sheet pile driving operations shall be submitted to the Engineer for review after driving is completed. These records shall provide a system of identification which shows the disposition of accepted piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations.

B. Vibration Minimization and Monitoring Plan

1. Prior to the commencement of any vibration-inducing activities (e.g., sheet pile installation), it shall be the responsibility of the Contractor to prepare and submit a Vibration Minimization and Monitoring Plan describing the means and methods to be utilized for minimizing and monitoring of vibrations relative to adjacent utilities and structures. The Contractor shall retain the services of a NY-licensed Professional Engineer to prepare the plan, and the final plan shall bear the Professional Engineer's signature and stamp. Structures and/or features that shall be evaluated and incorporated into the plan include, but are not limited to, the following:
 - a. Monitoring of ground vibration relative to the railroad right-of-way property immediately to the north of the site.
 - b. Monitoring of ground vibration relative to existing utilities (e.g., sewer, water, gas) located along the western shoulder of Freemans Bridge Road.
 - c. Monitoring of ground vibration relative to the property located at 99 Freemans Bridge Road (property immediately south of the southern edge of the ISTR treatment zone).

The plan shall include the sequencing of construction activities that may cause vibrations, and the type of equipment to be used to perform these activities. Acceptable peak particle velocities shall be in the range of 0.5 in/sec to 2.0 in/sec (or as otherwise required based on applicable utility or railroad requirements), and in no case shall peak particle velocities exceed 2.0 in/sec. The plan shall also include monitoring methods and procedures, drawings showing the type and location of each vibration monitoring device, specified monitoring criteria and/or action limits (e.g., peak particle velocities), and response actions to be implemented in the event of action limit exceedances. The plan shall also include the qualifications and experience of the individuals and/or subcontractors proposed to conduct the vibration monitoring activities. The construction activities associated with any activity that may induce vibrations to the soils shall not be initiated until the Vibration Minimization and Monitoring Plan is reviewed by the Engineer and the Department, as well as other affected stakeholders as applicable (e.g., railroad company representatives, utility representatives). Note that these stakeholders may have additional requirements, which the Contractor shall incorporate into the plan and implement as part of the monitoring program, as applicable.

2. Prior to the initiation of vibration inducing construction activities, the Engineer, the Department, the Contractor, and the Contractor's Professional Engineer responsible for the preparation of the Vibration Minimization and Monitoring Plan shall perform a joint inspection of each nearby feature and/or structure. The purpose of the joint inspection shall be to review and document the pre-construction conditions of the features and/or structures. During the inspection, the Contractor and/or the Contractor's Professional Engineer shall take video and still photographs, and prepare notes and sketches, as required to document pre-construction conditions of the relevant features and/or structures.

3. Following the completion of vibration inducing construction activities, the Engineer, the Department, the Contractor, and the Contractor's Professional Engineer responsible for the preparation of the Vibration Minimization and Monitoring Plan shall perform a joint inspection of each nearby feature and/or structure. The purpose of the joint inspection shall be to review and document the post-construction conditions of the features and/or structures. During the inspection, the Contractor and/or the Contractor's Professional Engineer shall take video and still photographs, and prepare notes and sketches, as required to document post-construction conditions of the relevant features and/or structures. At a minimum, the post-construction inspection shall document the same structures and/or features included in the pre-construction inspection, at the same locations and level of detail relative to the pre-construction documentation. The post-construction inspection shall also document any other features and/or structures where any damage is identified.

1.5 QUALIFICATIONS

- A. The Contractor or the Contractor's sheet pile installation subcontractor shall submit evidence of experience and competence in steel sheet pile installation work. The evidence shall demonstrate that the Contractor has a minimum of 5 years experience in steel sheet pile installation. The evidence shall also demonstrate that the Contractor has experience and qualified personnel to complete the work using the required installation techniques and equipment.

1.6 SUBSURFACE CONDITIONS

- A. Test borings have been performed at the site. The soil boring logs are included with historical site documents. It is the Contractor's responsibility to review available subsurface information, to facilitate the Contractor's understanding and assessment of subsurface conditions at the site. Regardless of any such information provided for the Contractor's convenience, the Contractor shall be solely responsible for evaluating subsurface conditions at the Site as they may relate to the Contractor's work. Also refer to Contract Section VIII (General Conditions), Articles 13 through 15.

1.7 HANDLING AND STORAGE

- A. Materials delivered to the site shall be in good condition, undamaged, and be accompanied by certified test reports as applicable. The manufacturer's logo and mill identification mark shall be provided on the sheet piling, as required by the referenced specifications.
- B. Steel sheet piles shall be handled and stored using methods that will not damage the materials and in a manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks. Storage of sheet piling should also facilitate required inspection activities. The pile shall be stored above ground upon platforms, blocking, or other supports. They shall be kept free from dirt, grease, and other foreign matter and shall be protected from corrosion.

1.8 QUALITY ASSURANCE

- A. The Manufacturer shall furnish 3 certified copies of mill test reports containing the true chemical and physical analysis of piling material prior to each shipment to the project site and identified with specific lots prior to installing materials. Material test reports shall meet the requirements of ASTM A6.
- B. The contractor shall inspect the interlocked joints of driven pilings extending above ground. Piling found to be out of interlock shall be removed and replaced at the contractor's expense.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Steel sheet piles shall be hot rolled sheet pile sections conforming to ASTM A328 Grade 50. Specific sheet-pile make/model shall be specified by the Contractor, based on the Contractor's review of available subsurface information and proposed installation means and methods. Use of cold rolled sheet pile sections as a substitute is not allowed. Steel sheet piles shall be in new and unused condition as delivered to the site.
- B. Equipment for driving sheet piling shall be a single or double acting air or steam hammer and/or vibratory equipment of sufficient energy to penetrate to the depths and/or elevations shown on the Contract Drawings.
- C. Tie rods, waler beams, plates, bolts, washers and all included accessories shall conform to the latest AISC / ASTM standards.
- D. Steel sheet piles shall be of the length(s) as indicated on the Contract Drawings.
- E. Steel sheet piles shall be furnished with continuous interlocking joints. The interlocks of sheet piling shall be free-sliding and maintain continuous interlocking when installed.
- F. Piles must be of a single type with no splices. Sheet piling (including special fabricated sections) shall be full-length sections of the dimensions shown. Fabricated sections shall conform to the requirements and the piling manufacturer's recommendations for fabricated sections.
- G. Appurtenant Metal Materials: Metal plates (cap), shapes, bolts, nuts, rivets, and other appurtenant fabrication and installation materials shall conform to manufacturer's standards and to the requirements specified for the respective sheet piling.

2.2 DELIVERY, STORAGE AND HANDLING

- A. All steel sheet pile materials shall be delivered to the site in an undamaged condition. straight and within appropriate tolerances at the time of delivery. Any steel sheet piles not within tolerances shall be replaced at the contractor's expense. Sheet piles shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. All sheet pile installation activities shall be performed in accordance with the Contractor's plans. The Contractor will utilize qualified personnel to implement the site-specific Vibration Minimization and Monitoring Plan during the sheet pile installation activities, based on the Contractor's proposed means and methods for the work.

Features and/or structures and associated monitoring shall include, but not be limited to, the following:

1. Monitoring of ground vibration near the railroad right-of-way property.
 2. Monitoring of ground vibration near the utilities (e.g., sewer, water) located along the western shoulder of Freemans Bridge Road.
 3. Monitoring of ground vibration near the northern property line of the parcel located at 99 Freemans Bridge Road (property immediately south of the southern extent of the ISTR treatment zone).
- B. Sheet pile shall be installed prior to ISTR well field drilling activities.
 - C. Due to the proximity of surrounding features to the sheet pile installation alignment, all sheet piles shall be furnished with secondary restraint measures to prevent sheet piles from falling in an uncontrolled manner during installation activities, in the event of primary restraint failure.
 - D. The Contractor shall handle the sheet pile in a manner that will not cause excessive bending stresses. The Contractor shall not damage the sheet piles in either handling or installing operations. Any damaged sheet piles will be rejected by the Engineer and the sheet piles shall be either repaired or replaced. Any repairs shall be inspected and accepted by the Engineer prior to installation.
 - E. Pulling and redriving: In the pulling and redriving of piles, the Contractor shall pull selected pilings to determine the condition of the underground portions of pilings. Any piling pulled and found to be damaged to the extent that its usefulness is impaired shall be removed and replaced at the Contractor's expense. Pilings pulled and found to be in satisfactory condition shall be re-driven when directed.
 - F. Driving Hammers, proposed by the Contractor and reviewed with the Engineer, may be steam, air, or diesel drop, single-acting, double-acting, differential-acting, or vibratory type. The Contractor shall select a driving method which minimizes the vibration of the surrounding foundations, structures, and other features (e.g., utilities). The driving energy of the hammers shall be as recommended by the manufacturer for the piling weight and subsurface materials to be encountered. The method and equipment selected shall install the piling to the required design depths and to minimize damage to each end of piling and adjacent interlocks. Suitable procedures shall be employed to prevent damage to the pile tops and interlocks.
 - G. Sheet piles shall be carefully located and shall be placed plumb, with out-of-plumbness not exceeding 1/8 inch per foot at length and as true to lines as possible.

Deviation in horizontal alignment shall not exceed 10 degrees at each joint.

Temporary wales, templates, or guide structures shall be provided to ensure that the pilings are placed and driven to the correct alignment. Pilings properly placed and driven shall be interlocked throughout their length with adjacent pilings to form a continuous surface throughout the length or run of piling wall.

- H. Driving hammers shall be maintained in proper alignment during driving operations by use of leads or guides attached to the hammer. Piles damaged or driven outside the tolerances specified shall be replaced at no additional cost to the Department. Piling damaged during driving, driven out of interlock, ruptured in the interlock, or otherwise damaged during installation shall be immediately removed and replaced. The damaged pile shall be spray painted with the letter "X" within three feet of both ends. Pilings shall be driven without the aid of a water jet. Adequate precautions shall be taken to ensure that pilings are driven plumb.
- I. Should obstructions restrict driving a piling to the specified penetration the Contractor shall attempt to drive through the obstruction. If the Contractor demonstrates that it is impractical to drive through the obstruction, the Contractor shall make changes in the alignment of the piling structure and submit the same to the Engineer for review. The use of pre-trenching and driving shoes may also be employed by the Contractor if deemed necessary and as submitted for review to the Engineer.
- J. All piles shall be driven to the elevations and/or depths as shown on the Contract Drawings unless otherwise stated herein.
- K. Holes for bolts, tie back rods, angle sections and miscellaneous hardware shall be marked and cut prior to placing the pile in its final position. All slag and rough edges resulting from cutting operations shall be ground off. Splicing of piles will not be permitted unless reviewed with the Engineer prior to use. All handling holes shall be patched with welded steel plates of similar thickness.

3.2 CUTTING AND SPLICING

- A. Tops of sheet piling shall be cut off or driven down to a straight line at the elevation and/or depths shown on the plans. Pilings driven to refusal or to the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Piling driven below the required top elevation and pilings damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed by the Engineer or Department at no additional cost to the Department. The top elevations of all pilings shall protrude from the ground surface only to the degree needed based on integration with the Contractor's proposed thermal insulating cap design.
- B. If directed, pilings shall be spliced as required to drive them to depths greater than shown and extend them up to the required top elevation. Pilings adjoining spliced pilings shall be full-length unless otherwise approved. Splicing of pilings shall be as indicated. Ends of pilings to be spliced shall be squared before splicing to eliminate dips or camber. Pilings shall be spliced together with concentric alignment of the

interlocks so that there are no discontinuities, dips, or camber at the abutting interlocks.

