Site Name: Dzus Fastener Co., Inc.
Site Number: 152033
Contract Number: D011107
Location: Town of Islip

Contract Documents
EA Engineering, P.C. and its affiliate EA Science and Technology

December 2018
New York State Department of Environmental Conservation
ANDREW M. CUOMO, Governor
Basil Seggos, Commissioner
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SECTION I

Advertisement and Notice to Bidders

New York State Department of Environmental Conservation

Project Name: **Dzus Fastener Company, Inc.**, NYS Site Number: 152033

Sealed bids for the **Dzus Fastener Company, Inc. site** ("project"), will be received by the New York State Department of Environmental Conservation, Division of Management and Budget Services, 10th Floor, 625 Broadway, Albany, New York, 12233-5027, Attn: Bureau of Expenditures until the time of **1:00 P.M. (EST)** and on the date of **Tuesday, January 08, 2019**. The bids will be publicly opened and read aloud at the above time and date. Telegraphic or other electronically transferred bids are not acceptable.

The project involves the implementation of remedial activities at the **Dzus Fastener Company, Inc., site located within the Town of Islip, Suffolk County**. These include but are not necessarily limited to dredging and offsite disposal of sediment and soil primarily contaminated with cadmium and chromium from Willetts Creek and Lake Capri between Union Boulevard to the north and Montauk Highway to the south in West Islip, New York. Work will include water management during construction and site restoration of Willetts Creek and areas surrounding the creek and lake impacted by the remedial action.

The estimated range for this work is: **$20 - 25 million.**

**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 web site link [http://www.dec.ny.gov/chemical/59233.html](http://www.dec.ny.gov/chemical/59233.html). Hard copies of, and FTP link to, biddable Contract Documents are available upon request from the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7012, Attn: Bureau of Program Management - Contracts and Payments Section at (518) 402-9711.

Proposals will be accepted only from bidders who attend the Pre-Bid Conference. All proposals must be made on the official proposal form and enclosed in the envelope which will be provided at the Pre-Bid Conference. Each proposal must be accompanied by a deposit or a bid bond in the amount of 5% of bid amount. All Bidders must attend a Pre-Bid Conference to discuss special requirements for the contract, to be held on **December 20, 2018 at the Site starting at 11:00 A.M. prevailing local time. ATTENDANCE IS MANDATORY AS A CONDITION OF BIDDING.**

Due to space constraints, and restrictions associated with accessing public school property, pre-bid conference attendance is limited to two (2) staff members per company. Bidders must pre-register the two personnel by close-of-business Monday December 17, 2018 by emailing contact information (company name, personnel names, email & phone numbers) to the NYSDEC Project Manager, Sarah K. Saucier, P.E. (Sarah.Saucier@dec.ny.gov). Attendees are required to have the following to participate in the pre-bid conference: (1) be pre-registered, (2) have a valid photo ID, (3) have their company name displayed on their apparel (or other manner, e.g. business card on lanyard) and (4) wear a high visibility safety vest or coat. A majority of the site includes moving and standing water, waders (or other appropriate footwear) are recommended to access site. The site is over 4,000 linear feet long. The meeting location for the pre-bid conference will be in the rear of the Stop & Shop Plaza at 400 Union Blvd, West Islip, NY 11795. After the site walk, a meeting will be held at the West Islip Public library at 3 Higbie Ln, West Islip, NY 11795.
Minority, Women, and Service-Disabled Veteran owned businesses are encouraged to submit bids in response to this solicitation. The contractor must make good faith efforts to subcontract a goal of 6% 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. The New York State Department of Environmental Conservation is an Equal Opportunity/Affirmative Action Employer.

The Contractor shall adhere to the New York State Department of Environmental Conservation Guidelines Regarding Permissible Contacts During a Procurement and the Prohibition of Inappropriate Lobbying Influence. For the purpose of this Notice to Bidders, the Director of the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7011, shall be the Department's designated Representative. Any questions, however, shall be directed to Sarah Saucier, the Department’s Project Manager and Designated Contact, at (518) 402-9813.


Basil Seggos
Commissioner
SECTION II

*Terms and Definitions*
SECTION II

Terms and Definitions

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

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

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

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

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

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

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

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

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

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

Change Order – A document prepared and recommended by Engineer, which is reviewed by Department and has been signed by Contractor and Department and approved by Comptroller. It authorizes an addition, deletion or revision in the Work, or an adjustment in Contract Price or Contract Time, or any combination thereof, issued on or after the Effective Date of the Agreement.
Claim – Contractor’s demand or assertion seeking as a matter of right, adjustment, interpretation, additional money, extension of time or other relief with respect to terms of the Contract.

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

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

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

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

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

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

Correction Period – The period of time within which Contractor shall promptly, without cost to Department and in accordance with Department's written instructions, either correct Defective Work or if it has been rejected by Department, remove it from the site and replace it with 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 of 24 hours lasting from midnight one day to midnight the next day.

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

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

**Department** – New York State Department of Environmental Conservation.

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

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

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

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

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

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

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

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

**Engineer** – The individual, partnership, corporation, joint venture, or any combination thereof, any entity named as Engineer in the Agreement who will have the rights and authority assigned to Engineer in the Contract Documents. The term "Engineer" means the Engineer or its authorized representative.
**Equipment** – All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the Work.

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

**Joint Venture** – An associated of two or more individuals or companies engaged in a solitary business enterprise for profit without actual partnership or incorporation.

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

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

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

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

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

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

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

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

**Progress Schedule** – Drawings, data computer reports, and narratives disclosing Contractor's approach to the Work; the associated Early Schedule, Late Schedule and Float times, as supported by the Critical Path Method (CPM) or Bar Chart Diagram; the Schedule of Values; and the Schedule of Shop Drawing submissions.
**Project** – The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

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

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

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

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

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

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

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

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

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

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

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

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

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

**Testing, Pre-Operational** – All testing, associated 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, or Contract Times.

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

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

Bidding Information and Requirements
SECTION III

Bidding Information and Requirements

ARTICLE 1 - Address for Notices

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

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

ARTICLE 2 - Interpretation of Bidding Documents

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

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

ARTICLE 3 - Bid Instructions

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

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

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

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

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

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

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

Bids of a joint venture must be signed by an agent or attorney-in-fact for the joint venture and shall 
be evidence of his or her authority to act on behalf of all members of the joint venture.

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

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

In the event there is a discrepancy in any Bid between the unit prices and the extended totals, the 
unit prices shall govern. In the event there is a discrepancy in any Bid between the prices written 
in figures and the unit or lump sum prices written in words, the prices written in words shall govern. 
Department may reject as non-responsive bids which do not contain a price for every numbered 
item contained in the Bid form or may insert a zero for every numbered item that doesn't contain 
a price.
Unless **Department** gives instructions to the contrary, the Bidder shall use no more than three decimal places in the cents column under unit Bid price items. If Bidder uses more than three decimal places without such instructions, **Department** may round off the Bid item to three decimal places.

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

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

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

**Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence** - Pursuant to State Finance Law §§139-j and §139-k, this contract includes and imposes certain restrictions on communications between a Governmental Entity and an Offerer/Bidder during the procurement process. An Offerer/bidder is restricted from making contacts from the earliest notice of intent to solicit bids through final award and approval of the Procurement Contract by the Department of Environmental Conservation (Department) and, if applicable, Office of the State Comptroller (“restricted period”) to other than designated staff unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law §139-j(3)(a). Designated staff, as of the date hereof, is identified on page I-1 of Section I, Advertisement and Notice to Bidders. Department employees are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the Offerer/bidder pursuant to these two statutes. Certain findings of non-responsibility can result in rejection for contract award and in the event of two findings within a 4-year period, the Offerer / Bidder is debarred from obtaining governmental Procurement Contracts. Further information about these requirements, including a copy of the new lobbying law, can be found at [http://www.ogs.state.ny.us/aboutogs/regulations/defaultAdvisoryCouncil.html](http://www.ogs.state.ny.us/aboutogs/regulations/defaultAdvisoryCouncil.html).

**ARTICLE 4 - Modification or Withdrawal of Bid**

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

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

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

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

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

**ARTICLE 5 - Required Bid Submittals**

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

a) The following items are to accompany Contractor's Bid submitted to the Department as required in Article 3:

- Form of Bid filled out
- Bid Bond or Certified Check
- Non-Collusion Certificate
- Vendor Assurance of No Conflict of Interest or Detrimental Effect (signed)
- MacBride Fair Employment Principles (signed)
- Offerer’s Affirmation of Understanding of an Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b) (signed)
- Use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD) Provision (signed)
- Offerer Disclosure of Prior Non-Responsibility Determinations (signed)
- 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 liabilities 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.

b) The following items shall be submitted to the Project Manager within 5 days of notification that the Bidder is the apparent low Bidder:

- Offsite 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 and duly authorized surety company licensed to do business in the State of New York

- A copy of the proposed site Pollution Liability insurance policy demonstrating that the bidder has the required $5 million of Pollution Liability insurance.

- A description of projects completed by Bidder documenting its experience in this type of 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.)
• M/WBE Workplan. 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.

• Executive Order No. 177 Certification (signed)

• 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**:

• Executed Agreement (four copies with original signatures)

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

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

• Bid Breakdown of Items (original)

• Certificates of Insurance

• 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

• SDVOB Utilization Plan 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 percent (5%) of the Bidder's gross sum Bid. The Bid Security shall be in the form of either a certified or bank check upon an incorporated bank or trust company, or a Bid Bond issued by a surety satisfactory to **Department**.

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

Attorneys-in-fact who sign Bonds shall file with such Bonds a certified copy of their Power of Attorney to sign Bonds and to conduct business in the State of New York. The Bid Security of a
Bidder awarded a Contract for the Work will be retained until such Bidder has executed the Agreement and furnished the required bonds and insurance, whereupon the Bid Security will be returned. If the Bidder fails to execute and deliver the Agreement, other required documents and furnish the required bonds and insurance within fourteen (14) days after the Notice of Intent to Award, **Department** may annul the Notice of Intent to Award, and the Bid Security of that Bidder will be forfeited to **Department**. The Bid Security of any Bidder Whom **Department** believes to have a reasonable chance of receiving the award may be retained by **Department** until the earlier of the 45th day after the Bid opening or seven (7) days after the Effective Date of the Agreement, whereupon Bid Security furnished by such Bidders will be returned. Bid Security of other Bidders will be returned after the Bid opening.

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

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

**ARTICLE 8 - Other Contracts and Occupancy**

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

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

**ARTICLE 9 - Taxes**

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

**ARTICLE 10 - Experience and Financial Statements**

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

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

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

In the case of a joint venture, each member must meet the experience requirements specified in Section 3, Article 17. 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 onsite personnel are required to have 40 hours 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.