- C. Spliced pilings shall be free sliding and able to obtain the maximum swing with contiguous pilings. The tops of pilings excessively battered during driving shall be trimmed when directed at no cost to the Department. Piling cutoffs shall be removed from the site. All cutting shall be done in a neat and workmanlike manner. A straight edge shall be used in cuts made by burning to avoid abrupt nicks. Bolt holes in steel piling shall be drilled or may be burned and reamed by approved methods that will not damage the surrounding metal. Holes, other than bolt holes, shall be reasonably smooth and the proper size for rods and other items to be inserted.

3.3 SHEET PILE REMOVAL

- A. Temporary sheet piling shall be removed using proper equipment. The Contractor is responsible for decontamination, transportation and proper disposal of removed sheet piling. Decontaminated sheet piles shall be inspected by the Engineer prior to off-site transport. If decontaminated sheet piles are unacceptable to the Engineer, Contractor shall decontaminate again at no cost to the Department.

3.4 SHEET PILE INSTALLATION RECORDS

- A. The Contractor shall document the following information at a minimum and provide this information to the Engineer in report format upon completion of the sheet pile installation:
 - 1. Date of driving,
 - 2. Length of sheet pile in the ground when driving is complete,
 - 3. Recorded tip and top elevations at all changes in profile,
 - 4. Detailed remarks concerning alignment, obstructions,
 - 5. Plumbness records of each sheet pile installed, and
 - 6. Recorded field modifications to the Contract Drawings and reviewed shop drawings.

3.5 QUALITY CONTROL

- A. The Contractor shall utilize survey control or other means and methods acceptable to the Engineer, to install the steel sheet piling to the limits and elevations shown on the Contract Drawings.

END OF SECTION

SECTION 32 31 13

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes labor, materials and equipment to properly install fence framework, fabric, and gates as shown on the Contract Drawings or at the discretion of the Engineer, complete with accessories.
- B. Features of chain link fences and gates shall be as shown on the Contract Drawings.

1.2 REFERENCES

- A. Materials and installation shall comply with the latest revision of the following codes, standards and specifications, except where more stringent requirements have been specified herein or shown on the Contract Drawings:
 - 1. American Society for Testing and Materials (ASTM)
 - a. *A90 - Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles*
 - b. *A121 - Specification for Zinc-Coated (Galvanized) Steel Barbed Wire*
 - c. *A392 - Specification for Zinc-Coated Steel Chain-Link Fence Fabric*
 - d. *A428 - Test Method for Weight of Coating on Aluminum-Coated Iron or Steel Articles*
 - e. *A491 - Specification for Aluminum-Coated Steel Chain-Link Fence Fabric*
 - f. *A585 - Specification for Aluminum-Coated Steel Barbed Wire*
 - g. *A817 - Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric*
 - h. *A824 - Specification for Metallic-Coated Steel Marcellled Tension Wire for Use with Chain-Link Fence*
 - i. *A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High Strength Low-Alloy and High Strength Low-Alloy with Improved Formability*
 - j. *B117 - Method of Salt Spray (Fog) Testing*
 - k. *C94 - Ready-Mixed Concrete*
 - l. *F567 - Standard Practice for Installation of Chain-Link Fence*
 - m. *F626 - Specification for Fence Fittings*

- n. *F1043 - Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework*
- o. *F1083 - Standard Specification for Pipe, Steel and Hot Dipped Zinc Coated, (Galvanized) Welded, for Fence Structures*

1.3 COORDINATION REQUIREMENTS

- A. The Contractor shall coordinate the locations and installation of chain link fences and gates with other features of their proposed site layout, on-site haul routes, ingress/egress locations, and traffic control plans as applicable.

1.4 SUBMITTALS

- A. Manufacturer's certification that all materials furnished are in compliance with the applicable requirements of the referenced standards, this specification and the Contract Drawings.
- B. Product Data: "Catalog cuts" and specification sheets indicating details of fence and gate construction, fence height, post spacing, dimensions and unit weights of framework and concrete footing details marked to specifically indicate the materials proposed for this project. Indicate selections with arrows, and cross out irrelevant data.
- C. Qualification Statements: Provide statement indicating fence installer has at least five years of experience in installing the specified fence and gate.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store fence and gate materials to prevent damage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The following manufacturers are named to establish a standard of quality necessary for the Project:
 - 1. Allied Tube & Conduit Corp.
 - 2. Anchor Fence, Inc.
 - 3. Page Aluminized Steel Corp.
 - 4. Or equal

2.2 GENERAL

- A. Framework

1. Schedule 40 steel pipe with 1.8 ounces of zinc coating per square foot of surface area conforming to Standard Specification ASTM F1083
2. Pipe shall be straight, true to section and conform to the following weights:

Pipe Size Outside Diameter	Weight Lbs./Ft.
1 5/8"	2.27
2"	2.72
2-1/2"	3.65
3"	5.79
3-1/2"	7.58
4"	9.11

B. Fabric: Zinc-Coated Steel.

1. Zinc-coated fabric shall be galvanized after weaving with a minimum 2.0 ounces of zinc per square foot of surface area and conform to ASTM A 392, Class 2.

C. Fittings:

1. Pressed steel or cast iron, galvanized with a minimum of 1.2 ounces of zinc per square foot of surface area, or cast aluminum alloy, all conforming to ASTM F 626.

2.3 CONCRETE MIX

- A. ASTM C 94 Portland Cement concrete with maximum 3/4" aggregate having a minimum compressive strength of 4,000 PSI at 28 days.

2.4 MATERIALS AND CONSTRUCTION

A. Fence Posts

1. Fence posts shall be sized as follows:

Fabric Height	Line Post O.D.	Terminal Post O.D.
Under 6'	2"	2"
6' to 9'	2-1/2"	2-1/2"
9' to 12'	3"	3"

B. Gate Posts

1. Gate posts shall be sized as follows:

Single Gate Width	Double Gate Width	SCH 40 Post O.D.
7' 6"	15'	4"
10'	20'	4"

C. Rails and Braces

1. Rails and braces shall be 1 5/8" O.D.

D. Fabric

1. Fabric shall be galvanized or aluminum-coated 9 gage steel wire, woven in a 2-inch diamond mesh with top selvage knuckled and bottom selvage knuckled. Fence heights up to 12 feet shall be one-piece widths.

E. Gates

1. Gates shall have perimeter frame assembly of 2-inches O.D., SCH 40 pipe and interior framing of 1 5/8" O.D. SCH 40 pipe with welded joints. Weld areas shall be repaired with zinc-rich coating applied per manufacturer's directions. Fabric shall match fence. Gate accessories, hinges, latches, center stops, keepers and necessary hardware shall be of quality required for industrial and commercial application. Latches shall permit padlocking of gate.

F. Fittings

1. Post caps shall be pressed steel, cast iron or cast aluminum alloy designed to fit snugly over posts to exclude moisture. Supply cone type caps for terminal posts and loop type for line posts.
2. Rail and brace ends shall be pressed steel, cast iron or cast aluminum alloy, cup-shaped to receive rail and brace ends.
3. Top rail sleeves shall be tubular steel, 0.051 thickness by 7 inches long, expansion type.
4. Tension bars shall be steel strip, 5/8 inch wide by 3/16 inch thick.
5. Tension bands shall be pressed steel, 14 gage thickness by 3/4 inch wide.
6. Brace bands shall be pressed steel, 12 gage thickness by 3/4 inch wide.
7. Truss rods shall be steel rod, 3/8 inch diameter merchant quality with turnbuckle.

G. Tension Wire

1. Tension wire shall be marcelled 7 gage steel wire with minimum coating of 0.80 ounces of zinc or 0.40 ounces of aluminum per square foot of wire surface and conforming to ASTM A824.

H. Tie Wires

1. Tie wires shall be aluminum 9 gage, alloy 1100-H4, A58 self-locking fabric bands or equal.

I. Hog Rings

1. Hog rings shall be 9 gage steel wire with a minimum zinc coating of 0.80 ounces per square foot of wire surface.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install fence and gate as shown on the Contract Drawings and in accordance with the manufacturer's installation instructions.
- B. Fence installation shall conform to requirements of ASTM F 567.
- C. Provide fence heights as shown on Contract Drawings.
- D. Space line posts at intervals not exceeding ten feet.
- E. Set terminal, gate and line posts plumb in concrete footings as shown on Contract Drawings. Top of footing shall be 2 inches above grade and sloped to direct water away from posts.
- F. Brace gate and terminal posts back to adjacent line posts with horizontal brace rails and diagonal truss rods.
- G. Install top rail through line post loop caps connecting sections with sleeves to form a continuous rail between terminal posts. Fasten top rail to terminal posts.
- H. Stretch bottom tension wire between terminal posts 6 inches above grade and fasten to outside of line posts with tie wires.
- I. Pull fabric taut to provide a smooth uniform appearance, free from sag, with bottom selvage 2-inches above grade. Fasten to terminal posts with tension bars threaded through mesh and secured with tension bands at maximum 15-inch intervals. Tie to line posts and top rails with tie wires spaced at maximum 12-inches on posts and 24-inches on rails. Attach to bottom tension wire with hog rings at maximum 24-inch intervals.
- J. Install gates plumb, level and secure for full opening without interference. Anchor center stops and keepers in concrete. Adjust and lubricate hardware for smooth operation.
- K. Install nuts for fittings, bands and hardware bolts on inside of fence. Peen ends of bolts or score threads to prevent removal.
- L. Install privacy screening (if specified on construction drawings) in accordance with the manufacturer's recommendations.

END OF SECTION

SECTION 32 72 00
WETLAND RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes topsoil, seed, plantings, mulch, and associated work with wetland restoration. The vegetative seed mixes and plantings provided in this specification are to be applied to the site based on the vegetative cover types defined on the Contract Drawings or as directed by the Engineer.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. 31 05 16 – Aggregates for Earthwork

1.3 REFERENCES

- A. Restoration activities shall be performed in compliance with the following:
 - 1. Sections 401 and 404 of the Clean Water Act.

1.4 PERFORMANCE REQUIREMENTS

- A. The Contractor shall comply with all applicable Federal, State and Local codes, ordinances, regulations, statutes and standards.

1.5 SUBMITTALS

- A. The following items shall be submitted:
 - 1. The location of source and data for off-site wetland topsoil proposed for the restoration work. Material samples and test reports shall include pH, organic matter, particle size distribution and analytical sampling results that comply with Part 375 Unrestricted Use Soil Cleanup Objectives. Also refer to requirements for imported soil/materials in Section 31 23 16 Earthwork.
 - 2. Source and content data for all seed mixes, plants, and trees. Data for each container of seed used shall be submitted; data submitted as representative of multiple containers will not be accepted.