Additionally, the successful Contractor must be compliant with Section X – Standard Specifications, SPEC 0003 – Minimum Requirements for Health and Safety and the Occupational Safety and Health Administration (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 copies of a narrative description and a time-scaled critical path method diagram or bar chart diagram as specified in the Contract Documents. The narrative in the Preliminary Progress Schedule shall describe the order in which Bidder proposes to perform the Work pursuant to the specified Contract Time(s) and Work sequence conditions indicated in or required by the Bidding Documents. It shall also indicate proposed starting and completion dates for Work expressed in terms of days elapsed from the Notice to Proceed associated with each division of the Specifications within each major structure or geographical area of Work. Activities shall further identify significant submittals, approvals and associated deliveries, significant testing, major Department responsibilities, and responsibilities of affected utilities and third parties. The narrative shall include monthly percentages of completion for the Work in relation to the rate of progress anticipated in the Preliminary Progress Schedule.

ARTICLE 12 - Bid Breakdown

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

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

ARTICLE 13 - Subsurface and Technical Information

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

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

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.

**ARTICLE 16 - Subcontractors, Suppliers or Others**

Unless otherwise agreed in writing by **Department, Contractor** shall subcontract no more than the percentage (%) of the total cost of the work under its contract as may be provided by the Contract Documents in Article 6 of Section IV, "Supplementary Bidding Information and Requirements". Procedures for approval of Subcontractors, Suppliers or other persons or organizations, after execution of the Agreement, are set forth in the General Conditions and the Supplementary Conditions.
ARTICLE 17 - Award of Contract

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

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

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

In order to be considered responsible, a Bidder must establish to the complete satisfaction of Department and Engineer, as a minimum, that it has adequate and satisfactory experience and financial resources to meet the obligations under the Contract and award of the Contract would be in the best interest of the State. A Bidder's prior experience shall be considered satisfactory when among other factors, its performance of prior work was timely, of good quality, in compliance with any contract requirements including contracted costs and schedule, and in compliance with applicable Law. The Bidder must have a minimum of three (3) years satisfactory experience in construction of the work to be performed. 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 USEPA, NYSDEC, or an equivalent environmental regulatory state 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. Even after the expiration of such 45-day period, Department may accept a Bid and award the work to any Bidder whose bid has not been unequivocally withdrawn or revoked prior to the mailing of written Notice of the Award to the successful Bidder. For purposes of the preceding sentence, withdrawal or revocation of a Bid shall not occur until Department receives an unequivocal written statement to that effect.
ARTICLE 18 - Time is of the Essence

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

ARTICLE 19 - Applicability of Federal, State and Local Law

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

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

ARTICLE 20 - M/WBE and EEO Requirements

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

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

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

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

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

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

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

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

Chapter 1 of the Laws of 2005, as amended by Chapter 596 of the Laws of 2005 (collectively referred to as the “Lobbying Law”), makes major changes to the Legislative Law and State Finance Law relative to lobbying on government procurements. More specifically, the Lobbying Law creates two new sections in the State Finance Law: Section 139-j addresses restrictions on “contacts” during the procurement process; and Section 139-k addresses the disclosure of contacts and the responsibility of offerers\(^1\) 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 period\(^2\) 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.

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\(^1\) 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).
Exceptions to this rule include:

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

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

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

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 22 – 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 23 – 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 24 – 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 25 – Service-Disabled Veteran-Owned Business Participation Requirements**

The contractor must make good faith efforts to subcontract a goal of 6% 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.
SECTION IV

Supplemental Bidding Information and Requirements
SECTION IV

Supplementary Bidding Information and Requirements

ARTICLE 1 - Location and Description of Project

The Site Number of this project is 152033. The Project is located in Suffolk County. Access to the site is on Union Boulevard via Stop & Shop Plaza for north access, Barberry Road for southern access.

This Project includes the Dredging and offsite disposal of sediment and soil primarily contaminated cadmium and chromium from Willetts Creek and Lake Capri between Union Boulevard to the north and Montauk Highway to the south in West Islip New York. Work will include water management during construction and site restoration of Willetts Creek and areas surrounding the creek and lake impacted by the remedial action.

ARTICLE 2 - Department Representatives

<table>
<thead>
<tr>
<th>NAME</th>
<th>ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Michael A. Ryan, Designated Representative</td>
<td>Division of Environmental Remediation 625 Broadway, Albany, NY 12233-7011</td>
</tr>
<tr>
<td>David Harrington, Section Chief</td>
<td>Division of Environmental Remediation 625 Broadway, Albany, NY 12233-7017</td>
</tr>
<tr>
<td>Sarah Saucier, Project Manager</td>
<td>Division of Environmental Remediation 625 Broadway, Albany, NY 12233-7017</td>
</tr>
<tr>
<td>TBD, Project Field Representative</td>
<td></td>
</tr>
</tbody>
</table>

ARTICLE 3 - Pre-Bid Conference

A pre-Bid conference will be held on Thursday, December 20, 2018, at: 11:00 A.M., at Dzus Fastener Co., Inc. to view the Project area. The pre-bid conference is held to discuss the requirements of the Bidding Documents, the protocols for performing the work and the conditions existing at the work site, and to provide for visual inspection of the Site by Bidders. Bidders will be required to sign an attendance sheet to document their presence at the mandatory pre-bid conference. **Department will accept Bids only from those bidders who attend this conference.**

Due to space constraints and restrictions associated with accessing public school property, pre-bid conference attendance is limited to two (2) staff members per company. Bidders must pre-register the two personnel by close-of-business Friday December 14, 2018 by emailing contact information (company name, personnel names, email & phone numbers) to the NYSDEC Project Manager, Sarah K. Saucier, P.E. (Sarah.Saucier@dec.ny.gov). Unless otherwise agreed to by the NYSDEC, attendees should have the following to participate in the pre-bid conference: (1) be pre-registered, (2) have a valid photo ID, (3) have their company name displayed on their apparel (or other manner, e.g. business card on lanyard) and (4) wear a high visibility safety vest or coat. A majority of the site includes moving and standing water, waders (or other appropriate footwear) are
recommended to access site. The site is over 4,000 linear feet long. The meeting location for the pre-bid conference will be in the rear of the Stop & Shop Plaza at 400 Union Blvd, West Islip, NY 11795. After the site walk, a meeting will be held at the West Islip Public library at 3 Higbie Ln, West Islip, NY 11795.

**ARTICLE 4 - Additional Bid Submittals**

Not applicable.

**ARTICLE 5 - Other Available Documents**

The following items and historical information are available for contractor's review at West Islip Public Library, 3 Higbie Lane, West Islip, New York 11795 or http://www.dec.ny.gov/chemical/59233.html


Remedial Investigation Report Dzus Fastener Company, Inc. (152033) West Islip, NY Operable Unit 4 – Lake Capri prepared by EA Engineering, P.C. and its affiliate EA Science and Technology September 2018

Pre-Design Investigation Report Dzus Fastener Company, Inc. (152033) West Islip, NY Operable Units 3 and 4 Willetts Creek and Lake Capri October 2018

**ARTICLE 6 - Subcontracting**

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

**ARTICLE 7 - Type of Schedule**

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

**ARTICLE 8 - Wage Rates**

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

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

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

Bid Forms and Attachments
SECTION V

ARTICLE 1(a) - Contract Bid Form and Acknowledgment for Construction of
Excavation/Transport/Disposal at the Dzus Fastener Co., Inc.

Site Contract Number: D011107, NYS Site Number: 152033

To The New York State Department of Environmental Conservation

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

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

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

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

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

E-mail Address ________________________________
Bid
New York State Department of Environmental Conservation
Dzus Fastener Co., Inc
Contract No. D011107; NYS Site Number: 152033

<table>
<thead>
<tr>
<th>Payment Item Number</th>
<th>Description</th>
<th>Unit</th>
<th>Estimated Quantity</th>
<th>Unit Price</th>
<th>Total Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS-1</td>
<td>Mobilization, Demobilization and Site Preparation</td>
<td>LS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS-2</td>
<td>Site Restoration - Willetts Creek Station 0+00 to 21+00</td>
<td>LS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS-3</td>
<td>Site Restoration - Willetts Creek Station 21+00 to 42+50 and Lake Capri</td>
<td>LS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC-1</td>
<td>Site Services</td>
<td>Day</td>
<td>340</td>
<td></td>
<td></td>
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<tr>
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<td>Health and Safety</td>
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<tr>
<td>UC-3</td>
<td>Dredging Willetts Creek</td>
<td>CY</td>
<td>20,800</td>
<td></td>
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<tr>
<td>UC-4</td>
<td>Processing Willetts Creek Sediment</td>
<td>CY</td>
<td>20,800</td>
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<td>UC-5</td>
<td>Dredging Lake Capri</td>
<td>CY</td>
<td>18,400</td>
<td></td>
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<td>UC-6</td>
<td>Processing Lake Capri Sediment</td>
<td>CY</td>
<td>18,400</td>
<td></td>
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<td>UC-7</td>
<td>Soil Excavation</td>
<td>CY</td>
<td>3,000</td>
<td></td>
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<td>UC-8</td>
<td>Transportation, &amp; Disposal of Non-Hazardous Material</td>
<td>TONS</td>
<td>60,200</td>
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<td>UC-9</td>
<td>Transportation, &amp; Disposal of Hazardous Material</td>
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<tr>
<td>UC-10</td>
<td>Post Remediation Confirmation Sampling and analysis</td>
<td>EA</td>
<td>770</td>
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</tbody>
</table>

Grand Total Bid $ (Price in figures)

Contractor Authorized Representative ______________________ Contractor Name ______________________ Date __________________
The undersigned acknowledges the receipt of the following Addenda and agrees to be bound by all Addenda whether or not listed herein.

<table>
<thead>
<tr>
<th>Addendum Number</th>
<th>Date of Addendum</th>
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<tbody>
<tr>
<td></td>
<td>Enter Date of Addendum</td>
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Accompanying this proposal is bid security in the amount of $______; said security is in the form of $______ certified check or checks, and $___________ Bid Bond which shall become the property of the Department if this proposal shall be accepted by Department, and the undersigned shall fail to execute and return the contract in a timely manner or fail to comply with the requirements of the Bidding Documents.

Corporate Seal
Corporation

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

By____________________________________
Print Name

____________________________________
Signature

Date____________________________________

Please Complete Information Requested Below:

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

Federal Identification Number is: ________________________________
## If a Corporation

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
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<tbody>
<tr>
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</tbody>
</table>

## If a Partnership

<table>
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<tr>
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<th>Address</th>
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<td>_______________</td>
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</table>

**CONTRACT NUMBER:** D011107

(ACKNOWLEDGMENT)

State of _____________) s.s.: County of _____________)

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

________________________________________
Notary Public
Bidder’s/Proposer’s Certification

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

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

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

1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;

2) Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a Bid for the purpose of restricting competition.

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

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

2. Has business operations in Northern Ireland:

   Yes ☐ or No ☐ (check answer) If yes, complete #3

3) Shall take lawful steps in good faith to conduct any business operations that it has in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to non-discrimination in employment and freedom of workplace opportunity, regarding such operations in Northern Ireland and shall permit independent monitoring of its compliance with such Principles. (Check Answer):

   Yes ☐ or No ☐ (check answer)
NOTE: All references to “bid” “bidder” shall be deemed to include “proposer” “proposal”
Click or tap to enter a date.

Date

______________________________
Print Name and Title

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

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

Article 1(d) – State Ethics Law Provision

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

Except as follows: (attach information if needed)

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

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

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

*Use of Best Available Retrofit Technology (BART) and Ultra Low Sulphur Diesel (ULSD) Pursuant to*

Environmental Conservation Law Section 19-0323

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

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

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

Click or tap to enter a date.

**Date**

__________________________

Print Name and Title

__________________________

Signature

*ARTICLE 1(g) - Page to Attach*

**Bid Security**

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

**NYSDEC-DER Site Number:** 152033

*ARTICLE 1(h) - Bid Bond*

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

10/16 V-10
The condition of the above obligation is such that whereas the Principal has submitted to New York State Department of Environmental Conservation Certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Now, Therefore

a) If said Bid shall be rejected, or in the alternate,

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

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

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

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

(Seal)

Principal

Surety

By ______________________________
CONTRACT NUMBER:
D011107
(ACKNOWLEDGMENT BY SURETY COMPANY)

State of __________)
County of ________)  s.s.:

On this _____ day of _____, 20____ before me personally came _____ to me known, who being by me duly sworn, did depose and say that he/she resides in ____________, that he/she is the __________ (title) of the __________ (firm), the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Seal)

____________________________
Notary Public

(ACKNOWLEDGMENT)

State of __________)
County of ________)  s.s.:

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

____________________________
Notary Public
ARTICLE 1(i) - Offerer Disclosure of Prior Non-Responsibility Determinations

(Page 1 of 2)

Name of Individual or Entity Seeking to Enter into the Procurement Contract:
________________________________________________________________________________
Address: _________________________________________________________________________
Name and Title of Person Submitting this Form:
________________________________________________________________________________

Contract Procurement Number: _________________________________________________________________________
Date: ________________________________________________________________________________
1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or
   entity seeking to enter into the Procurement Contract in the previous four years? (Please circle):
   Yes □ No □
   If yes, please answer the questions 2 - 4, if no, go to question 5:
2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law
   §139-j? (Please circle):
   Yes □ No □
3. Was the basis for the finding of non-responsibility due to the intentional provision of false or
   incomplete information to a Governmental Entity? (Please circle):
   Yes □ No □
4. If you answered yes to any of the above questions, please provide details regarding the finding of
   non-responsibility below.
   Governmental Entity: ______________________________________________________________
   Date of Finding of Non-responsibility: ________________________________________________
   Basis of Finding of Non-Responsibility: _______________________________________________
   (Add additional pages as necessary)
ARTICLE 1(i) - Offerer Disclosure of Prior Non-Responsibility Determinations (Continued) (Page 2 of 2)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named individual or entity due to the intentional provision of false or incomplete information? (Please check one):
   Yes ☐ No ☐

6. If yes, please provide details below.
   Governmental Entity: ______________________________________________________________
   Date of Termination or Withholding of Contract: _________________________________________
   Basis of Termination or Withholding: _________________________________________________

   (Add additional pages as necessary)

Offerer Certification:
Offerer certifies that all information provided to the New York State Department of Environmental Conservation with respect to State Finance Law §139-k is complete, true and accurate.
By:_________________________________________ Date: __________________________
   Signature
ARTICLE 1(j) – Vendor Assurance of No Conflict of Interest or Detrimental Effect

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(j) – Vendor Assurance of No Conflict of Interest or Detrimental Effect

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 2(a) - Statement of Surety's Intent

To: New York State Department of Environmental Conservation

We have reviewed the Bid of ____________________________________________ (Contractor)
of _____________________________________________________________ (Address)

for Dzus Fastener Co., Inc.

Contract Number: D011107

NYS Site Number: 152033

Bids for which will be received on January 8, 2019 and wish to advise that should this Bid of Contractor be accepted, and the Contract awarded to Contractor, it is our present intention to become surety on the Performance Bond and Labor and Material Payment Bond required by the Contract.

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

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

Attest:

Corporate Seal

(If no seal, write "No Seal" and sign) Surety’s Authorized Signature(s)

Telephone Number for Bonding Company

Telephone Number for Bonding Broker

Attach Power of Attorney
Article 2(b) - M/WBE-EEO Workplan and Utilization Plan

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

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

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

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

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

M/WBE Directory on the Internet

Empire State Development has put the Minority and Women-Owned Business Directory on the Internet. The Internet address is www.empire.state.ny.us, just follow the links to the M/WBE Directory. Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed, call (518) 270-1130.
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](http://www.osc.state.ny.us/vendrep/systeminit.htm) or go directly to the VendRep System online at [https://portal.osc.state.ny.us](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](http://www.osc.state.ny.us/vendrep) or contact the Office of the State Comptroller’s Help Desk.

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

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

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

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

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Sarah Saucier, Project Manager
625 BROADWAY 12th FLOOR
ALBANY, NY 12233-7017
(518) 402-9814
**Article 2 (d) – Corporate Resolution**

The Contractor is required to submit a Corporate Resolution from the Contractor’s governing board 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 Certificates of 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.

Should you require any assistance with fulfilling these requirements, please contact Janice Mangino in the Department’s Bureau of Contract & Grant Development by phone at 518-402-9247 or by e-mail at janice.mangino@dec.ny.gov. She can assist you by further explaining the insurance requirements or contacting your insurance company directly. Please include the contract number D011107 in the subject line of all correspondence.

If you do not require assistance, please:

1. Request that your insurance provider note the Department’s specific contract number 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:

   The State of New York and the
   NYS Department of Environmental Conservation
   Division of Environmental Remediation
   Remedial Bureau E
   625 Broadway
   Albany, NY 12233-7017
   Attention: Sarah Saucier

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
   625 Broadway
   Albany, NY 12233-7017
   Attention: Sarah Saucier
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

Date Bond Executed ____________________________  NYSDEC-DER Site Number:152033

Date Contract Executed by Principal ____________________________

Principal (Name and Address)

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

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

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

Full and Just Sum of Bond

(Express in words) __________________________________________________

(Express in figures) ________________________________________________

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

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

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

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

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

Signed, sealed and delivered in the presence of

____________________________________________________
Name of Corporation

Corporate Seal of Principal

if a Corporation

By

__________________________________________
Print Name

_________________________________________
L.S

Signature

Date

10/16
Corporate Seal of Surety Company

____________________________________________
Corporation Surety

____________________________________________
Business Address

By (President) _______________________________

Attest (Secretary) ___________________________ Date __________________

(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_________, that he/she is the ________ (title) of the ________ (firm), the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

(Seal)

_________________________________________
Notary Public

(ACKNOWLEDGMENT)

State of ) s.s.:
County of )

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

_________________________________________
Notary Public
ARTICLE 3(d) - New York State Department of Environmental Conservation

Labor and Material Payment Bond

Date Bond Executed: ______________

NYSDEC-DER

Site Number: 152033

Date Contract Executed by Principal ___________________________

Principal (Name and Address)

________________________________________________________________

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

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Full and Just Sum of Bond (Express in words)

___________________________________________________

(Express in figures) ____________________________________________

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

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

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

Provided, however, that the Comptroller of the State of New York having required the Principal to furnish this bond in order to comply with the provisions of Section 137 of the State Finance Law, all rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance with the provisions, conditions and limitations of said Section to the same extent as if they were copied at length herein; and
Further, provided, that the place of trial of any action on this bond shall be in the county in which the contract was to be performed, or if the contract was to be performed in more than one county, then in any such county, and not elsewhere.

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

Signed, sealed and delivered in the presence of

______________________________________________
Name of Corporation

Corporate Seal of Principal
if a Corporation

By

______________________________________________
Print Name

L.S.

Signature

Date ________________________________

Corporation Seal of Surety Company

______________________________________________
Corporation Surety

______________________________________________
Business Address

By (President) ________________________________

Attest (Secretary) ________________________________

Date ____________________
(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 ____________, that he/she is the __________ (title) of the __________ (firm), the corporation described in and which executed the within instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation and the he/she signed his name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

Seal

________________________________________
Notary Public

(ACKNOWLEDGMENT)

State of _________)  s.s.:
County of _________)

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

________________________________________
Notary Public
**Article 3 (e) – SDVOB Utilization Plan**

Contractor must submit an 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
ARTICLE 4(a)
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MANAGEMENT AND BUDGET
CONTRACTOR'S APPLICATION FOR PAYMENT
(UNIT PRICE CONTRACT)

Payee (Name and Address)

FOR INTERNAL USE ONLY
STATE COMPTROLLER'S PRE-AUDIT CERTIFIED FOR PAYMENT IN THE SUM OF
$ __________________
By: __________________

Work Period Ending 20_____

By: __________________

With Final Payment Attach Labor Affidavits for Payroll Period to Conform to New York State Labor Law Section 220.

SCHEDULE I

<table>
<thead>
<tr>
<th>CONTRACT AND CHANGE ORDER AMOUNTS</th>
<th>WORK COMPLETED TO DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line</td>
<td>Line</td>
</tr>
<tr>
<td>1. Original Bid Price (Schedule V, Col. 1)</td>
<td>$</td>
</tr>
<tr>
<td>2. Change Order (Schedule VI, Col. 1)</td>
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</tr>
<tr>
<td>3. Net Contract Amount</td>
<td>$</td>
</tr>
<tr>
<td>4. Maximum Retainage (5% of Line 3)</td>
<td>$</td>
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</tbody>
</table>

SCHEDULE II

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 ____________________ Signature ____________________

SCHEDULE III

CERTIFICATION OF INSPECTOR

I certify that I have checked and verified the above application for payment; that to the best of my knowledge and belief it is a true and correct statement of work performed and/or material supplied by the contractor; that all work or material included in this application has been inspected by me and/or by my duly authorized representative or assistants and that the work has been performed and/or materials supplied in full accordance with requirements of the referenced contract; and that payment claimed and requested by the contractor is correctly computed on the basis of work performed and/or material supplied to date.

Date ____________________ Architect/Engineer ____________________

SCHEDULE IV

ENDORSED BY DEPARTMENT OF ENVIRONMENTAL CONSERVATION

EXAMINED AND APPROVED BY RESPONSIBLE DIVISION OR BUREAU

APPROVED FOR PAYMENT BY DIVISION OF FISCAL MANAGEMENT

<table>
<thead>
<tr>
<th>EXPENDITURES</th>
<th>LIQUIDATION</th>
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<tbody>
<tr>
<td>Dept</td>
<td>Cost Center</td>
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</table>
### SCHEDULE V

#### JOB PROGRESS

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Unit Price</th>
<th>Estimated Quantity</th>
<th>Type of Work</th>
<th>COLUMN 1 Contract Amount</th>
<th>Actual Quantity</th>
<th>COLUMN 2 Amount</th>
<th>Code</th>
</tr>
</thead>
</table>

**Liquidated Damages**

| Credits | $ | $ |

| Totals | $ | $ |

#### SCHEDULE VI

#### APPROVED CHANGE ORDERS

<table>
<thead>
<tr>
<th>No.</th>
<th>+ -</th>
<th>Additions - Deductions</th>
<th>Prior</th>
<th>New</th>
<th>Value Earned to Date</th>
<th>No.</th>
<th>+ -</th>
<th>Additions-Deductions</th>
<th>Prior</th>
<th>New</th>
<th>Value Earned to Date</th>
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</tbody>
</table>

| (SUB) TOTAL | $ | $ | TOTAL | $ | $ |
SECTION VI

Agreement
SECTION VI

Agreement

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

☐ a corporation organized and existing under the laws of
☐ the State of a partnership, consisting of
☐ an individual conducting business as

the location of whose principal office is____________________hereinafter called "Contractor."