3. Description of seed application method. Should hydroseeder be used, the Contractor shall submit all data including material and application rates.
4. Submit certificates from plant nursery stock supplier for each group of live plant stock required, stating botanical name, common name, origin, age, date of packaging, and name and address of supplier. Submit at least 4 weeks prior to planting.
5. Invoices for all plants and seed procured for the project shall be submitted.
6. Source and content data for organic mulch (*e.g.*, hay). If synthetic mulch is used, catalog data that includes the manufacturer, materials, and installation procedures, shall be submitted.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wetland topsoil shall be unfrozen friable silt loam free from clay lumps, stones, roots, sticks, stumps, brush or foreign objects.
 1. Wetland topsoil shall have moderate pH (5 to 7.5) and organic matter concentration between 3% - 10%.
 2. Wetland topsoil shall be comprised of the following particle sizes:
 - a. At least 50% silt (0.05 to 0.002 mm dia.) and 12 to 27% clay (less than 0.002 mm dia.) or
 - b. 50 to 80% silt and less than 12% clay.
 3. All topsoil used for wetland restoration shall satisfy the Unrestricted Use and/or Protection of Ecological Resources Soil Cleanup Objectives, established in NYCRR Part 375-6.7(d), as applicable.
 4. Prior to and during installation of the wetland topsoil layer, material from the borrow source shall be tested in accordance with the following standards and frequencies:

<u>Parameter</u>	<u>Standard</u>	<u>Frequency</u>
Topsoil Particle Size	ASTM D422	Once per 500 cy
Topsoil pH	ASTM D4972	Once per 500 cy

<u>Parameter</u>	<u>Standard</u>	<u>Frequency</u>
Topsoil Organic Content	ASTM D2974	Once per 500 cy

- B. Seed mixtures shall be of commercial stock of the current or prior season's crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix. Seed shall be labeled true to species and variety. The percent of pure live strain of the seed shall be submitted with the seed mixture.
- C. The seed supplier shall provide a seed analysis report including certified analyses of percent viability, percent weed seeds, and percent of other crop seed. The certifying laboratory shall be indicated on the seed tag or on associated submittals.
- D. The state of origin of the seed shall be indicated on the seed tag or on associated submittals.
- E. The following weed seeds, stems or rhizomes shall not be present in any seed mix:
1. Smooth brome (*Bromus inermis*)
 2. Tall fescue (*Schedonorus phoenix*)
 3. Purple loosestrife (*Lythrum salicaria*)
 4. Common reed (*Phragmites australis*)
 5. Cattail (*Typha angustifolia*, *T. x glauca*)
 6. Reed canarygrass (*Phalaris arundinacea*)
- F. All seed shall meet the standards of germination and purity set by New York State or the Association of Official Seed Certifying Agencies (AOSCA).
- G. The following seed and plant mixtures shall be applied as to areas indicated below:

Zone A – Emergent Marsh Seed Mix

Content (%)	Common Name	Botanical Name
15	Red Top Grass	<i>Agrostis alba</i>
12	Virginia Wild Rye	<i>Elymus virginicus</i>
5	Soft Rush	<i>Juncus effusus</i>
5	Spotted touch me not	<i>Impatiens capensis</i>
5	Pale touch me not	<i>Impatiens pallida</i>
5	Beggar Ticks	<i>Bidens frondosa</i>
5	Umbrella Sedge	<i>Cyperus strigosus</i>
5	Blue Vervain	<i>Verbena hastata</i>
5	Jerusalem Artichoke	<i>Helianthus tuberosus</i>

5	Grass Leaved Goldenrod	<i>Euthamia graminifolia</i>
5	Swamp Milkweed	<i>Asclepias incarnata</i>
5	Purple Stemmed Aster	<i>Aster puniceus</i>
5	Joe Pye Weed	<i>Eupatorium maculatum</i>
5	Boneset	<i>Eupatorium perfoliatum</i>
2	Fox Sedge	<i>Carex vulpinoidea</i>
2	Field Horsetail	<i>Equisetum arvense</i>
2	Rough Horsetail	<i>Equisetum hyemale</i>
2	Nodding Bur Marigold	<i>Bidens cernua</i>
1	Indian Hemp	<i>Apocynum cannabinum</i>
1	Water Horehound	<i>Lycopus americanus</i>
1	Monkey Flower	<i>Mimulus ringens</i>
1	Awl Sedge	<i>Carex stipata</i>
1	False Nettle	<i>Boehmeria cylindrica</i>

Note: Apply seed at 40 lbs. per acre to Zone A areas indicated on sheet C-110 of the Contract Drawings.

Zone B – Scrub Shrub Seed Mix

Content (%)	Common Name	Botanical Name
24	Fox Sedge	<i>Carex vulpinoidea</i>
14	Southern arrowwood	<i>Viburnum dentatum</i>
11	Virginia Wildrye	<i>Elymus riparius</i>
10	Lurid (Shallow) Sedge	<i>Carex lurida</i>
10	Silky Dogwood	<i>Cornus amomum</i>
10	Grey Dogwood	<i>Cornus racemosa</i>
7	Blunt Broom Sedge	<i>Carex scoparia</i>
5	Hop Sedge	<i>Carex lupulina</i>
3	Hercules' Club	<i>Aralia spinosa</i>
2	Awl Sedge	<i>Carex stipata</i>
2	Buttonbush	<i>Cephalanthus occidentalis</i>
1	Cosmos (Bristly) Sedge	<i>Carex comosa</i>
1	Meadow Sweet	<i>Spiraea alba</i>

Note: Apply seed at 15 lbs. per acre to Zone B areas indicated on sheet C-110 of the Contract Drawings.

Zone B – Scrub Shrub Plant Mix

Common Name	Botanical Name
Pussy willow	<i>Salix discolor</i>
Redosier dogwood	<i>Cornus sericea</i>
Southern arrowwood	<i>Viburnum dentatum</i>
Speckled alder	<i>Alnus incana</i>

Note: Shrubs shall be planted at a density of 1 per 16 square feet, alternating species such that equal numbers of each species are planted.

Zone C – Forested Seed Mix

Content (%)	Common Name	Botanical Name
30	Big Bluestem	<i>Andropogon gerardii</i>
20	Switchgrass	<i>Panicum virgatum</i>
10	Virginia Wildrye	<i>Elymus virginicus</i>
10	Purpletop	<i>Tridens flavus</i>
3	Coastal Panicgrass	<i>Panicum amarum</i>
5	Partridge Pea	<i>Chamaecrista fasciculata</i>
5	Blackeyed Susan	<i>Rudbeckia hirta</i>
5	Swamp Milkweed	<i>Asclepias incarnata</i>
2	Showy Ticktrefoil	<i>Desmodium canadense</i>
5	Oxeye Sunflower	<i>Heliopsis helianthoides</i>
5	Plains Coreopsis	<i>Coreopsis tinctoria</i>

Note: Apply seed at 20 lbs. per acre to Zone C areas indicated on sheet C-110 of the Contract Drawings.

Zone C – Forested Tree Plant Mix

Common Name	Botanical Name
Swamp White Oak	<i>Quercus bicolor</i>
Eastern Cottonwood	<i>Populus deltoides</i>
American Sycamore	<i>Platanus occidentalis</i>
Silver Maple	<i>Acer saccharinum</i>
Quaking Aspen	<i>Populus tremuloides</i>
Yellow Birch	<i>Betula alleghaniensis</i>

Note: Trees shall be planted at a density of 1 per 56 square feet, alternating species such that equal numbers of each species are planted. Tree pot sizes shall be varied as follows: 50% #1; 25% #2; 25% #5.

Zone C – Forested Shrub Plant Mix

Common Name	Botanical Name
Pussy willow	<i>Salix discolor</i>
Redosier dogwood	<i>Cornus sericea</i>
Southern arrowwood	<i>Viburnum dentatum</i>
Speckled alder	<i>Alnus incana</i>

Note: Shrubs shall be planted at a density of 1 per 16 square feet, alternating species such that equal numbers of each species are planted.

H. Plantings

1. All plant materials shall comply with state and federal laws with respect to inspection for plant diseases and insect infestations.
2. Plants shall be in accordance with the current edition of the *American Standard for Nursery Stock* (ANSI Z60.1-2004) unless otherwise specified.
3. Woody plants shall be of high quality and symmetrical. They shall be healthy, well branched and densely foliated when in leaf.
4. Plants shall be free of disease and insects, eggs, or larvae, and have healthy, well-developed root systems such that the root ball does not fall apart upon plant removal from the pot.
5. Plants shall be tagged true to species name and variety and not contain weeds.
6. For trees and shrubs in individual pots, each pot or stem shall be tagged.
7. Plants shall arrive at the job site free from physical damage.
8. Each species shall be handled and packed in a manner approved for that plant. All precautions that are customary in good trade practice shall be taken such that plants arrive at the Site in good condition. Plants that arrive dried out, exposed to excessive heat, or that have been in storage for protracted periods of time, will not be accepted. If, upon inspection, the plants or root stocks display mold or decay, the material will not be accepted.
9. All woody seedlings shall have a heavy fibrous root system that has been developed by proper horticultural treatment, transplanting, and root

pruning.

10. “Pots” shall be minimum 1-gallon size (or as specified or in paragraph I, above).

- I. Mulch shall be stalks of oats, wheat, rye or other approved crops which are free from noxious weeds. Mulch may also be EcoBlanket® or a hydromulch with tackifier that is made out of bio-degradable material. Photodegradable blankets or plastic blankets cannot be used.

PART 3 - EXECUTION

3.1 GENERAL

The restoration project shall be implemented by the Contractor to mitigate the potential for introduction of all invasive species, including but not limited to those identified in NYSDEC’s “Prohibited and Regulated Invasive Species” per NYS regulation 6 NYCRR Part 375. All materials (e.g., backfill, mulch, plant materials) and equipment to be used for the restoration work shall be inspected by the Contractor prior to use, to avoid the introduction of invasive species.

Trees outside of the excavation area that are greater than 6 inches DBH should be protected by placing a barrier around the tree at the tree drip-line. This applies to trees that are near the movement of construction equipment, with the intention of the barrier to prevent damage through inadvertent driving, bucket swings and lifts, etc.

3.2 INSTALLATION

- A. Following the removal of Soil backfill (Common Fill) temporarily placed within the wetland area to facilitate the ISTR treatment (refer to Sheet C-103 and C-110 of the Contract Drawings), place topsoil within wetland restoration areas (Zones A, B and C) and rough grade to achieve a minimum depth of 12-inches (or greater depth as needed to restore grading/elevations to pre-construction conditions). Finished grading may vary in specific areas by up to +/- 2-inches but the overall average grading in the restoration areas shall be consistent with pre-construction conditions. The topsoil shall not be compacted or fine graded but shall be loose and non-uniform such that an irregular (*i.e.*, includes hummocks and hollows) surface results. Topsoil shall be placed to achieve finished grade approximately matching pre-construction conditions, as indicated on Contract Drawings.
- B. Soil staging activities shall be coordinated with the Engineer prior to placement. Excess select fill or topsoil shall be disposed of on-site in an approved location or off-site. Silt fence shall be installed around the perimeter of the disposal area(s) until disposal activities are completed, and the area(s) is graded, seeded, and mulched. Silt fence shall be removed after a minimum of 80% of vegetative

coverage is achieved.

- C. Seeding shall be performed during two seasonal windows: mid-April through May or November through mid-December. If site soils require temporary stabilization, they shall be temporarily seeded and mulched using 30 pounds per acre of oats (*Avena sativa*).
- D. Alternative species, seed mixes or planting/seeding dates may be used with Department approval only.
- E. Procedures for planting woody potted stock:
 - 1. Potted trees and shrubs shall be planted from mid-April to late May or from September through December.
 - 2. The planting hole diameter shall be at least 1.5 times the diameter of the root ball and dug to a depth such that the root flare is even with the finished grade when the plant is placed in the hole.
 - 3. If the planting hole is initially dug too deeply, soil shall be added back into the hole to attain the proper elevation.
 - 4. Loosen roots encircling the root ball by hand and install the plant as soon as possible once it has been removed from the pot.
 - 5. Backfill the planting hole and firmly work soil into and around the root ball with care taken to fill in air spaces.
 - 6. Tamp the backfill with foot pressure sufficient to prevent the root ball from shifting or leaning.
 - 7. Leave the top of the root ball exposed in order to allow water to flow down into it.
 - 8. Form earthen water-holding saucers (4 inches deep with a similar diameter as the planting hole) around each plant.
 - 9. Water all plants immediately after planting. Apply water directly to the root ball and adjacent soil. Fill the water holding saucer with water.
 - 10. Following installation, remove all tags, labels, strings, etc. from all plants.
- F. Nursery grown materials shall be stored under continuously cool, covered, and moist conditions prior to use.

- G. Seed shall be applied to Zones B and C after placement of trees and shrubs.
- H. Habitat structure (*i.e.*, coarse woody debris, brush piles and rock piles) shall be placed randomly throughout each wetland restoration area (Zones A and B) in accordance with sheets C-110 and C-503 of the Contract Drawings. Coarse woody debris shall consist of cleared site trees and shrubs obtained from materials cleared as part of on-site construction activities. Place stockpiled debris as directed prior to planting.
- I. When the topsoil surface has been graded, the seed mixture shall be uniformly applied by a method approved by the Engineer.
 - 1. Tracking shall be performed over seeded areas using the tracks of a bulldozer (or equivalent), running perpendicular to the slope gradient where present. In areas receiving trees or shrubs, soil tracking shall occur before tree installation and seed broadcasting.
 - 2. Seeding and mulching shall not be done during windy weather.
- J. The mulch shall be hand or machine spread over restored areas to form a continuous blanket over the seed bed:
 - a. If straw mulch or similar is used, approximately 1 to 1.5 inches uniform thickness at loose measurement shall be applied. Excessive amounts or bunching of mulch will not be permitted.
 - b. If EcoBlanket® or hydromulch is used, these mulches shall be installed at a rate recommended by the manufacturer.
- K. Hydroseeding may be accepted as an alternative method of applying seed and mulch. The Contractor shall submit all data regarding materials and application rates to the Engineer for review.
- L. Unless otherwise specified, mulch shall be left in place and allowed to disintegrate.
- M. Sufficient water shall be applied to each plant to maintain plant health and vigor. Watering of herbaceous species (*i.e.*, seed) shall occur from July to September of the planting year if soils are not moist and if plants are showing signs of moisture stress. Watering shall be in such a manner as to prevent washing out of seed or exposing plant roots.
- N. Watering of woody species (potted plants) shall occur if one inch of rain is not received during any seven-day window from June 1 through August 31 in the year of installation. Watering events may be avoided if the woody plants are not showing moisture stress and with written approval from the Engineer. Watering shall occur in the first July to September following planting (*e.g.*, woody plants installed in the fall shall be watered the following year). Sufficient water shall be

applied to each plant to maintain plant health and vigor.

- O. Temporary fencing for herbivory control shall be installed around Floodplain Forest areas. Fence shall remain in place and be maintained in working condition until removal is approved by the Engineer.

3.3 MONITORING AND MAINTENANCE

The Contractor shall be responsible for Items A through C of this Section only.

- A. The Contractor shall warranty the plantings and seed for a period of one year or until the end of the next growing season, whichever is later. The Contractor shall replace deceased planted stock or reseed areas based on the following criteria:
 - 1. Minimum 95% survival of planted stock
 - 2. Minimum 95% ground coverage of seeded areas
 - 3. Plants and/or seeds shall be replaced during the optimal season for plant survival.
- B. Replacements shall be of the same size originally planted and subject to the first year maintenance efforts prescribed herein.
- C. Alternative species and/or seed mixes may be used during replacement with Engineer approval only.

The Department shall be responsible for the remaining Items within this Section as they are not a part of this Contract.

- D. The Department will monitor the plantings (potted stock) and seed for an additional period of four years. Monitoring events will be performed during the growing season (*i.e.*, April through October) and the results summarized in annual reports that will be submitted to NYSDEC and USACE. The Department will replace deceased planted stock or reseed areas based on the following:
 - 1. In Years 2 and 3 of the monitoring period, deceased planted stock will be replaced or bare areas reseeded based on the following criteria:
 - a. Maintain the densities and species diversities. However, species that are observed to be successful (*i.e.*, are growing vigorously) may be substituted for less successful species.
 - b. Vigorously growing non-invasive volunteers may be included in the survival, density, and percent cover calculations.
 - c. Plants and/or seeds shall be replaced during the optimal season for plant survival.

2. In Years 4 and 5 of the monitoring period, deceased planted stock will be replaced or bare areas reseeded based on the following criteria:
 - a. Maintain the original prescribed densities and species diversities. Species that are observed to be successful (i.e., are growing vigorously) may be substituted for less successful species.
 - b. Vigorously growing non-invasive volunteers may be included in the survival, density, and percent cover calculations.
 3. The following additional information will be recorded during monitoring events for the five year monitoring period:
 - a. Date and time of data collection efforts, as well as recent weather information
 - b. Comparison of site conditions to pre-disturbance conditions
 - c. Species identification of what restoration plants are deceased and those that have survived
 - d. Enumeration of deceased and surviving restoration plants
 - e. Percent vegetative cover
 - f. Identification of pioneer species
 - g. Percent cover and identification of invasive species
 - h. Surface water levels
 - i. Photographs from fixed reference points of each restoration area showing representative portions of the restoration areas
 - j. Observed fish and wildlife
- E. If invasive species are observed during the vegetative surveys, actions will be taken within 90 days to eliminate invasive species problems, including but not limited to:
1. The species, location and size of the population will be recorded as well as the control method and date of control action
 2. If the population is of manageable size (e.g., less than approximately 500 stems or 0.1 acres):
 - a. Invasive plants will be manually removed by excavating roots, pulling or clipping until the population is eliminated
 - b. The area that had the invasive species will be covered with a non-translucent tarp for a minimum of one growing season
 - c. Invasive plants which grow up around the tarp will be pulled or clipped
 - d. Invasive plant refuse will be appropriately disposed of, i.e., burned or landfilled in nontranslucent bags. Invasive plant refuse cannot

- be composted, added to stockpile soils or handled in a way that would lead to reuse at this or any other site.
3. If the population is considered to be too large for manual control methods, a Department-approved herbicide will be used according to manufacturer's instructions. Herbicide application will be completed by a certified applicator.
 4. With agreement from NYSDEC, control methods can be adapted over time given outcomes of initial control efforts. The timing and methods for control measures will be specifically designed for each species observed
- F. Efforts to eliminate invasive species will continue throughout the monitoring period within the restored areas. The presence of any invasive species identified in the current or future list of "Prohibited and Regulated Invasive Species" per NYS regulation 6 NYCRR Part 375, will not be allowed. Any other invasive species not specified on the noted list may not occupy more than 5% of the restored areas.

END OF SECTION

SECTION 32 93 13
TOPSOIL AND SEEDING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes topsoil, fertilizer, seed, mulch, and associated work and maintenance required until acceptance for areas outside of delineated wetlands.

1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
 - 1. American Society for Testing and Materials (ASTM)
 - a. ASTM D422 Method for Particle-Size Analysis of Soils
 - b. ASTM D2974 Test Method for Moisture, Ash, and Organic Matter of Peat and Other Organic Materials
 - c. ASTM D4972 Standard Test Method for pH of Soils
 - d. ASTM D5268 Specification for Topsoil used for Landscaping Purposes

1.3 SUBMITTALS

- A. The following items shall be submitted:
 - 1. Documentation giving location of properties from which the topsoil will be obtained, names and addresses of the owners, and depth to be stripped.
 - 2. Documentation giving the seed vendor's certified statement for the seed mixture required, stating common name, scientific name, percentage by weight, and percentages of purity and germination. Data for each container of seed used shall be submitted; data submitted as representative of multiple containers will not be accepted.
 - 3. Documentation giving data concerning hydro-seeding equipment (if used), including all material application rates.
 - 4. Documentation regarding test results for particle size, acidity, fertility, and texture performed on representative samples of soil.
 - 5. Affidavit from owner of source and analytical testing results.
 - 6. Source and content data for organic mulch.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil

1. The topsoil shall be unfrozen, natural, fertile, friable, clayey loam soil characteristic of productive soils in the vicinity and shall comply with ASTM D5268. No admixtures of subsoil shall be allowed. Topsoil must be uniform in composition and texture, clean and free from clay lumps, stones, weeds, sticks, brush, stumps, roots, toxic substances, and debris or similar substances 2-inches or more in greatest dimension.
2. All topsoil shall be screened.
3. Topsoil shall have moderate pH (5 to 7.5) and organic matter concentration (as determined by loss on ignition) ranging from 3 to 10%.
4. Topsoil as delivered to the site or stockpiled shall meet the following requirements:
 - a. Topsoil shall be well graded and have the following particle size distribution (by weight):
 - 1) 85 to 100 percent passing 1 inch, 65 to 100 percent passing 1/4 inch, and 15 to 80 percent passing a Number 200 sieve (0.075 mm, 0.003 inch). The 2 micron particle size shall not be greater than 20 percent of the total sample mass, as determined by hydrometer analysis.
 - b. Organic materials used in the manufacture of topsoil shall meet the requirements of NYSDOT 713-15.
 - c. Topsoil shall contain no nuisance weeds including seeds, stems or rhizomes of purple loosestrife, common reed, Japanese knotweed or plants on the Federal Noxious Weeds list.
 - d. Each load of topsoil shall be inspected by the Engineer and is subject to rejection.
5. All topsoil shall be compliant with the unrestricted use Soil Cleanup Objectives listed in NYCRR PART 375 and shall satisfy the Protection of Groundwater Soil Cleanup Objectives Part 375-6.7(d)(1)(ii)(b). Also refer to Section 31 23 16 Earthwork for additional requirements for imported soil/materials.

B. Fertilizer

1. Fertilizer shall be a standard quality commercial carrier of available plant food elements. A complete prepared and packaged material containing a minimum of 10 percent nitrogen, 10 percent phosphoric acid and 10 percent potash.
2. Each bag of fertilizer shall bear the manufacturer's guaranteed statement of analysis.

C. Seed Mixtures

1. Seed mixtures shall be of commercial stock of the current season's crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix.
2. The nursery shall provide a seed analysis report including certified analyses of percent viability, percent weed seeds, and percent of other crop seed. The

certifying laboratory shall be indicated on the seed tag or on associated nursery submittals.

3. The state of origin of the seed shall be indicated on the seed tag or on associated nursery submittals.
4. The following weed seeds shall not be present in seed mix:
 - a. Smooth brome
 - b. Tall fescue
 - c. Purple loosestrife
 - d. Common reed
 - e. Cattail
 - f. Reed canary grass
 - g. Others included in the Federal Noxious Weeds list
5. Seed shall meet the standards of germination and purity set by New York State or the Association of Official Seed Certifying Agencies (AOSCA).
5. The seed mixture is specified in Table 1-1 or approved equal.

Table 1-1. ERNMX-123: Native Upland Wildlife Forage & Cover Meadow Mix

Content (%)	Common Name	Botanical Name
34	Big Bluestem	<i>Andropogon gerardii</i>
20	Switchgrass	<i>Panicum virgatum</i>
15	Virginia Wildrye	<i>Elymus virginicus</i>
10	Purpletop	<i>Tridens flavus</i>
5	Coastal Panicgrass	<i>Panicum amarum</i>
5	Partridge Pea	<i>Chamaecrista fasciculata</i>
3	Blackeyed Susan	<i>Rudbeckia hirta</i>
3	Fowl Bluegrass	<i>Poa palustris</i>
2	Showy Ticktrefoil	<i>Desmodium canadense</i>
2	Oxeye Sunflower	<i>Heliopsis helianthoides</i>
1	Plains Coreopsis	<i>Coreopsis tinctoria</i>

Note: Apply seed at 30 lbs. per acre with 30 lbs/acre of a cover crop. If seeding prior to July 31, the cover crop shall consist of oats (*Avena sativa*). If seeding after July 31, the cover crop shall be winter rye (*Secale cereale*).

6. Seed shall be watered as needed to achieve consistent germination and growth.
- D. Mulch
1. Mulch shall be un-rotted stalks of oats, wheat, rye or other approved crops which are free from noxious weeds, salt, mold, or other objectionable material.