WITNESSETH

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

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

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

ARTICLE 1 – Defined Terms

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

ARTICLE 2 - Work

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

New York State Department of Environmental Conservation

Site Name: Dzus Fastener Co., Inc.

Contract Number: D011107

Date: December 2018
ARTICLE 3 - Engineer

EA ENGINEERING, P.C. 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 and B
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 Appendices C and D)
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 422 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 482 calendar days from the Effective Date of the Agreement plus twenty (20) calendar days or within 30 days of substantial completion, whichever is sooner.

6.4 Department and Contractor recognize that the Contract Time(s) specified in paragraphs 6.1, 6.2, and 6.3 above are of the essence of this Agreement, and that Department may suffer financial loss if the Work is not completed within the Contract Time(s) specified above, plus any extensions thereof allowed in accordance with the General Conditions, as amended or supplemented in the Supplementary Conditions.

6.5 Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of $3,700 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 $2,500 for each day that expires after the Contract Time specified in paragraph 6.3 above for completion and readiness for payment. These liquidated damages are additive and represent a reasonable estimate, in lieu of any such proof, of Department's extra expenses for Inspection, engineering services, administrative costs, and Interim excess operating costs for each day that expires after the associated Contract Time.

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

ARTICLE 7 - Alterations and Omissions

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

**ARTICLE 8 - Determinations as to Variances**

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

**ARTICLE 9 - Payment Procedures**

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

9.1 **Progress Payments.** Contractor shall submit Applications for Payments to Engineer for review no more frequently than monthly in accordance with paragraph 13.2 of the General Conditions from the date when the Contract Time commences to run. Department shall make progress payments against the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer as provided below. All progress payments will be calculated on the basis of the progress of the Work measured by the schedule of values established pursuant to paragraph 1.4.3 of the General Conditions. Progress payments will also be made for materials pertinent to the Contract in accordance with the General Conditions. Contractor shall provide complete and accurate billing invoices to the Department in order to receive payment. Billing invoices submitted to the Department must contain all information and supporting documentation required by the Contract, the Department, and the State Comptroller.

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 Comptroller's/ OSC's procedures to authorize electronic payments. Authorization forms are available at the Comptroller's/ OSC's website at [www.osc.state.ny.us/epay/index.htm](http://www.osc.state.ny.us/epay/index.htm), by e-mail at [epunit@osc.state.ny.us](mailto: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/ Purchase Order if it does not comply with the Comptroller's/ 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.

11.1 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.

Mr. David Harrington, Section Chief  
NYSDEC - Division of Environmental Remediation Remedial Bureau E, Section A  
625 Broadway, 12th Floor  
Albany, NY 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:  
ARTICLE 16 - Applicable Law; Jurisdiction; Service of Legal Process

Contractor agrees:

16.1 That this Agreement is subject to and governed by all applicable federal and New York State law.

16.2 To procure all necessary licenses and permits.

16.3 To voluntarily and irrevocably submit to the jurisdiction of a New York State Court of competent jurisdiction, to resolve any dispute or controversy arising out of this Contract.

16.4 That the venue of any action at law or in equity commenced against Department arising out of a Project in one of Department's regions, shall be in the county in that Region where Department regional headquarters is located.

16.5 That the service of legal process or any notices in connection with a dispute or controversy arising out of this Contract, by United States registered mail, postage prepaid, addressed to the Designated representative of Department at the address stated in the Contract. Documents shall constitute good and valid service of process upon Engineer.

16.6 To waive any defense based on or alleging lack of jurisdiction, improper venue, or invalid service, if there is compliance with paragraphs 16.3 and 16.4 in this Article.

16.7 This Contract may be presented in court as conclusive evidence of the foregoing agreement.

ARTICLE 17 - Sales and Use Tax Exemption

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

Contractor agrees to maintain and keep, and to contractually require all subcontractors and material men to maintain and keep, records relating to the tax exemption of material, equipment and Supplies for a period of six years. The six-year period shall commence to run as of the date of final payment.
ARTICLE 18 - Effective Date

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

ARTICLE 19 – 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 – Encouraging Use of New York State Business in Contract Performance

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, bidders/proposers for this contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Bidders/proposers need to be aware that all authorized users of this contract will be strongly encouraged; to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, bidders/proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York's infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor's optimal performance under the contract; thereby fully benefiting the public-sector programs that are supported by associated procurements.

Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their use of the contract. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.
Bidders/proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below:

Will New York State Businesses be used in the performance of this contract? ☐ Yes ☐ No
If yes, identify New York State businesses that will be used and attach identifying information.

**ARTICLE 21 - Contract Price**

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

Bid $_____________________

Plus, change order(s)
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."

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Contractor Acknowledgement
State of ________________
County of ________________

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.

____________________________________ Notary Public

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Separable Part A
Beach Street Middle School
17 Beach Street
West Islip, NY

Separable Part A of the project site abuts the Beach Street Middle School and includes Willetts Creek from Station 0+00 to 21+00. Access to Separable Part A is limited via the Stop & Shop Plaza at 400 Union Blvd West Islip, New York. NYSDEC is leasing space from the West Islip School District on the Middle School property to facilitate the work.

This part includes all specified work required to satisfactorily prepare the portion of the site associated with Separable Part A for the contract specified remedial activities, construct/operate the Middle School sediment processing area, dredge Willetts Creek sediment from Station 0+00 to 21+00, manage water associated with the dredging operations, transport and dispose of stabilized sediment associated with Separable Part A, and restoration of Willetts Creek and adjacent properties associated with Separable Part A.

Part A work shall be Substantially Completed within 202 days from the Notice to Proceed date. Liquidated damages shall be in the amount of ($3,700) for each day that expires until the Department considers this separable part of the work satisfactorily complete.
SECTION VII

Appendices A, B, C, and D
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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, licensor, licensee, lessor, lessee or any other party):

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

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

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

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

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence victim status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin:

(a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of $50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State.
of any State approved sums due and owing for work done upon the project.

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

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

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

10. **RECORDS.** The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in the 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.

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

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

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

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

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over $25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

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

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

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

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

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

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

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

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

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

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

NYS Department of Economic Development Division for Small Business
Albany, New York 12245 Telephone: 518-292-5100
Fax: 518-292-5884
e-mail: 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 6323.
Third Avenue
New York, NY 10017
212-803-2414
e-mail: mwbecertification@esd.ny.gov
https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than $1 million:

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

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

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

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

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

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

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

25. **CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.** To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

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: http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf

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.
APPENDIX B
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 to 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.

(i) 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 program staff for further fact finding, negotiation, or other appropriate action; 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 of Remedial Bureau E
(Name and Title)

NYSDEC Division of Environmental Remediation
625 Broadway, Albany, NY 12233-7017
(Address)

518-402-9814
(Telephone)

The designated appeal individual to review decision is:

George Heitzman, Assistant Division Director
(Name and Title)

NYSDEC Division of Environmental Remediation
625 Broadway, Albany, NY 12233-7011
(Address)

518-402-9662
(Telephone)

The Chair of the Contract Review Committee is:

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 non-infringing 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 forward 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 10% Minority Labor Force Participation, 10% 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 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.

(3) 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 regard 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 he 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 damage 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), 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)

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Appendix E

PARTICIPATION OPPORTUNITIES 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 (“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: http://www.dec.ny.gov/about/108183.html

I. Contract Goals

A. The Department hereby establishes an overall goal of 6% 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://ogs.ny.gov/veterans/Docs/CertifiedNYS_SDVOB.pdf. 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 VeteransDevelopment@ogs.ny.gov 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
SECTION VIII

General Conditions

ARTICLE 1 - Preliminary Matters

Copies of Documents:

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

Preconstruction Conference:

1.2 No later than twenty calendar days after the Effective Date of the Agreement, but before Contractor starts the Work, a conference will be held on a date and at a location set by Department to:

   1.2.1 Review, item by item, the requirements of this Article;

   1.2.2 Review the qualifications of Contractor’s resident superintendent and the qualifications of any Subcontractors and Suppliers of Contractor;

   1.2.3 Discuss Contractor’s plans for complying with the requirements of Article 5 of the General Conditions;

   1.2.4 Formalize procedures for processing of Administrative Agreements, Payment Applications, Shop Drawings and other submittals, Change Orders and Proposed Change Orders, and Contractor requests for clarifications and interpretation of Contract Documents;

   1.2.5 Establish a working understanding among the parties as to the Work; and

   1.2.6 Discuss any conflicts, errors or discrepancies that Contractor has discovered by review of the Contract Documents.

Commencement of Contract Time and Start of Work at Site:

1.3 Before starting, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall immediately report in writing to Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

1.4 Before a Contractor may commence Work on the site but no later than 10 calendar days after Notice of Award, Contractor shall submit to Engineer for review and acceptance:
1.4.1 An interim progress schedule indicating Contractor’s anticipated schedule for the Work for the first three months in detail and for the remainder of the Work in summary form. If Contractor doesn’t intend to perform Work on the date when Contract Time commences, Contractor must notify Department as soon as possible in writing when work will commence so inspection services can be scheduled to minimize cost to the Department. The interim progress schedule shall include the information specified in paragraphs 1.4.2 and 1.4.3.

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

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

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

Finalizing Interim Schedules:

1.6 Contractor shall submit a proposed progress schedule to finalize the interim schedules submitted in accordance with paragraph 1.4 and the requirements of the Progress Schedule Section of the Standard Specification no later than twenty days after starting work at the site. The progress schedule shall be acceptable to Engineer and Department as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will not relieve Contractor from full responsibility for the progress or scheduling of the Work. The schedule of Shop Drawing, material, soil characteristic, sample collection, and analytical test results submissions shall be acceptable to Engineer and Department as providing a workable arrangement for processing the submissions. The schedule of values shall be acceptable to Engineer and Department as to form and substance. The first Application for Payment shall not be processed unless Contractor has submitted acceptable schedules.
ARTICLE 2 - Contract Documents: Intent, Amending, Reuse

Intent:

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

2.2 The Contract Documents describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may be necessary to satisfactorily complete the contract must be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), even though reference may be specifically made to an earlier standard. If there is any conflict or discrepancy between standard specifications, manuals, or codes of any technical society, organization or association, or between Laws, the Engineer shall determine which shall apply and shall be binding on Contractor. Contractor has a duty to comply with the latest standard specification, manual, code, or Laws in effect at the time of opening of bids, without any increase in Contract Price or extension in Contract Time. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 8.4. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Department, Contractor or Engineer or any of their consultants, agents or employees from those set forth in the Contract Documents. If there is any conflict or discrepancy between the provisions of the Contract Documents and any such referenced standard specification, manual, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence.