2. Other sources of mulch may be utilized if they are biodegradable and are approved by the Engineer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. All disturbed areas to be top-soiled shall receive a minimum of 6-inches of topsoil. The areas to receive topsoil shall be graded to a depth of not less than 6 inches or as specified below the proposed finished surface.
- B. The topsoil shall not be placed until the subgrade is in suitable condition and shall be free of frost and excessive moisture. All debris and inorganic material shall be removed and the surface loosened for a depth of 2 inches prior to the placing of topsoil.
- C. Top-soiled surfaces shall be seeded in accordance with this Section. All surfaces shall then be fertilized and mulched in accordance with this section.

3.2 APPLICATION PROCEDURES

- A. The finished surface shall conform to the lines and grades of the area before disturbed or as shown on the Contract Drawings. Any irregularities shall be corrected before the placement of fertilizer and seed.
- B. The Contractor shall proceed with the complete landscape work as rapidly as portions of the site become available, working within seasonal limitations of each type of work required.
- C. The fertilizer shall be applied uniformly at the rate of 20 pounds per 1000 square feet.
 1. Following the application of the fertilizer and prior to application of the seed, the topsoil shall be scarified to a depth of at least 2 inches with a disc or other suitable method traveling across the slope if possible.
- D. When the topsoil surface has been fine graded, the seed mixture shall be uniformly applied upon the prepared surface with a mechanical spreader at the rate specified.
 1. Seeding shall be performed during two seasonal windows: April 1 to June 15, October 15 through December 1, or as otherwise practicable and reviewed by the Owner's Representative. If site soils require stabilization at times outside of these dates, they shall be temporarily mulched using two tons per acre of straw.
 2. The seed shall be raked lightly into the surface and rolled.
 3. Seeding shall be suspended when wind velocities exceed 5 miles per hour or as directed by the Engineer.
- E. Mulch shall be hand or machine spread to form a continuous blanket over the seed bed, approximately 2 inches uniform thickness at loose measurement. Excessive amounts of bunching of mulch will not be permitted. Unless otherwise specified, mulch shall be left in place and allowed to disintegrate.
- F. Seed bed shall be moistened following application of mulch. A muddy soil condition will not be acceptable.
- G. Hydro-seeding may be accepted as an alternative method of applying fertilizer, seed and mulch. The Contractor must submit all data regarding materials and application rates to

the Engineer for review.

- H. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a minimum of 80% ground coverage. Watering shall be in such a manner as to prevent washing out of seed.
- I. If areas are determined to be unacceptable, the remaining mulch will be removed and all areas shall be reseeded, re-fertilized and re-mulched as per the above application procedures at the Contractor's expense.

3.3 MAINTENANCE

- A. The Contractor shall begin maintenance period immediately after planting of landscape materials.
- B. The Contractor shall maintain seeded areas, for the periods required to establish an acceptable growth, but not less than 60 days after date of substantial completion. If seeded in the fall and not given a full 60 days of maintenance, or if not considered acceptable by the Engineer at that time, continue maintenance during following spring until acceptable, vegetative stand is established.

END OF SECTION

SECTION XII

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 Part 3 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 DEPARTMENT'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. Payment will be made to the CONTRACTOR in accordance with the specified methods of measurement and the unit or lump sum prices stipulated in the acceptance of the bid. 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. Payment under all tasks will include, but necessarily be limited to, compensation for furnishing all supervision, labor, equipment overhead, profit, material, services, applicable taxes, and for performing all other related work required. No other payment will be made.
- D. 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.
- E. For unit price items, the CONTRACTOR shall be paid for the actual amount of work accepted and for the actual amount of materials in place during the period of construction. After the work is completed and before final payment is made, the ENGINEER or

CONTRACTOR as specified in the pay items will make final measurements to determine the quantities of the various items of work accepted as the basis for final payment. The CONTRACTOR shall accept compensation as herein provided, in full payment for furnishing all materials, labor, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced by the Contract.

- F. For lump sum items, the CONTRACTOR will be paid on the basis of actual work accepted until the work is completed. Upon completion of the item, 100 percent of the lump sum price may be paid, subject to the terms of the Agreement. The pay items listed below describe the measurement of and payment for the Work to be done under respective items listed in the Bid as outlined in the approved schedule of values.
- G. 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.
- H. All units of measurement shall be standard United States convention, as applied to the specific items of work by tradition and as interpreted by the ENGINEER. Each unit or lump sum price stated in the Bid shall constitute full compensation, as herein specified, for each item of Work completed.

1.2 ENGINEER'S ESTIMATE OF QUANTITIES

- A. The estimated quantities for Unit Price Items, as listed in the Bid Schedule, are approximate only and are included solely for purpose of the comparison of Bids. The ENGINEER does not expressly, or by implication, agree that nature of materials encountered or required shall correspond therewith and reserves the right to increase or decrease any such quantities or to eliminate quantities as the ENGINEER may deem necessary.

1.3 RELATED PROVISIONS

- A. Payments to CONTRACTOR: Refer to General Conditions, Supplementary Conditions, and Agreement Section VI.
- B. Changes in Contract Price: Refer to General Conditions, Supplementary Conditions and Agreement Section VI.
- C. Schedule of Values: Refer to General Conditions, Supplementary Conditions, and Section X 01 29 73, Schedule of Values.

1.4 SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Section VIII, Article 1.4, 1.6 and Article 13.

1.5 INCIDENTAL ITEMS

- A. Except for the items designated hereunder for Measurement and Payment, the costs of

items necessary to complete the work as specified are considered incidental to the items specified for Measurement and Payment. The costs of incidental items shall be included in the prices of items specified for Measurement and Payment.

PART 2 - 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, 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 as specified in this Section.
 2. For each lump sum bid item, the CONTRACTOR shall provide a schedule of values. 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. 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) 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. 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. Area 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. 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.
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 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. The weights shall be taken in the presence of a Department representative. When the weight is per ton, trucks shall be weighed prior to loading and after loading. The measured tonnage will be the difference between the prior- and post-loading measured truck weights.

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, as specified, or ordered by the ENGINEER.

PART 3 – BID ITEMS

LUMP SUM PAYMENT ITEMS

A. Bid Item LS-1 – Revised Work Plan and Pre-Mobilization Activities

The work of this item includes the preparation and submittal of the Contractor's Revised Work Plan and related documents, and associated project documents and related pre-mobilization activities. This includes, at a minimum, but not limited to, the following:

1. Contractor's Revised Work Plan, including the site-specific ISTR equipment specifications and drawings, thermal modeling and energy balance results and key assumptions, equipment cut sheets and submittals, ISTR operations manual, and other

related design information.

2. Preparation of the project schedule
3. Preparation/revisions to the site-specific Health and Safety Plan (SSHASP) as required.
4. Preparation of the Sheet Pile Installation Plan and Vibration Minimization and Monitoring Plan.
5. Obtain all the necessary permits and approvals and completion of agency notifications in coordination with the Engineer and the Department required for performing the work included in the Contract Documents (including all efforts to prepare required applications and related submittals, and applicable agency fees), including but not limited to the following:
 - a. Stormwater and soil erosion and sediment control submittals (i.e., demonstrate compliance/equivalency with the *SPDES General Permit for Stormwater Discharges from Construction Activities* [Permit No. GP-0-15-002] including preparation of a Stormwater Pollution Prevention Plan [SWPPP])
 - b. Air emissions treatment equipment and other information required to demonstrate ability to comply with air emissions criteria.
 - c. Wastewater discharge permit(s) based on the Contractor's proposed means and methods to treat/discharge wastewater generated from ISTR operations (e.g., POTW, surface water discharge)
 - d. NYSDOT permits for work conducted within the utility easements and right-of-way located along the western shoulder of Freemans Bridge Road, specifically for the DSS-25 soil excavation work and required utility connections
 - e. Coordination with the Department regarding acquisition of railroad company approvals and related submittals for work within and adjacent to the railroad right-of-way property.
 - f. Town of Glenville, and other local, state, and federal permits (e.g., general building/construction, electrical, plumbing, sanitary sewer connection)
6. The Department will secure the required access agreements for private properties, including the railroad right-of-way property. The Contractor shall obtain access agreements for the work within the NYSDOT right-of-way, the Town of Glenville sanitary sewer easement, and Lowes Drive.
7. Contact and coordination with all City, County and State road authorities as necessary to establish haul routes and other transportation requirements (e.g., traffic control plan) in accordance with their input and approval.
8. Costs for procurement of all long-lead equipment and materials required to be ordered prior to mobilization, in order to avoid delays in the project schedule following mobilization to the site.
9. Bonds and Insurances as defined in the Contract Documents.

B. Bid Item LS-2 – Mobilization and Demobilization

The work of this item includes the Contractor's efforts to mobilize and demobilize to the site in accordance with the requirements of the Contract Documents. The Contractor may invoice for up to 70% of this item upon completion of mobilization and the remaining 30% at substantial completion.

Mobilization includes, but is not limited to, the following items:

1. All initial utility mark outs and confirmations, including Dig Safely New York (DSNY) utility clearance.
2. Install temporary utilities and services as defined in Section 01 51 05, Temporary Utilities and Controls.
3. Install project Signs as defined in Section 01 58 00, Project Identification and Signs.
4. Install perimeter security fencing, gates and construction entrances as shown on the Contract Drawings and as otherwise required for the Contractor's site access and execution of the work.
5. Establish erosion and sediment control measures as shown on the Contract Drawings and specified in the Contract Documents.
6. Establish decontamination areas.
7. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs as further defined in Section 01 35 29, Contractor's Health and Safety Plan.
8. Establish field offices and support areas as further defined in Sections 01 52 11, Engineer's Field Office and Section 01 52 13, Contractor's Field Offices and Sheds.
9. Other environmental control measures as further defined in Section 01 35 29, Contractor's Health and Safety Plan.
10. Establish on-site and off-site traffic controls as further defined in Section 01 55 13, Access roads and Parking Areas.
11. Bonds and Insurances as defined in the Contract Documents.

Demobilization includes, but is not limited to, the following items:

1. Final decontamination and demobilization of all remaining personnel, equipment and materials from the site, upon completion of all the site restoration work.
2. Submission of all final project as-built records, ISTR Completion Report, and other project close-out documentation as detailed in the Contract Documents and as required by the Engineer and the Department.

C. Bid Item LS-3 – Site Preparation and ISTR System Construction

The Work of this item includes the site preparation activities and construction of the ISTR system, including but not limited to the following:

1. Installation of vegetated swales, the temporary stormwater storage area, and other stormwater management facilities as shown on the Contract Drawings, including

temporary stockpiling of excavated soils for subsequent re-use as part of site restoration work.

2. Completion of site surveys and stakeouts throughout the site preparation and construction work in accordance with Section 31 22 01 Site Survey and Stakeout and as otherwise required to complete the work.
3. Clearing and management of existing above-grade vegetation within the ISTR treatment zone and staging areas as required for the work.
4. Abandonment of existing groundwater monitoring wells within the ISTR treatment zone as shown on the Contract Drawings.
5. Removal of other features and utilities located within the ISTR treatment zone footprint, as shown on the Contract Drawings (refer to Sheet C-104). Purging, cutting and capping of existing utilities along the ISTR treatment zone perimeter as indicated on the Contract Drawings.
6. Removal and off-site transportation and disposal of existing concrete and masonry slabs and/or pads and materials located within the ISTR treatment zone, as shown on the Contract Drawings. Assume off-site disposal at a properly licensed and permitted non-hazardous waste landfill.
7. Excavation of the upper 1-2 feet of wetland area soils within the ISTR footprint to the limits shown on the Contract Drawings (refer to Sheet C-104). Assume off-site transportation and disposal of the soils at a properly licensed and permitted non-hazardous waste landfill.
8. Use of imported borrow materials to backfill the wetland area, as shown on the Contract Drawings. Also refer to Section 31 05 16.
9. Excavation of the utility trenches for the ISTR potable water service, natural gas service, and process wastewater discharge line as shown on the Contract Drawings. Placement and compaction of the excavated soils with the ISTR treatment zone footprint as part of the ISTR cap subgrade preparation.
10. Installation of the ISTR potable water service, natural gas service, and process wastewater discharge lines as shown on the Contract Drawings, and in coordination with utility service provider requirements and personnel.
11. Note that National Grid is the regional natural gas service provider. Estimated National Grid design and construction fees are included in Bid Item LS-3A. The Contractor shall include in LS-3 all costs for the Contractor to apply for and coordinate National Grid's design and installation of the new natural gas service connection to support the Contractor's operations.
12. Excavation of the DSS-25 area soils as shown on the Contract Drawings. Placement and compaction of the excavated soils within the ISTR treatment zone footprint as part of the ISTR cap subgrade preparation. Completion of post-excavation verification soil sampling, and backfilling and compaction of the completed excavation with imported borrow materials.
13. Removal of all construction water encountered or generated as required to complete the work. All construction water shall be containerized and managed in accordance with

Section 31 23 19 Construction Water Management. For off-site transportation and disposal, assume that construction water will be considered non-hazardous.