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

Engineer will promptly investigate the matter and respond to Contractor. Until such interpretation or clarification is obtained from Engineer, any Work done by Contractor after the discovery of such a conflict, error or discrepancy, which is directly or indirectly affected by same, will be at Contractor’s own risk and Contractor shall bear all cost arising therefrom. In resolving such conflicts, errors or discrepancies, the Contract Documents shall be given preference in the following order:
2.3.1 First, in accordance with the order of preference stated in the conflicting parts of the Contract Documents as provided by Article 4 of the Agreement;

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

Amending and Supplementing Contract Documents:

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

2.4.1 An Administrative Agreement,

2.4.2 A Change Order (pursuant to Article 9), or

2.4.3 A Proposed Change Order signed by Department (pursuant to Article 9).

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

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

2.5.1 A Field Order (pursuant to Article 8.4),

2.5.2 Engineer’s approval of a Shop Drawing or sample (pursuant to Article 5.23 thru 5.29), or

2.5.3 Engineer’s written interpretation or clarification (pursuant to Article 8.3).
Reuse of Documents:

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

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

Availability of Lands:

3.1 As indicated in the Contract Documents, Department shall make available the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands as are designated for the use of Contractor. Easements or other authority for permanent structures or permanent changes in existing facilities will be obtained and paid for by Department, unless otherwise provided in the Contract Documents. If Contractor believes that any delay in Department’s furnishing of these lands or easements entitles Contractor to an extension of the Contract Time, Contractor may make a request therefore as provided in Article 10 of the General Conditions. If Department and Contractor are unable to agree concerning such an extension, a claim may be made as provided in Articles 9, 10 and 11 of the General Conditions.

3.2 Any lands and easements for access not furnished by Department, which Contractor deems necessary for the Work, including but not limited to requirements for temporary construction facilities, access and egress, or for storage of materials, shall be provided by Contractor at no increase in Contract Price nor extension in Contract Time. Contractor shall obtain all necessary permits and written approvals from the appropriate jurisdictional agencies and property owner(s) for use of premises not furnished by Department as described above, and for the use of all off-site areas needed for the Work including but not limited to off-site borrow pits, and waste and disposal areas. If permits and approvals do not specify the required treatment, if any, of said areas during and at the completion of the Work, the Progress Schedule must describe such treatment. Copies of all permits and approvals applicable to said areas shall be filed with the Engineer before utilization of any said areas. Contractor shall have sole responsibility for any property damage or personal injuries occasioned by an act or omission of Contractor in respect to all lands, and easements obtained pursuant to this paragraph.

3.3 Engineering survey horizontal and vertical control reference points for construction which are specified in the Contract Documents or which in Engineer’s judgment are necessary to enable Contractor to proceed with the Work, will be provided by Department. Contractor shall be responsible for laying out the Work using such reference points, shall protect and preserve the established reference points; and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall notify Engineer in writing whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations; and shall be responsible for the accurate
replacement or relocation of such reference points by a professionally qualified surveyor at Contractor’s expense.

**Physical Conditions and Existing Structures:**

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

3.5 Intentionally left blank.

**Physical Conditions - Underground Facilities Shown or Indicated:**

3.6 The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the Design Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

3.6.1 Department shall not be responsible for the accuracy or completeness of any such information or data; and,

3.6.2 Contractor shall have responsibility: a) for reviewing and checking all such information and data; b) for locating all Underground Facilities shown or indicated in the Contract Documents as to depth and alignment in advance of installations, backfilling or other work required by the Contract Documents; c) for coordination of the Work with the owners of such Underground Facilities during construction, d) for the safety and protection thereof, and e) for repairing any damage thereto resulting from the Work. The cost of and the time required to perform the responsibilities outlined in this paragraph will be considered as having been included in the Contract Price and in Contractor’s schedule for the performance of the Work within the prescribed Contract Time(s) and Contractor shall not be entitled to additional payment therefor.

3.6.3 Contractor shall excavate and uncover all Underground Facilities to be crossed or paralleled by the proposed Work a sufficient time in advance to permit change in
line and grade of the existing Underground Facility or the proposed Work if the location of the existing Underground Facility should interfere with the Work. Further, a reasonable interval of time, up to thirty days, will be allowed to Engineer and Department in order to resolve issues relating to Underground Facilities shown or indicated which are determined to interfere with the Work. This interval of time will be considered as having been included in the Contract Price and in Contractor’s schedule for the performance of the Work within the Contract Time unless otherwise agreed to in writing by Department. If more than thirty days is consumed in resolving such issues, no claim will be allowed unless: 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirement of Article 9, 10 and 11 of the General Conditions and the Standard Specifications.

3.6.4 Where it is necessary for the Work to be close to or between other underground facilities or structures for short distances, Contractor shall shore, block, and protect the other underground facilities or structures to the satisfaction of the utility agency, state agency, municipality or private owner having ownership or jurisdiction over said underground facilities on structures.

3.6.5 Access to various municipal structures shall not be obstructed by Contractor to prevent use of hydrants, valves, manholes, fire alarms, etc. Contractor is to make no connections to existing water mains, or operate valves on existing mains, or otherwise interfere with the operation of the existing water distribution system, without first giving written notice to the owners of such municipal structures and securing their written approval of the proposed action.

Underground Facilities Not Shown or Indicated:

3.7 If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall promptly after learning thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 5.22), identify the owner of such Underground Facility and give written notice of such uncovering to that owner and to Engineer and Department. Engineer and Department will promptly review the situation to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility and take prompt action to amend the Contract Documents to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 5.20.

3.7.1 Contractor shall schedule excavation and uncovering Work to begin a sufficient time in advance to allow Engineer’s review and the possible amendment to the Contract Documents if unanticipated Underground Facilities are discovered as
described in paragraph 3.7. Further, up to thirty days, will be allowed to Engineer and Department to resolve issues and problems related to a report of newly discovered Underground Facilities, not shown or indicated. This interval of time will be considered as having been included in the Contract Price and in Contractor’s schedule for the performance of the Work within the Contract Time and Contractor shall not be entitled to any additional payment therefor.

3.7.2 No claim by Contractor under paragraph 3.7 of the General Conditions will be allowed unless more than thirty days has elapsed and 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

Report of Differing Site Conditions:

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

3.9 Engineer’s and Department’s Review: Engineer and Department will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto, and notify Contractor in writing of findings and conclusions. Immediately thereafter, Department shall perform or cause to be performed any necessary or appropriate additional investigations and tests with respect to the newly discovered conditions and furnish copies to Contractor.

3.10 Possible Document Change: If Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Proposed Change Order or a Change Order will be issued as provided in Article 9 to reflect and document the consequences of the inaccuracy or difference, provided Department has not exercised its right to suspend or terminate under Article 14 of Section 8, "General Conditions", Appendix B, or Article 12 of Section 6 "Agreement."

3.11 Possible Contract Adjustment: An increase or decrease in the cost of, or the time required to perform any part of the Work, whether or not affected by such differing conditions, and a corresponding adjustment in Contract Price or Contract Time in accordance with Articles 9, 10 and 11 of the General Conditions, or any combination thereof, may be allowable to the extent that they are attributable to any such inaccuracy or difference which Contractor could not reasonably have been expected to anticipate or be aware of. If Department and Contractor are unable to agree as to the adjustment in Contract Price or Contract Time, or
if Engineer concludes that there is not a material error in the Contract Documents, or that the uncovered or revealed condition could reasonably have been anticipated by Contractor, and Contractor disagrees, a claim may be made therefor as provided in Articles 9, 10 and 11 of the General Conditions.

3.12 No claim by Contractor under paragraph 3.11 of the General Conditions will be allowed unless: 1) Contractor has given the written notice required in paragraph 3.8 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order substantiating in detail Contractor’s proposed adjustments in accordance with the requirements of Articles 9, 10 and 11 of the General Conditions, and the Standard Specifications.

3.13 Responsibilities and Allowances: Contractor shall schedule excavation and uncovering of Work to begin a sufficient time in advance to allow Engineer’s review as described in paragraph 3.9, and Department’s issuance of a Change Order or a Proposed Change Order as described in paragraph 3.10 in connection with a report of differing conditions. Further, a reasonable interval of time, not less than thirty days will be allowed to Engineer and Department for those functions required to resolve any report of differing conditions. This interval of time will be considered as having been included in the Contract Price and in Contractor’s schedule for the performance of the Work within the Contract Time. If more than thirty days is used, no claim will be allowed unless (1) Contractor has given the written notice required in paragraph 3.8 of the General Conditions, and (2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

ARTICLE 4 - Bonds and Insurance

Performance and Other Bonds:

4.1 Contractor shall furnish performance, labor and material payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor’s obligations under the Contract Documents. These Bonds shall remain in effect until at least one year after the date when final payment is made, unless otherwise provided by Law or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall: a) be in the form prescribed by the Contract Documents; and b) be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and As Acceptable Reinsuring Companies" as published by the U.S. Treasury Department. Also, the surety shall be licensed to do business in New York State. All Bonds signed by an agent must be accompanied by an original or a certified true copy of the agent's power of attorney. Contractor’s failure to submit and keep in effect a Bond or form of financial security acceptable to Department in the manner required by this paragraph shall be cause for termination. Contractor shall give written notice to Department and reference the site number and project name, if the surety on any Bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to
do business is involuntarily terminated by any state or federal agency, it ceases to meet the requirements of paragraph 4.1. Contractor, if required by Department, shall within fourteen days substitute another Bond or Surety, in an acceptable form of financial security. The top of all bonds shall have "NYSDEC-DER Site No. 152033".

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 agrees to procure and maintain at its own expense and without expense to the Department insurance of the kinds and amounts hereinafter provided by insurance companies licensed to do business in the State of New York, covering all operations under this Contract.

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:

   - 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
   - remove or modify the “insured contract” exception to the employer’s liability exclusion; or
   - 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, 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.

1. Should the Contractor engage a subcontractor, the Contractor shall impose the insurance requirements of this document on the subcontractor. Contractor shall determine the required insurance types and limits, commensurate with the work of the Subcontractor. The Contractor will 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.

**4.2.2 U.S. Longshore and Harbor Workers’ Compensation Act and/or Jones Act must be provided.**

**4.2.3 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:**

<table>
<thead>
<tr>
<th>Form #</th>
<th>Form Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-105.2</td>
<td>Certificate of Workers’ Compensation Insurance (September 2007, or most current version)</td>
</tr>
<tr>
<td>U-26.3</td>
<td>State Insurance Fund Version of the C-105.2 form</td>
</tr>
<tr>
<td>SI-12/GSI-105.2</td>
<td>Certificate of Workers’ Compensation Self-Insurance</td>
</tr>
<tr>
<td>CE-200</td>
<td>Certificate of Attestation of Exemption (when Contractor meets the requirements.)</td>
</tr>
</tbody>
</table>

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

*Please note that 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

**4.2.4 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.
<table>
<thead>
<tr>
<th>Form #</th>
<th>Form Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB-120.1</td>
<td>Certificate of Insurance Coverage under the New York State Disability Benefits Law</td>
</tr>
<tr>
<td>DB-155</td>
<td>Certificate of Disability Self-Insurance</td>
</tr>
<tr>
<td>CE-200</td>
<td>Certificate of Attestation of Exemption (when Contractor meets the requirements.)</td>
</tr>
</tbody>
</table>

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

*Please note that 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](http://www.wcb.ny.gov/content/main/Employers/Employers.jsp)

**4.2.5 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
- Fire Damage – $50,000

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 forms must be endorsed to the policy: CG 20 10 11 85 or an equivalent – Additional Insured-Owner, Lessees or Contractors CG 25 03 11 85 or an equivalent – Designated Construction Project(s) general aggregate limit (only required for construction contracts).
Limits may be provided through a combination of primary and umbrella/excess liability policies. The CGL aggregate shall be endorsed to apply on a per project basis for construction contracts.