14. ISTR system construction, including but not limited to the following:
 - a. Installation of the subsurface sheet pile wall for groundwater hydraulic control during the ISTR operations, as shown on the Construction Drawings. Also refer to Section 31 62 16 Steel Sheet Piling.
 - b. ISTR well-field installation, including drilling services and equipment/materials for all components (heater wells/electrodes, SVE wells, pressure monitoring points, temperature monitoring points, MPE wells, etc.).
 - c. Placement and compaction of imported borrow materials for the ISTR cap subgrade surface as needed, and installation of the surface cap over the ISTR well-field as specified in the Contractor's means and methods.
 - d. ISTR process equipment installation, including vapor treatment equipment and emissions stack, liquid treatment equipment and all associated interconnecting piping, monitoring systems, instrumentation and controls, and wiring.
 - e. Emergency back-up generator to run blowers and instrumentation systems in the event of primary power loss.
 - f. Secondary containment pad and curbing for all liquid handling equipment and connecting piping.
 - g. Furnishing and installation of all on-site electrical and power distribution equipment downstream from the pad-mounted transformers (transformers T-1 through T-4, as shown on the Contract Drawings) as required to supply power to the Contractor's ISTR system and site support facilities (e.g., trailers, lighting). The installation of the primary power service, including poles #P01 through #P09 and transformers T-1 through T-4 as shown on the electrical sheets of the Contract Drawings, is included in Bid Item LS-4.
15. All required start-up and testing of the ISTR system equipment and components to verify proper operation, prior to the commencement of the ISTR full-scale operations
16. This bid item also includes all ongoing maintenance and services required during the site preparation and ISTR system construction work, including but not limited to the following:
 - a. Maintenance of erosion and sediment control measures pursuant to the Contract Documents and Contract Drawings.
 - b. Preparation for and attendance at all required construction meeting(s) pursuant to the Contract Documents.
 - c. All required construction reporting and documentation (e.g., submittals, daily reports, progress schedule updates).
 - d. All home-office and on-site supervision of the project as required.
 - e. All personnel voice and data communications (e.g., mobile phones).
 - f. All company vehicles (e.g., company pick-up trucks) used by Contractor personnel.

- g. All costs related to maintaining and implementing the Contractor's site-specific health and safety plan (SSHASP), and related safety monitoring.
- h. Implementation of the Sheet Pile Installation Plan and Vibration Minimization and Monitoring Plan as required.
- i. Maintenance of fencing and other site security measures.
- j. All required site house-keeping to maintain clean and orderly work areas.
- k. Maintaining all staging and stockpiling areas.
- l. All dust, odors, and noise monitoring, control measures, and response actions as required.
- m. All spill control measures, response(s) actions, clean-up, and notifications and reporting as required.
- n. Maintaining and operating field trailers and offices, support areas, project signs, sanitary facilities, on-site and off-site traffic controls, access roads, disposal of non-impacted project waste (e.g., office trailer trash), and maintaining compliance with all permit requirements.

D. Bid Item LS-4 – ISTR Primary Electric Power Service Installation

The Work of this item includes the installation of the on-site primary power service to supply power for the project, including but not limited to the following:

Procurement and installation of the primary electric service equipment, including Poles #P01 through #P09, transformers T-1 through T-4, all connecting overhead wires and conduits, and related work as shown on the electrical sheets of the Contract Drawings.

Note that National Grid is the regional electrical service provider. Estimated National Grid design and construction fees for the new off-site power service are included in Bid Item LS-4A. The Contractor shall include in LS-4 all costs for the Contractor to apply for and coordinate National Grid's installation of a new off-site power service to the site, to connect to the Contractor's on-site power service at pole #P01, install National Grid' primary metering on pole #P02, and to safely energize the new power service following connection.

The on-site primary electric service installation represented on the electrical sheets of the Contract Drawings is based on a 11 MVA power supply provided for the project.

E. Bid Item LS-5 – ISTR Operations

The Work of this item includes the operation of the ISTR system following completion of start-up and testing through final system shut-down and cool-down, including but not limited to the following:

- 1. All labor, equipment, and materials (e.g., equipment rental, operator oversight costs, and associated materials and other directs costs) as required for routine operations oversight and for timely trouble-shooting and/or emergency response throughout the operations period.

2. Costs for all ISTR operations monitoring, all safety and environmental monitoring, and all permit and/or permit equivalency compliance monitoring, sampling, and reporting (e.g., air emissions, process wastewater discharges) during operations.
3. All required post-treatment verification soil sampling of the ISTR treatment zone, receipt and compilation of sampling results, and review with the Engineer and the Department to confirm that the ISTR treatment objectives have been met. This includes any additional heating operations and additional soil sampling costs that are required if initial soil sampling results do not meet the ISTR treatment objectives.
4. This payment item does not include utilities usage fees for the ISTR electrical service, ISTR natural gas service, ISTR potable water service, or ISTR wastewater discharge service. Refer to Bid Items LS-7 through LS-10.
5. This bid item also includes all ongoing maintenance and services required during the ISTR operations work, including but not limited to the following:
 - a. Maintenance of erosion and sediment control measures pursuant to the Contract Documents and Contract Drawings.
 - b. Preparation for and attendance at all required construction meeting(s) pursuant to the Contract Documents.
 - c. All required construction reporting and documentation (e.g., submittals, daily reports, progress schedule updates).
 - d. All home office and on-site supervision of the project as required.
 - e. All personnel voice and data communications (e.g., mobile phones).
 - f. All company vehicles (e.g., company pick-up trucks) used by Contractor personnel.
 - g. All costs related to maintaining and implementing the Contractor's site-specific health and safety plan (SSHASP), and related safety monitoring.
 - h. Maintenance of fencing and other site security measures.
 - i. All required site house-keeping to maintain clean and orderly work areas.
 - j. Maintaining all staging and stockpiling areas.
 - k. All dust, odors, and noise monitoring, control measures, and response actions as required.
 - l. All spill control measures, response(s) actions, clean-up, and notifications and reporting as required.
 - m. Maintaining and operating field trailers and offices, support areas, project signs, sanitary facilities, on-site and off-site traffic controls, access roads, disposal of non-impacted project waste (e.g., office trailer trash), and maintaining compliance with all permit requirements.

F. Bid Item LS-6 – Site Restoration

The Work of this item includes site restoration activities following completion of the ISTR operations, including but not limited to the following:

1. Abandonment of the ISTR well-field components in accordance with NYSDEC Commissioner Policy CP-43. In addition, the upper 10 feet of each well or component shall be removed as part of abandonment, to remove shallow subsurface obstructions that may impede future site re-development.
2. Decontamination and removal of all ISTR process equipment from the site, including removal of all remaining spent media (e.g., spent liquid-phase granular activated carbon, particulate filters).
3. Removal of the ISTR primary power service, including transformers T-1 through T-4, concrete pads, connecting conduits, utility poles #P02 through #P09 and all overhead wires and disposal off-site.
4. Removal of the ISTR potable water service line, natural gas service line, and wastewater discharge line. These utility lines shall be properly purged, cut, and capped at the edge of the Freemans Bridge Road right-of-way, and otherwise properly abandoned in accordance with utility service provider and township requirements.
5. Characterization, profiling, and off-site transportation and disposal of spent media and ISTR system wastes (e.g., spent liquid-phase granular activated carbon, particulate filters, LNAPL, DNAPL) and decontamination liquids.
6. Removal and off-site transportation and disposal of the ISTR cap materials. Assume off-site transportation and disposal of the materials at a properly licensed and permitted non-hazardous waste landfill.
7. Excavation of the upper 1-2 feet of borrow materials that were placed within the wetland area, and placement and compaction of the excavated soil within the remaining footprint of the former ISTR treatment zone, as shown on the Contract Drawings.
8. Import and place 1-2 feet of imported wetland topsoil in the wetland area to restore grading to pre-construction conditions, and perform planting, seeding, and other activities to restore the wetland area as shown on the Construction Drawings.
9. Removal of all construction water encountered or generated as required to complete the work. All construction water shall be containerized and managed in accordance with Section 31 23 19 Construction Water Management. For off-site transportation and disposal, assume that construction water will be considered non-hazardous.
10. Remove the vegetated swales, the temporary stormwater storage area, and other stormwater management facilities as shown on the Contract Drawings. Use the stockpiled soils generated from the installation of these features to restore grading to pre-construction conditions.
11. Restore the existing 6-inch HDPE outfall pipe (used as the temporary storm water storage area drain during the construction work) to pre-construction conditions.
12. Remove the 6-inch PVC outfall pipe and dispose off-site, and restore the removal area to pre-construction conditions or better.
13. Removal of temporary facilities (e.g., trailers, portable sanitary facilities, parking areas) from the site.
14. Remove all chain link security fencing and gates, including all fence post concrete footings, and dispose of the materials off-site.

15. Import and place topsoil and seeding over the portions of the ISTR treatment zone located outside wetland areas, and other disturbed soils within the work areas, to promote the establishment of permanent vegetative cover over the disturbed areas as part of site restoration, in accordance with the Contract Drawings and specifications.
16. Completion of final site surveying following completion of the site restoration work to document final site conditions, in accordance with Section 31 22 01 Site Survey and Stakeout.
17. All inspections of the job site and work areas with the Engineer and the Department necessary to verify site conditions and project completion.
18. Following establishment of required vegetative cover, remove all remaining erosion and sediment control measures and dispose off-site.
19. This bid item also includes all ongoing maintenance and services required during the site restoration work, including but not limited to the following:
 - a. Maintenance of erosion and sediment control measures pursuant to the Contract Documents and Contract Drawings.
 - b. Preparation for and attendance at all required construction meeting(s) pursuant to the Contract Documents.
 - c. All required construction reporting and documentation (e.g., submittals, daily reports, progress schedule updates).
 - d. All home office and on-site supervision of the project as required.
 - e. All personnel voice and data communications (e.g., mobile phones).
 - f. All company vehicles (e.g., company pick-up trucks) used by Contractor personnel.
 - g. All costs related to maintaining and implementing the Contractor's site-specific health and safety plan (SSHASP), and related safety monitoring (also refer to Section 01 35 29 Contractor's Health and Safety Plan).
 - h. Maintenance of fencing and other site security measures until removal.
 - i. All required site house-keeping to maintain clean and orderly work areas.
 - j. Maintaining all staging and stockpiling areas until removal.
 - k. All dust, odors, and noise monitoring, control measures, and response actions as required.
 - l. All spill control measures, response(s) actions, clean-up, and notifications and reporting as required.
 - m. Maintaining and operating field trailers and offices, support areas, project signs, sanitary facilities, on-site and off-site traffic controls, access roads until their removal, and disposal of non-impacted project waste (e.g., office trailer trash), and maintaining compliance with all permit requirements.