4.2.6 Business Automobile Liability: 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.

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.

4.2.7 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.

The Contractor shall also provide pollution liability broadened coverage for covered autos (endorsement CA 99 48 03 06 or CA 00 12 03 06) as well as proof of MCS 90.

4.2.8 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.

4.2.9 **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.

4.2.10 **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 12233-7017 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).
4.2.11 Marine Protection & Indemnity:

Contractor shall procure Marine Protection & Indemnity and Hull and Machinery coverage. Hull and Machinery coverage shall be provided for the total value of the watercraft or equipment. The Contractor shall obtain Protective and Indemnity Liability insurance for all marine operations under the Agreement, with a minimum $2,000,000 limit.

4.2.12 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 legal holidays (New Years, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas). Work during other than normal working hours may be scheduled by Contractor by first obtaining written permission from Department and as provided in Section 5.3. Department shall be entitled to recover extra costs incurred in providing inspection related to Work done during other than normal working hours in accordance with paragraph 5.3.5 below.

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

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

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

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

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

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

5.4.1 All water for testing, flushing and construction shall be furnished by Contractor. If water is available from Department and Department agrees to its use, Contractor shall connect to Department’s water system at a point approved by Department. Department will charge Contractor for water used in performing the above functions in accordance with Department’s established rate schedule. There shall be installed at each and every connection to any water supply: (a) a meter accepted by Department or Owner of water supply, and (b) a backflow preventer device accepted by the New York State Department of Health.

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

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

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

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

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

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

Adjusting Progress Schedule:

5.6 Contractor shall report on the status of and any revisions to the Progress Schedule to Engineer and Department by delivering Progress Schedule status and update submittals to Engineer in accordance with the Specifications and Article 1.6 of the General Conditions. If Contractor does not adequately update the Schedule, Department may reject Contractor’s requests for payment, provided that Department gives Contractor 10 days written notice of its intention to do so.

5.7 "Or-Equal" or Substitute Items:

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

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

5.7.2 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute only if first approved by Engineer. Contractor shall submit in writing sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for review by Engineer established by paragraph 5.7.1, and as may be supplemented in the Contract Documents, will apply to reviews under this paragraph.

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

Subcontractors, Suppliers and Others:

5.8.1 Contractor shall not employ nor award Work to Subcontractors in excess of the amount specified in Article 6 of the Supplementary Bidding Information and Requirements Section. Such percentage may be increased by an Administrative Agreement if, during performance of the Work, Contractor requests an increase and Department at its sole discretion determines that the increase would be to Department’s advantage. Contractor shall submit to Department a statement stating the character and amount of the work to be subcontracted and the party to whom it is proposed to subcontract the work. Contractor shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, unless first approved by Department.

5.8.2 Wherever Work to be performed by Contractor or by a Subcontractor is dependent upon Work of other Subcontractor(s) or the work of separate contractor(s), then Contractor shall require such Subcontractor(s) whose Work is so dependent to:

5.8.2.1 Provide necessary notices of delay, data or other requirement(s) for performance of dependent Work or work of separate contractor(s),

5.8.2.2 Supply and/or install items to be built into dependent Work or work of separate contractor(s),

5.8.2.3 Make provisions for dependent Work or work of separate contractor(s),

5.8.2.4 Examine previously placed dependent Work or work of separate contractor(s),

5.8.2.5 Check and verify dimensions of previously placed dependent Work or work of separate contractor(s),
5.8.2.6 Notify Engineer in writing immediately upon determining previously placed dependent Work or work of separate contractor(s), the dimensions of which are unsatisfactory or will prevent a satisfactory installation of Work,

5.8.2.7 Not proceed with Work until the unsatisfactory dependent conditions which prevent satisfactory installation of Work have been corrected.

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

5.8.3 Whenever other Contractors will perform portion(s) of the work that depend on the Contractor’s portion of the Work; Contractor shall provide all of the notices and information listed in 5.8.2 to such other Contractors in a timely manner.

5.9 Contractor shall be responsible and liable to Department and Engineer for Contractor’s acts and omissions and all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a contract with any level of Subcontractor or Supplier. Nothing in the Contract Documents shall create any contractual relationship between Department or Engineer and any such Subcontractor, Supplier or other person or organization. Department or Engineer may furnish to any Subcontractor or Supplier, to the extent practicable, evidence of the payments made to Contractor on account of specific Work done.

5.10 The various sections, divisions and subdivisions of the Standard and Supplementary Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. The Standard Specifications, Supplementary Specifications, and Drawings are complementary to each other and are to be read as a whole. Anything mentioned or shown in a division of such Specifications, or Drawings or in a specific trade Drawing shall be effective as if shown in all divisions of such Specifications and in all Drawings. In addition to the requirements of paragraphs 5.24 through 5.30 of the General Conditions, shop drawings of a specific trade shall be compared to and coordinated with those from other trades by Contractor before submission to Engineer.

5.11 All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Department.
Patent Fees and Royalties:

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

Permits:

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

Laws and Regulations:

5.14.1 Contractor shall comply with all Laws applicable to performance of the Work. Except where otherwise expressly required by applicable Laws or Contract Documents, neither Department nor Engineer shall be responsible for monitoring Contractor’s compliance with any Laws.

5.14.2 If Contractor observes that the Contract Documents are at variance with any applicable Laws, Contractor shall immediately give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods set forth in paragraph 2.4 and 2.5 of the General Conditions. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws, and without such notice to Engineer, Contractor shall bear all costs arising therefrom; however, it shall not be Contractor’s primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws.

Taxes:

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

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

5.16.1 Temporary buildings (e.g., storage sheds, trailers, shops, offices) and utilities may be erected by Contractor only with the approval of Engineer and shall be built without additional expense to Department. Such temporary buildings and utilities shall remain the property of Contractor and shall be decontaminated as necessary and removed by Contractor at his expense upon completion of the Work; the buildings and utilities may be abandoned and remain at the site with the written consent of Department.

5.16.2 When materials are transported for performance of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by Federal, State, or local law or regulation. When it is necessary to cross curbs, sidewalks or work which is completed or underway on site, Contractor shall protect them from damage, and shall repair any damage caused.

5.16.3 Notwithstanding the designation of site boundaries or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain phases or portions of the Work may require that certain operations be carried out beyond the site boundaries. Trenching, utility Work, site development, landscaping, other Work, if required beyond such designated limits, shall be scheduled in such a manner as to cause or occasion a minimum of inconvenience or disturbance to or interference with the normal operation of Department, abutting owners and the public. Contractor shall obtain Department’s prior approval and all necessary approvals from others, including but not limited to public authorities and utility companies for such operations, and shall conduct such operations expeditiously and restore the affected area to its original condition immediately upon completion of such operations, unless otherwise specified in the Contract Documents.
5.16.4 All existing walks, roadways, paved or landscaped areas on which temporary driveways or walks are rerouted shall be restored to their original condition, immediately upon completion of the phases or portions of the Work for which such features were disturbed unless otherwise specified in the Contract Documents.

5.16.5 Pumping, draining and control of surface and ground water will be carried out to avoid endangering the Work or any adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof, or exceeding the limits allowed by Contract Documents, or applicable Law.

5.17 During the progress of the Work, Contractor shall keep the Site free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Site clean and ready for Department. Contractor shall restore all pavement, sidewalks, driveways, fences, shrubs, lawns, trees and any other public or private property damaged as a result of the Work under this Contract. All such replacement shall be done in accordance with the applicable specifications and no separate or extra payment will be made unless specifically provided for in the Payment Items. In all cases, said replacement shall be at least equal to the original conditions.

5.18 Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

As-Built Documents:

5.19 Contractor shall maintain in a safe place at the Site one as-built document which shall consist of all Drawings, Specifications, Addenda, written amendments, Change Orders, Proposed Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 8.3) in good order and annotated to show all changes made during construction. Contractor will be required to review with Engineer the status of all as-built documents in connection with Engineer’s evaluation of an Application for Payment. Pursuant to paragraph 13.2.1 of the General Conditions, failure to maintain a current file of such as-built documents up-to-date may be just cause to recommend withholding of payments for Work performed. These as-built documents together with all approved samples and a copy of all approved Shop Drawings shall be available to Engineer for reference at the Site. Upon completion of the Work, these as-built documents, samples and Shop Drawings shall be delivered to Engineer for Department. Failure by Contractor to produce acceptable as-built documents of the above listed items shall be cause for reduction of Contract Price in an amount equal to Department’s cost of generating or producing the as-built documents.
5.20 Contractor shall be responsible for initiating, maintaining and supervising all health and safety precautions and programs in connection with the Work which include but are not limited by the Contract Documents and Contractor’s Health and Safety Plan. Contractor shall take all necessary precautions for the health and safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees and other persons and organizations who may be affected thereby. Contractor shall comply with all applicable Laws of any public body having jurisdiction for the health and safety of persons or property in order to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such health, safety and protection. Contractor shall notify owners of Underground Facilities and utility owners when performance of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. In addition to any requirements imposed by Laws, Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site which are in any way affected by the excavations or other operations connected with performance of the Work under the Contract.

5.21 All damage, injury or loss to any property referred to in the above paragraph caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or caused by anyone for whose acts any of them may be liable, shall be remedied by Contractor; provided that Contractor shall not be responsible for damage or loss attributable to defects in the Drawings or Specifications or to the acts or omissions of Department or Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and to the extent not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor. Contractor’s duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a written notice to Department and Contractor in accordance with paragraph 13.11 that the Work is acceptable, except as otherwise expressly provided in connection with Substantial Completion. Department has the right to suspend Work or terminate this contract for cause for Contractor’s failure to comply with any health and safety plan required by the Contract Documents or Law.

5.22 Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor’s superintendent unless otherwise designated in writing by Contractor to Department.

**Emergencies:**

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

**Shop Drawings and Samples:**

5.24 After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 1.4, hereof) six copies of all Drawings plus additional copies as required by Contractor, unless otherwise specified in the Contract Documents. All such Shop Drawings shall bear a stamp or other specific written indication that Contractor has satisfied the requirements of the Contract Documents with respect to the review of the submissions including but not limited to subparagraph 5.26 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 review. Department’s charges to Contractor for additional reviews will be equal to Engineer’s charges to Department under the terms of Engineer’s agreement with Department. In the event Contractor fails to pay such costs within 30 days after receipt of an invoice from Department, funds will be withheld from payment requests and at the completion of the Work, a Change Order or proposed Change Order will be issued incorporating the unpaid amount, and Department will be entitled to an appropriate decrease in Contract Price.

5.28.4 After the Engineer’s second review, delays associated with Contractor’s resubmittal and Engineer’s review and return of a particular Shop Drawing or sample submission shall be the responsibility of Contractor. Such delays shall not justify an increase in Contract Price nor an extension in Contract Time.

5.29 Engineer’s review and approval of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called Engineer’s attention to each such variation at the time of submission as required by paragraph 5.27 and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by Engineer relieve Contractor from responsibility for errors or omissions in the Shop Drawings or from responsibility for complying with paragraph 5.26.
5.30 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to Engineer’s review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

Continuing the Work:

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

Weather Protection:

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

Cutting and Patching of Work:

5.33 Contractor shall be responsible for all cutting of masonry and other materials, and all fitting, drilling or patching which may be necessary to complete the Work or to make its several parts fit together properly, whether or not such Work is expressly specified in the Contract Documents.

5.34 Contractor shall not damage or endanger any portion of the Work or the work performed by Department or by any separate contractors by cutting, patching or otherwise altering any work, or by excavation. Contractor shall not cut or otherwise alter work performed by Department or any separate contractors except with the written consent of Department and of such separate contractor. Contractor shall not unreasonably withhold from Department or any separate contractor consent to cutting or otherwise altering the Work.

Quality Control:

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

Project Meetings:

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

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

Conflicts Between Contract Documents and Site:

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

ARTICLE 6 - Other Work

Related Work at Site:

6.1 Department may perform other work related to the Project at the site by Department’s own forces, have other work performed by utility owners, or enter into other contracts for such other work.

6.2 Contractor shall afford each utility owner and other contractor who is a party to a direct contract with Department (or Department, if Department is performing the additional work with Department’s employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect the Work with theirs. Contractor shall do all the Work that may be required to make its several parts come together properly and integrate with other work. Contractor shall only alter the work of others with the written consent of Engineer and notice to the other contractors whose work will be affected and shall not endanger any work of others by altering their work. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors.

6.3 If any part of Contractor’s Work depends for proper execution or results upon the work of any such other contractor, utility owner or Department, Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor’s failure so to report shall constitute an acceptance of the other work as fit and proper for integration with Contractor’s Work except for latent or non-apparent defects and deficiencies in the other work.

ARTICLE 7 - Department’s Responsibilities

7.1 Department may issue communications to Contractor through Engineer.
7.2 In case of termination of the employment of Engineer, Department shall appoint an engineer whose status under the Contract Documents shall be the same as the former Engineer.

7.3 Department shall promptly furnish the data as required under the Contract Documents and shall make payments to Contractor promptly after they are due as provided in Article 13.

7.4 Department is represented by the Project Field Representative, the Project Manager and the Designated Representative whose duties and authority are set forth in the Contract Documents. Department is also represented by Engineer.

7.5 Department will not be responsible for Contractor’s means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, unless the Contract Documents specifically impose such a duty on Department. Department will not be responsible for Contractor’s failure to perform or furnish the Work in accordance with the Contract Documents.

7.6 Department will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 8 - Engineer’s Duties and Responsibilities

Project Representation:

8.1 The duties and responsibilities and the limitations of authority of Engineer during construction are set forth in the Contract Documents. Engineer’s Resident Engineer will assist Engineer in inspecting the performance of the Work. The duties, and authorities of any Resident Engineer and Resident Project Representatives are set forth in the Contract Documents. Secondarily Department is represented as set forth in article 7.4 of the General Conditions.

Visits to Site:

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

Clarifications and Interpretations:

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

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

Rejecting Defective Work:

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

Shop Drawings, Change Orders and Payments:

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

8.7 Engineer’s duties regarding Change Orders are set forth in Articles 9, 10 and 11 of the General Conditions.

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

Determinations for Unit Prices:

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

**Engineer’s Determinations and Claims:**

**8.10** Engineer shall interpret the Contract Documents and determine the acceptability of the Work thereunder subject to Department’s right to modify or overrule Engineer’s determination after consultation with Engineer and Contractor. Claims or other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work, or in respect to changes in the Contract Price or Contract Time will be referred to Engineer in writing with a request for a formal determination in accordance with this paragraph. Engineer shall render such determination in writing within a reasonable time. Written notice of Contractor’s disagreement with Engineer’s Determination constituting a Claim shall be delivered by Contractor to Engineer and Department within ten days after receipt. Written documentation supporting such position shall be submitted to Department within thirty days of Engineer’s Determination, unless the Department allows an extension of time to submit additional information.

**8.10.1** A written demand or written assertion by Contractor seeking the payment of money is not a Claim under this Article until certified as required below. Contractor shall submit with the claim a certification executed by Contractor’s Authorized Representative specified in the Contract Documents that:

**8.10.1.1** The Claim is made in good faith,

**8.10.1.2** Supporting Cost and Pricing Data are current, accurate, and complete to the best of the Contractor’s knowledge and belief, and

**8.10.1.3** The amount of the Claim accurately reflects the adjustments in Contract Price or Contract Time for which Contractor believes Department is liable.

**8.10.2** Contractor agrees that all unresolved claims shall be subject to the Dispute Resolution procedures as provided in Article 9 in Appendix B to the Agreement.

**8.10.3** Contractor shall proceed diligently with performance of Work under this Contract and comply with any decision of Engineer or Department pending final resolution of any request for relief, Claim, appeal, or action arising under the Contract.

**Limitations on Engineer’s Responsibilities:**

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

8.12 Engineer will not be responsible, and Contractor remains responsible for Contractor’s means, methods, techniques, sequences and procedures of construction, and the safety precautions and programs incident thereto, unless Contract Documents specifically impose such a duty on Engineer. Engineer will not be responsible for Contractor’s failure to perform or furnish the Work in accordance with the Contract Documents.

8.13 Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

**ARTICLE 9 - Changes in the Work**

9.1 Department may, at any time or from time to time and without notice to any surety, order additions, deletions or revisions in the Work or other requirements, which the performance of, or compliance with, is established in the provisions of the Contract Documents. These changes will be initiated by Proposed Change Orders, in Administrative Orders and authorized by Change Orders. Upon receipt of an Administrative Order, or Proposed Change Order, the Contractor shall proceed with the Work involved. All such Work involved shall be performed in accordance with the applicable conditions of the Contract Documents. If an Administrative Order or Proposed Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made in a duly executed Change Order. The value of any work covered by a Proposed Change Order or a Change Order for an increase or decrease in the Contract Price or the Contract Time, hereafter called the "Work involved", shall be determined by one of the following methods:

9.2 Department may order minor changes in the Work which do not involve an adjustment in the Contract Price or in the Contract Time and are consistent with the overall intent and purpose of the Contract Documents. Such minor changes will be authorized by a Field Order which shall be binding on Department and Contractor who shall perform such changes promptly. If Contractor believes that a Field Order justifies an increase in the Contract Price or the Contract Time, Contractor shall make written notification in accordance with Section VIII, Article 8.10 within 3 days and provide documentation within 15 days in a Proposed Change Order to Engineer.

9.3 Additional work performed without authorization of a Proposed Change Order will not entitle Contractor to an increase in the Contract Price or an extension in the Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General
Conditions and except in the case of uncovering Work as provided in paragraph 12.9 and 12.10 of the General Conditions.

9.4 When changes in the Work, involving adjustments to the Contract Price or Contract Time are contemplated by Department, pursuant to paragraph 9.1, Contractor may be requested to submit a cost proposal prior to being authorized to proceed with the change. If Department and Contractor are unable to agree and Department orders the change, or if Department pursuant to Engineer’s review and decision concludes that the written direction, instruction, interpretation or clarification, approval, decision or determination does not require an increase in Contract Price or extension in Contract Time, Contractor will be required to carry on with the Work involved and adhere to the Progress Schedule. Contractor proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three days of receipt (or issuance) of a Proposed Change Order initiated by Department (or Contractor), and shall be submitted in accordance with Articles 8, 9, 10 and 11 of the General Conditions. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price or Contract Time will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time. Unless Contractor gives written notice of intent to appeal Department’s determination or to file a claim in accordance with Article 8 of the General Conditions, within said thirty days of the issuance of a Proposed Change Order or the rejection of a Proposed Change Order, Department’s determination shall be final and binding upon Contractor.

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

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

9.5.2 Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents to which Contractor is entitled as a result of the proposed change. Pursuant to this requirement of the Contract Documents, Contractor acknowledges and agrees to the following waivers when executing Change Orders or Proposed Change Orders authorized in accordance with paragraph 9.4 of the General Conditions:
9.5.2.1 Contractor acknowledges and agrees that the adjustments in Contract Price and Contract Time stipulated in this Change Order represent full compensation for all increases or decreases in the cost of, or the time required to perform the entire Work under the Contract, arising directly or indirectly from this Change Order, including this and all previous Change Orders. Acceptance of this waiver constitutes an agreement between Department and Contractor that the Change Order represents an all-inclusive, mutually agreed upon adjustment to the Contract for all direct, indirect and consequential costs and delays, and that Contractor shall waive all rights to file a claim on this Proposed Change Order after it is properly executed.

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

9.6 If the provision of any bond requires that the surety be notified of any change in the Work, it shall be Contractor’s responsibility to so notify the surety and the amount of each applicable bond shall be adjusted accordingly. Contractor shall furnish proof to Department of such adjustment.

9.7 No claim by Contractor for an adjustment under this Article of the General Conditions shall be allowed if asserted after the date of final payment under this Contract.

**ARTICLE 10 - Change of Contract Price or Time**

10.1 The Contract Price constitutes the total compensation, subject to authorized adjustments, payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at its own expense without any change in the Contract Price or the Contract Time.

10.2 The Contract Price and the Contract Time may only be changed by a duly executed Change Order.

10.3 The value of the Work involved shall be determined by one of the following methods:

10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, those unit prices shall be used to determine the cost of the Work involved.
10.3.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by application of mutually agreed upon unit prices to the quantities of the items of Work involved.

10.3.3 By mutual acceptance of a lump sum.

10.3.4 On the basis of the cost of the Work involved as provided in paragraph 10.4 of this Article plus a Contractor’s fee for overhead and profit as provided in paragraph 10.7 of this Article.

10.3.5 Where the Department and Contractor cannot agree on any of the methods described above, and Department directs Contractor to proceed with the Work involved as provided in Article 10 of the General Conditions.

10.4 The Cost of the Work involved shall include the following items and shall not include any of the costs disallowed under this Article 10 of the General Conditions:

10.4.1 Payroll costs of employees in the direct employ of the Contractor in the performance of the Work involved in job classifications agreed upon by Department and Contractor. Payroll costs shall include, but shall not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers or workmen's compensation, health and retirement benefits, and sick leave applicable thereto. Such employees may include foremen at the site but shall not include employees in the job classifications itemized in paragraphs 10.6.1. The costs of performing the Work involved during other than normal working hours, as defined in paragraph 5.3.1, shall be included in the above to the extent authorized by Department and as required by Law.

10.4.2 Cost of all materials and equipment furnished and incorporated into the Work involved, including costs of transportation and storage thereof, and suppliers' field services connected therewith. All cash discounts shall accrue to Contractor unless Department deposits funds with Contractor with which to make payments, in which case, the cash discounts shall accrue to Department. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to Department, and Contractor shall make provisions so that they may be obtained.