G. Bid Item LS-7 – ISTR Power Usage

The work of this item includes the usage fees to supply electric power to the project. This item shall be based on the total number of kilowatt-hours (kW-hr) required to complete the project (inclusive of the ISTR operations and all other site support facilities), based on the bidder's proposed means and methods.

Refer to Section 02 62 18 In-Situ Thermal Remediation for additional information regarding available power supply for the project.

H. Bid Item LS-8 – ISTR Natural Gas Usage

The work of this item includes the usage fees to supply natural gas to the project. This item shall be based on the total natural gas demand in thousands of British thermal units (MMBTU) required to complete the project (inclusive of the ISTR operations and all other site support facilities), based on the bidder's proposed means and methods.

Refer to Section 02 62 18 In-Situ Thermal Remediation for additional information regarding available natural gas supply for the project.

I. Bid Item LS-9 – ISTR Potable Water Usage

The work of this item includes the usage fees to supply potable water to the project. This item shall be based on the total potable water usage in gallons required to complete the project (inclusive of the ISTR operations and all other site support facilities).

J. Bid Item LS-10 – ISTR Wastewater Discharge Fees

The work of this item includes the usage fees to discharge treated ISTR process wastewater to the local POTW throughout the project duration. This shall be based on the total treated ISTR process wastewater discharge volume in gallons required to complete the project.

K. Bid Item LS-3A – ISTR Natural Gas Service Installation (Estimated National Grid Design/Construction Fee)

The work of this item includes the National Grid design and construction fees associated with the installation of a new natural gas service lateral, from the existing 12-inch diameter gas main located at Freemans Bridge Road, to the Contractor's proposed ISTR equipment (refer to the Contract Drawings).

The Department has communicated with National Grid to understand the availability of local natural gas service to support the project. Information regarding the availability of local natural gas service, and National Grid has indicated that a natural gas supply of up to 70 MMBTU/hr may be available from an existing 12-inch diameter gas main located along Freemans Bridge Road, as shown on the Contract Drawings. The estimated National Grid design and construction fee for a new natural gas service connection to the existing gas main is included in payment item LS-3A. Following Contract award, the Contractor will be required to execute a final service plan with National Grid and provide up-front payment to National Grid for the underground natural gas service lateral and service connection in order for National Grid to commence the detailed service design and construction.

L. Bid Item LS-4A – ISTR Electrical Service Installation (Estimated National Grid Design/Construction Fee)

The work of this item includes the National Grid design and construction fees associated with the installation of a new electrical power service from an off-site location to support the project.

Based on the Department's prior communications with National Grid to understand availability of local electrical power to support the project, National Grid has indicated they can supply a new 34.5 kV line extension off-site for service to connect to pole #P01, as shown on the Contract Drawings. The estimated National Grid design and construction fee is included in payment item LS-4A. Following Contract award, the Contractor shall communicate with National Grid to develop a service plan reflecting the Contractor's electrical power requirements for the project based on the Contractor's proposed means and methods. The Contractor will be required to execute a final service plan with National Grid and provide up-front payment to National Grid for the off-site line extension service connection in order for National Grid to commence the detailed service design and construction.

++ END OF SECTION ++

SECTION XIII

Wage Rates and Associated Contract Requirements

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Kathy Hochul, Governor

Roberta Reardon, Commissioner

NYS DEC- DER

Elyse DuBois, Project Manager
625 Broadway
Albany NY 12233-7017

Schedule Year 2022 through 2023
Date Requested 03/02/2023
PRC# 2023002464

Location 107 Freemans BrRd & Adj Parcels
Project ID# D012803
Project Type Site No.447039-The project involves the implementation of remedial activities at the site. This project will use in situ thermal treatment as well as general construction activities to remediate the

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 2022 through June 2023. 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.ny.gov. 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 ["Request for a dispensation to work overtime" form \(PW30\)](#) and ["4 Day / 10 Hour Work Schedule" form \(PW 30.1\)](#).

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.ny.gov.

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.ny.gov.

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.ny.gov.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records. 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.

The filing of payrolls to the Department of Jurisdiction is a condition of payment. 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 journeymen 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.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

NYS DEC- DER

Elyse DuBois, Project Manager
625 Broadway
Albany NY 12233-7017

Schedule Year 2022 through 2023
Date Requested 03/02/2023
PRC# 2023002464

Location 107 Freemans BrRd & Adj Parcels
Project ID# D012803
Project Type Site No.447039-The project involves the implementation of remedial activities at the site. This project will use in situ thermal treatment as well as general construction activities to remediate the

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

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' concern regarding 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. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

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, <https://dol.ny.gov/public-work-and-prevailing-wage>

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.ny.gov .

Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)

Effective June 23, 2020

This provision is an addition to the existing 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 and supplement 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 job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.ny.gov or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. *In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

(12.20)

**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.

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. These include:

- Unemployment Insurance benefits, if you are 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 and Unemployment Insurance contributions required by New York State and Federal Law.**

Penalties for paying workers 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 or 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 (866) 435-1499 or send an email to dol.misclassified@labor.ny.gov. All complaints of fraud and violations are taken seriously. You can remain anonymous.

Employer Name:

IA 999 (09/16)

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:

<https://dol.ny.gov/public-work-and-prevailing-wage>

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) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5156		

* 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: _____

Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is \$250,000.00 or more the contract 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 518-457-5589.

WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is \$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 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 the 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.

Contractors must pay subcontractors within a 7 days period.

(07.19)

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.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records.

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.

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 straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

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.ny.gov) 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	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
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

Schenectady County General Construction

Boilermaker

03/01/2023

JOB DESCRIPTION Boilermaker

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

WAGES

Per hour

	07/01/2022	01/01/2023 Additional	01/01/2024 Additional
Boilermaker	\$ 39.34	+ \$1.30	+ \$1.30

SUPPLEMENTAL BENEFITS

Per hour

	07/01/2022
Journeyman	\$ 25.65 + 1.24*

* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

(1/2) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th
19.15	19.15	20.08	21.00	21.93	22.87	23.79	24.72
+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*

* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

1-197

Carpenter - Building

03/01/2023

JOB DESCRIPTION Carpenter - Building

DISTRICT 2

ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie

WAGES

Per hour:	07/01/2022	07/01/2023 Additional	07/01/2024 Additional	07/01/2025 Additional
Carpenter	\$ 34.00	\$ 1.25	\$ 1.25	\$ 1.25
Floor Coverer	34.00	1.25	1.25	1.25
Carpet Layer	34.00	1.25	1.25	1.25
Dry-Wall	34.00	1.25	1.25	1.25
Diver-Wet Day	61.25	0.00	0.00	0.00
Diver-Dry Day	35.00	1.25	1.25	1.25
Diver Tender	35.00	1.25	1.25	1.25

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- Pile Drivers/Dock Builders shall receive \$0.25 per hour over the journeyman's rate of pay when performing piledriving/dock building work.
- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work

- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
 - 0' to 80' no additional fee
 - 81' to 100' additional \$.50 per foot
 - 101' to 150' additional \$0.75 per foot
 - 151' and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

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', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 23.47

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

* Note - Saturday is also payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

CARPENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
55%	60%	65%	70%	80%

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96	\$ 14.96
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PILEDRIIVER/DOCK BUILDER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%*	60%*	70%*	80%*

*Pile Driver/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work.

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96
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LINOLEUM, RESILIENT TILE, AND CARPET LAYER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%	60%	70%	80%

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96
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ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- Certified welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

2-291B-A1b

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing west to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour:	07/01/2022	07/01/2023 Additional	07/01/2024 Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface	\$ 33.08	\$ 2.25*	\$2.25*

*To be allocated at a later date

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 25.45

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE

HOLIDAY

Paid: See (5) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour (1300 hour terms at the following percentage of Journeyman's wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

1st term	\$ 16.97
2nd term	17.41
3rd term	19.40
4th term	19.84

2-42AtSS

Carpenter - Heavy&Highway

03/01/2023

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour	07/01/2022	07/01/2023 Additional	07/01/2024 Additional
Carpenter	\$ 37.52	\$ 3.75*	\$ 4.00*
Piledriver	37.52	3.75*	4.00*
Diver-Wet Day	62.52	3.75*	4.00*
Diver-Dry Day	38.52	3.75*	4.00*
Diver-Tender	38.52	3.75*	4.00*

*To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:

- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51'to 100' additional \$.50 per foot
 - 101'to 150' additional \$0.75 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 23.80

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

- In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday. Employee must work scheduled work day before and after the Holiday.

- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

REGISTERED APPRENTICES

CAPRENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
65%	70%	75%	80%	85%

Supplemental Benefits per hour:

\$ 18.11	\$ 18.65	\$ 20.73	\$ 21.27	\$ 21.81
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PILEDRIIVER/DOCKBUILDER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
65%	70%	80%	85%

Supplemental Benefits per hour:

\$ 18.11	\$ 18.65	\$ 21.27	\$ 21.81
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NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

2-291HH-Alb

Electrician

03/01/2023

JOB DESCRIPTION Electrician

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Greene: Portion of the County North of a line following the South limits of the City of Catskill in a westerly direction from the Hudson River to State Highway 23A. Then continuing on 23A to the road following the Little West Kill and continuing along this road to Delaware County.
Otsego: Only the Towns of Decatur and Worcester

WAGES

Per hour

	07/01/2022	06/01/2023
Electrician	\$ 45.00	\$ 47.12
Audio/Sound	45.00	47.12
Video	45.00	47.12
Tele-Data	45.00	47.12
Solar/ Photovoltaic	45.00	47.12

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead(Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

SUPPLEMENTAL BENEFITS

Per hour

Journeyman	\$ 29.24 +3% of wage	\$ 29.29 +3% of wage
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OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

For Projects Bid on or Prior to 05/31/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST A FIVE (5) DAY 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 10%
3rd Shift	12:30 AM to 9:00 AM	REGULAR RATE PLUS 15%

For Projects Bid on or After 06/01/2019

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%

For Projects Bid on or After 09/01/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS OF AT LEAST A FIVE (5) DAY 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 (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyman's wage.

0-6mo	6-12mo	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

Apprentices indentured on or before 12/31/2018

0-12 month term	\$ 14.66*
2-5th year term	29.24*

Apprentices indentured on or after 01/01/2019

0-12 month term	\$ 14.66*
2nd year term	23.52*
3rd year term	24.66*
4th year term	25.81*
5th year term	29.24*

*Plus additional 3% of wage

1-236

Elevator Constructor

03/01/2023

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Madison: Madison Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida
Oneida: Entire county except the towns of: Camden, Florence, and Vienna.

WAGES

Per hour

07/01/2022

01/01/2023

Mechanic

\$ 50.78

\$ 53.02

Helper

70% of Mechanic
Wage Rate

70% of Mechanic
Wage Rate

Four (4), ten (10) hour days may be worked for New Construction and Modernization Work at straight time during a week, Monday thru Thursday or Tuesday thru Friday.

***Four (4), ten (10) hour days are not permitted for Contract Work/Repair Work

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour

07/01/2022

01/01/2023

Journeyman/Helper

\$ 36.885*

\$ 37.335*

(*)Plus 6% of hourly rate, if less than 5 years of service. Plus 8% of hourly rate, if more than 5 years of 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
50%	55 %	65 %	70 %	80 %

(*)Plus 6% of the hourly rate, no additional supplemental benefits.

Supplemental Benefits - per hour worked:

Same as Journeyman/Helper

1-35

Glazier

03/01/2023

JOB DESCRIPTION Glazier

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

	07/01/2022	05/01/2023 Additional	07/01/2023 Additional
Glazier Base Wage	\$ 31.86	+\$1.80	
+ additional \$4.05 per hour for all hours worked, not subject to overtime/premium			
High Work Base Wage*	34.01		+\$1.55
+ additional \$4.05 per hour for all hours worked, not subject to overtime/premium			

(*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

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, as your normal schedule, you must submit an Employer Registration for Use of 4 Day/10 Hour Work Schedule, form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour

Journeyman	\$ 21.75
Journeyman High Work	27.65

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT WORK OR SINGLE IRREGULAR SHIFTS STARTING BETWEEN THE HOURS LISTED BELOW:

4:00pm to 6:30am:	ADDITIONAL 12.5% TO APPLICABLE WAGE RATE AND SUPPLEMENTAL BENEFIT
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HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier 1500 hr. terms at the following percentage of Journeymans base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$3.60 per hour for all hours worked for all terms			

Apprentice Glazier Hi-Work 1500 hr. terms at the following percentage of Journeymans Hi-Work base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$4.05 per hour for all hours worked for all terms			

Supplemental Benefits per hour worked

Apprentice	
1st term	\$ 18.08
2nd-4th term	21.75
Apprentice High Work	
1st term	21.28
2nd-4th term	27.65

Insulator - Heat & Frost**03/01/2023****JOB DESCRIPTION** Insulator - Heat & Frost**DISTRICT 1****ENTIRE COUNTIES**

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour	07/01/2022	05/01/2023 Additional	05/01/2024 Additional
Asbestos Worker*	\$ 38.40	+\$2.50	+\$2.00
Insulator*	38.40		
Firestopping Worker*	32.64		

(*)On Mechanical Systems only.

On government mandated shift work additional 12% of wage for all shifts starting after 3:30 P.M.

SUPPLEMENTAL BENEFITS

Per hour

Journey person \$ 24.42

OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journey person's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices \$ 24.42

1-40

Ironworker**03/01/2023****JOB DESCRIPTION** Ironworker**DISTRICT 1****ENTIRE COUNTIES**

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worcester.

WAGES

Wages	07/01/2022
Per hour	

Ornamental	\$ 33.50
Reinforcing	33.50
Rodman	33.50
Structural & Precast	33.50
Mover/Rigger	33.50
Fence Erector	33.50
Stone Derrickman	33.50
Sheeter	33.75
Curtain Wall Installer	33.50
Metal Window Installer	33.50

SUPPLEMENTAL BENEFITS

Per hour

JOURNEYPERSON \$ 31.14

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTWORK:

1st Shift	6:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	2:00 PM to 7:00 PM	REGULAR RATE PLUS 10%
3rd Shift	7:00 PM to 12:00 AM	REGULAR RATE PLUS 15%

THE FOLLOWING RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS:

Shift Starting 4:30 PM to 12:00 AM	REGULAR RATE PLUS 10%
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HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

07/01/2022

1st year	\$ 19.50
2nd year	21.50
3rd year	23.50
4th year	25.50

Supplemental Benefits per hour worked

1st year	\$ 11.78
2nd year	23.73
3rd year	25.42
4th year	27.13

1-12

Laborer - Building

03/01/2023

JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Schenectady, Schoharie

PARTIAL COUNTIES

Fulton: Only the Townships of Bleeker, Mayfield, Northampton, Johnstown, Broadalbin and Perth.

Montgomery: Only the Townships of Mohawk, Glen, Charleston, Amsterdam, and Florida.

Saratoga: Only the Townships of Day, Hadley, Edinburg, Corinth, Moreau, South Glens Falls, Providence, Greenfield, Wilton, Galway, Northumberland, Milton, Saratoga Springs, Charlton, Ballston, Malta and Clifton Park.

WAGES

Per hour

	07/01/2022	07/01/2023
		Additional

Group #1:		
All Classifications	\$ 34.54	+ \$2.35
except as noted in		
Groups 2 & 3		

Group #2:

Blaster, Drilling equipment
only where a separate air
compressor unit supplies power,
Metal formsetter (sidewalk),
Well pointing & Laser
operator

\$ 35.04

Group #3:

Handling of Asbestos
or Toxic Materials \$ 35.89

SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$ 23.11

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

1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

Apprentices 07/01/2022
\$ 23.11

1-157

Laborer - Heavy&Highway

03/01/2023

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Schenectady, Schoharie

PARTIAL COUNTIES

Fulton: Only the Townships of Bleeker, Mayfield, Northampton, Johnstown, Broadalbin and Perth.

Montgomery: Only the Townships of Mohawk, Glen, Charleston, Amsterdam, and Florida.

Saratoga: Only the Townships of Day, Hadley, Edinburg, Corinth, Moreau, South Glens Falls, Providence, Greenfield, Wilton, Galaway, Northumberland, Milton, Saratoga Springs, Charlton, Ballston, Malta and Clifton Park

WAGES

GROUP # A:

Basic, Drill Helper, Flagman, Outboard and Hand Boats.

GROUP # B:

Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers, Tools Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators (1-1/2" and Single Diaphragm) Nozzle (Asphalt, Gunite, Seeding, and Sand Blasting), Laborers on Chain Link Fence, Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C:

Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Acetylene Torch Operators, Asphalt Paver/Raker and Powderman.

GROUP # D:

Blasters, Metal Form Setters (sidewalk), Stone or Granite Curb Setters.

GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour	07/01/2022	07/01/2023
		Additional
Group # A	\$ 36.60	\$ 3.50
Group # B	36.80	
Group # C	37.00	
Group # D	37.20	
Group # E	39.10	

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$5.00 per hour.

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', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$ 25.99

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 employer can choose to celebrate Saturday or give Friday off with pay.

REGISTERED APPRENTICES

Wages per hour

1000 HOUR TERMS AT THE FOLLOWING PERCENTAGE OF JOURNEYMAN'S BASE WAGE

1ST	2ND	3RD	4TH
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

	07/01/2022
Apprentices	\$ 25.99

1-157h/h

Laborer - Tunnel

03/01/2023

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 1

ENTIRE COUNTIES

Albany, Fulton, Hamilton, Herkimer, Madison, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

WAGES

Class 1: All support laborers/sandhogs working above the shaft or tunnel

Class 2: All laborers/sandhogs working in the shaft or tunnel

Class 4: Safety Miners

Class 5: Site work related to Shaft/Tunnel

Class A: Mole nipper, powder handler, changehouse attendant and top laborer, Air spade, jackhammer, pavement breaker, Top bell, Bottom bell, side or roofbelt driller, maintenance men, burners, block layers, rodmen, caulkers, miners helper, trackmen, nippers, derailmen, electrical cablemen, hosemen, groutmen, gravelmen, form workers, movers and shaftmen, conveyor men.

Class B: Powder monkey, Blasters, ironmen and cement worker, miner, welder, heading driller, steel erectors, piledriver, rigger

Per Hour

07/01/2022

*For projects bid on or after May 1, 2019

Class 1	\$ 43.50
Class 2	45.50
Class 4	47.75
Class 5	38.25

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

*For projects bid on or before April 30, 2019

Class A	\$ 40.80
Class B	41.80

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 2.00 an hour.

SUPPLEMENTAL BENEFITS

Per hour

*For projects bid on or after May 1, 2019

Journeyman \$ 27.50

*For projects bid on or before April 30, 2019

Journeyman \$ 26.75

OVERTIME PAY

See (B, E, Q, V, X) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

Note: If the holiday falls on a Sunday, it will be celebrated on Monday.

If the holiday falls on a Saturday, it will be celebrated on Friday.

REGISTERED APPRENTICES

FOR APPRENTICE RATES, refer to the appropriate Laborer Heavy & Highway wage rate contained in the wage schedule for the County and Location where the work is to be performed.

1-190/157T

Lineman Electrician

03/01/2023

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

A Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors, assembly of all electrical materials, conduit, pipe, or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines. Also includes digging of holes for poles, anchors, footer, and foundations for electrical equipment.

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. (Ref #14.01.01)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Welder, Cable Splicer	56.00	57.40	58.90
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

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". (Ref #14.02.01-A)

Lineman, Technician	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Cable Splicer	61.60	63.14	64.79
Certified Welder -			
Pipe Type Cable	58.80	60.27	61.85
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

Lineman, Tech, Welder	\$ 57.32	\$ 58.72	\$ 60.22
Crane, Crawler Backhoe	57.32	58.72	60.22
Cable Splicer	63.05	64.59	66.24
Certified Welder -			
Pipe Type Cable	60.19	61.66	63.23
Digging Mach. Operator	51.59	52.85	54.20
Tractor Trailer Driver	48.72	49.91	51.19
Groundman, Truck Driver	45.86	46.98	48.18
Equipment Mechanic	45.86	46.98	48.18
Flagman	34.39	35.23	36.13

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. (Ref #14.03.01)

Lineman, Tech, Welder	\$ 58.51	\$ 59.91	\$ 61.41
Crane, Crawler Backhoe	58.51	59.91	61.41
Cable Splicer	58.51	59.91	61.41
Digging Mach. Operator	52.66	53.92	55.27
Tractor Trailer Driver	49.73	50.92	52.20
Groundman, Truck Driver	46.81	47.93	49.13
Equipment Mechanic	46.81	47.93	49.13
Flagman	35.11	35.95	36.85

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE 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 %

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. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90	\$ 26.40	\$ 26.90
	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid
Journeyman Lineman or	\$ 27.90	\$ 29.40	\$ 30.90

Equipment Operators with Crane License	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid
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*The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

07/01/2022	05/01/2023	05/06/2024
\$ 25.90	\$ 26.40	\$ 26.90
*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a

Lineman Electrician - Teledata

03/01/2023

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 outside work, stopping at first point of attachment (demarcation).

	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Cable Splicer	\$ 36.28	\$ 37.73	\$ 39.24	\$ 40.81
Installer, Repairman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Teledata Lineman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Tech., Equip. Operator	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Groundman	\$ 18.25	\$ 18.98	\$ 19.74	\$ 20.53

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED:

1ST SHIFT	REGULAR RATE
2ND SHIFT	REGULAR RATE PLUS 10%
3RD SHIFT	REGULAR RATE PLUS 15%

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Journeyman	\$ 5.14	\$ 5.14	\$ 5.14	\$ 5.14

*plus 3% of
the hourly
wage paid

*plus 3% of
the hourly
wage paid

*plus 3% of
the hourly
wage paid

*plus 3% of
the hourly
wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked.

Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal, Lighting

03/01/2023

JOB DESCRIPTION Lineman Electrician - Traffic Signal, Lighting

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.
(Ref #14.01.01)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 48.19	\$ 49.32	\$ 50.54
Crane, Crawler Backhoe	48.19	49.32	50.54
Certified Welder	50.60	51.79	53.07
Digging Machine	43.37	44.39	45.49
Tractor Trailer Driver	40.96	41.92	42.96
Groundman, Truck Driver	38.55	39.46	40.43
Equipment Mechanic	38.55	39.46	40.43
Flagman	28.91	29.59	30.32

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE 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%

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. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid
Journeyman Lineman or Equipment Operators with Crane License	\$ 27.90 *plus 7% of the hourly wage paid	\$ 29.40 *plus 7% of the hourly wage paid	\$ 30.90 *plus 7% of the hourly wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked.
Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

07/01/2022	05/01/2023	05/06/2024
\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a-LT

Lineman Electrician - Tree Trimmer

03/01/2023

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

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.

Per hour:	07/01/2022	01/01/2023
Tree Trimmer	\$ 28.25	\$ 29.80
Equipment Operator	24.98	26.35
Equipment Mechanic	24.98	26.35
Truck Driver	20.80	21.94
Groundman	17.13	18.07
Flag person	13.20*	13.20*

*NOTE- Rate effective 12/31/2022: \$14.20