10.4.3 Payments made by Contractor to subcontractors who perform a part of the Work involved. If required by Department, Contractor shall obtain competitive bids from prospective subcontractors acceptable to Contractor and shall deliver such bids to Department who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost plus a fee, the subcontractor's cost shall be determined in the same manner as Contractor's cost of the Work involved. All subcontracts shall be subject to the provisions of the Contract Documents, insofar as applicable.
10.4.4 Costs of special consultants, including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants, employed for services specifically related to the Work involved to the extent authorized in writing by Department.

10.4.5 Costs of Contractor owned equipment - Contractor shall be reimbursed for his ownership and operating costs for self-owned equipment employed on the Work involved. The rates of reimbursement shall be as listed in most recent published edition of the Rental Rate Blue Book published by Dataquest, Inc. in effect on the date of issuance of the applicable Change Order or Proposed Change Order, or prior to performing the Work in a claim for an increase or decrease in the Contract Price and applied in the following manner.

10.4.5.1 Ownership costs - The equipment rates for ownership costs include depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, repairs, mobilization to and demobilization from the site of the Work involved, and profit reimbursement will be made for the hours on the Work involved. In no event shall the equipment rate billed to Department be at rates exceeding those described below.

10.4.5.2 Less than 8 hours of actual use or necessary for availability as approved by Engineer: The daily rate or the product of the hours of actual use multiplied by the hourly rate, whichever is less.

10.4.5.3 Between 8 hours and 40 hours of actual use: The weekly rate or the product of the hours of actual use used divided by 8 and multiplied by the daily rate, whichever is less.

10.4.5.4 Between 40 hours and 176 hours of actual use: The monthly rate or the product of the hours of actual use divided by 40 multiplied by the weekly rate, whichever is less.

10.4.5.5 Over 176 hours of actual use: The product of the hours of actual use divided by 176 multiplied by the monthly rate.

10.4.5.6 Operating costs including fuel, lubricants, other operating expendables, and preventive and field maintenance. Operating costs do not include the operator's wages. Contractor shall be reimbursed the product of the hours of actual use multiplied by the estimated operating cost per hour.

10.4.5.7 The geographic area adjustment factor and the Rate adjustment tables for federal aid projects shall be applied to the equipment ownership rates.
10.4.5.8 The rates used shall be those in effect at the time the Work involved is to be done as listed in the then current Rental Rate Blue Book.

10.4.5.9 In the event that a rate is not established in the Rental Rate Blue Book for a particular piece of equipment, Department will establish rates for ownership and operating costs.

10.4.5.10 Equipment to be used by Contractor shall be specifically described by manufacturer and model number and be of suitable size and capacity to accomplish the Work involved. In the event Contractor elects to use equipment of a higher rental rate than equipment suitable for the Work involved, payment will be made at the rate applicable to the suitable equipment. Department and Engineer shall determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversized or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment.

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

10.4.5.12 Actual equipment use time documented by Engineer shall be on the basis that the equipment was on and used at the site. In addition to the leasing rate, equipment operational costs shall not exceed the estimated hourly operation rate as set forth in the Blue Book. Daily records listing the equipment units and their respective operators, identification code, and actual usage and certified at the end of each day by Engineer shall be the record upon which actual equipment use shall be based. For multiple shift work sequences the allowable equipment rate for second or third shifts shall not exceed 50 percent of the base rate. Idle equipment at the site and necessary to perform the Work involved but not in actual use shall be paid at the rate determined above. Idle time shall include a reasonable time allowance to and from the site and be as documented by Engineer.

10.4.6 Costs of Contractor rented equipment.

10.4.6.1 In the event Contractor must rent a specific piece of equipment, payment will be the actual rental rate for the piece of equipment for the time that is used on the Work involved or required by Department
to be present, not to exceed the rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the site of the Work involved.

10.4.6.2 Contractor shall also be reimbursed for the operating cost of the rented equipment if that cost is not included in the rental cost. The operating cost shall be determined in the same manner as specified for Contractor owned equipment above. If contractor owned equipment is available on site to complete the work, Contractor shall be reimbursed only at the rate for owned equipment and there shall not be any reimbursement for transportation of equipment to or from site.

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

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

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

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

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

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

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

10.4.8.4 Royalty payments and fees for licenses and permits.

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

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

10.5.1 When more than one individual change is covered by one Proposed Change Order or Change Order, the adjustment in Contractor’s fee shall be the sum of the individual fees computed on each individual change in accordance with paragraphs 10.7.2.1 through 10.7.2.4.

10.6 The cost of the Work involved shall not include any of the following, all of which are to be considered general and overhead costs covered by the Contractor’s fee:

10.6.1 Payroll costs and other compensation of Contractor’s executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, superintendents, administrators, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor, at the site or not, for general administration of the Work including any Change Orders, and who are not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 of this Article.

10.6.2 Expenses of Contractor’s principal and branch offices other than Contractor’s office at the site. Costs derived from the computation of an extended or unabsorbed home office overhead rate by application of the Eichleay, Allegheny, Burden Fluctuation, or other similar methods.

10.6.3 Any part of Contractor’s capital expenses, including interest on Contractor’s capital employed for the Work involved and charges against Contractor for delinquent payments.
10.6.4 Cost of premiums for all bonds and insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same.

10.6.5 Costs incurred in the preparation of Proposed Change Orders or Change Orders or in preparation or filing of claims.

10.6.6 Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings or unpaid retainage.

10.6.7 Small tools used or consumed in the performance of the Work involved having an individual value of less than $100.

10.6.8 Costs due to negligence of Contractor or any subcontractor anyone directly or indirectly employed by them for whose acts any of them may be liable, including, but not limited to correction of defective work, disposal of equipment or material wrongly supplied and repairing any damage to property.

10.6.9 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4 of this Article, all of which are to be considered general and overhead costs covered by the Contractor’s fee.

Contractor’s Fee:

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

10.7.1 Contractor shall negotiate with Department for reasonable overhead rates and fair and reasonable profit based on assumptions of risk, exposure to weather, size of the change, labor to material ratio, equipment requirements, and time of performance.

10.7.2 In no case shall the Contractor’s fee exceed the following percentages of the various percentages of the Cost of the Work involved.

10.7.2.1 For costs incurred under paragraph 10.4.1 (Payroll Costs) of this Article, the Contractor’s fee shall not exceed fifteen percent (15%).

10.7.2.2 For costs incurred under paragraph 10.4.2 (Costs of Materials and Equipment) of this Article, the Contractor’s fee shall not exceed ten percent (10%).

10.7.2.3 For costs incurred under paragraph 10.4.3 (Cost of Subcontracts) of this Article, the Contractor’s fee shall not exceed five percent (5%) and the subcontractor's fee shall not exceed ten percent (10%).
10.7.2.4 For costs incurred under paragraph 10.4.3 of this Article, for work performed by a subcontractor's subcontractor, the Contractor’s and the first subcontractor's fees shall not exceed five percent (5%) each and the second subcontractor's fee shall not exceed ten percent (10%).

10.7.2.5 No fee shall be paid on the costs itemized under paragraphs 10.4.4 and 10.4.5 nor on subcontractors' fees derived in accordance with paragraphs 10.7.2.3 and 10.7.2.4.

10.7.3 No fee shall be paid on premium portion of wages nor on increased wages due to delays.

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

10.8.1 An increase in the Contract Price due solely to delays causing extensions in the Contract Time will be allowed only if the delays to the Work, or parts thereof, arise from acts or omissions of Department or Engineer which are longer than the time period(s) provided for review(s) or decision(s) as provided for in the Contract Documents, and provided further that the delays arise from changes in the Work covered by Proposed Change Orders or Change Orders prepared pursuant to Article 9 of the General Conditions or from suspensions of Work pursuant to paragraph 14.1 of the General Conditions. However, no adjustment in the Contract Price shall be made under this paragraph for the following reasons:

10.8.1.1 For any extensions granted in the Contract Time to the extent that performance would have been so extended by any other cause including fault or negligence of Contractor or subcontractors, suppliers or other persons or organizations.

10.8.1.2 For any acceleration alternative in lieu of an extension proposed by Contractor, to the extent that the acceleration costs exceed those in connection with the alternative extension in Contract Time.

10.8.1.3 For which a Contract Price is provided or excluded under any other provision of the Contract Documents.

10.8.1.4 For delays which are covered by or which could be covered by relocating the Total Float or a portion of it.

10.8.2 Recovery of damages for delay on account of extensions in Contractor’s Progress Schedule or in connection with acceleration alternatives thereof will be allowed only when said delays extend the Work, or a part thereof, beyond the applicable Contract Time(s).

10.8.3 It is further expressly agreed and understood that Contractor will not be entitled to any compensation or damages on account of delays which meet the requirements of paragraph 10.12.3 of the General Conditions for time extensions
but which can or could have been avoided by reallocating portions of the Total Float. Under this requirement, it is further understood and agreed that the only remedies for delays which are figured to cause an extension in the Contract Time or form the basis for a proposal for an acceleration alternative thereof solely due to the use of Total Float will consist of an increase in Contract Time only and shall exclude Contractor’s right to recover any delay damages or compensation from Department.

10.9 In submitting proposals or asserting claims for changes under this Article, Contractor acknowledges and agrees that no adjustment shall be made: 1) for any escalation costs for any part of the Work which is not delayed beyond the applicable latest possible dates specified in the approved Progress Schedule, or 2) for any acceleration costs incurred without prior authorization from Department, or 3) for which an adjustment has been provided for, limited as to extent, or excluded under any other provision of the Contract Documents.

10.10 Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents (direct, indirect and overhead) to which Contractor is entitled as a result of the proposed change. Pursuant to this requirement, Contractor acknowledges and agrees to the following waivers when executing Proposed Change Orders and Change Orders authorized in accordance with Article 9:

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

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

10.11 Additional costs incurred due to acceleration or additional work performed by Contractor without an agreed upon Proposed Change Order will not entitle Contractor to an increase in Contract Price or Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General Conditions or in the case of uncovering Work as provided in paragraph 12.9 of the General Conditions.
10.12 The Contract Time may be changed only by a duly executed Change order. Any proposal for an extension or shortening of the Contract Time shall be based on a Proposed Change Order in accordance with the provisions of this Article.

10.12.1 Contractor requests substantiating the extent of increase in the Contract Time shall be delivered to Engineer within fifteen days of the event causing the proposed need for the extension in the Contract Time unless Department, in writing, allows an additional period of time. Contractor shall prove that the delays have materialized or will materialize despite reasonable, prudent, and diligent efforts to prevent such delays and meet the criteria set forth in this Article. Any delays by Contractor in submittal of proposals will not justify a delay or be basis for an extension of the Contract Time.

10.12.2 Extensions in Contract Time due to delays to parts of the Work will not be granted until all Total Float available for those parts of the Work has been used.

10.12.3 An extension in the Contract Time will not be granted unless Contractor can demonstrate, through an analysis of the Progress Schedule approved in accordance with the applicable provisions of the Standard Specifications, that the delay in completing the applicable parts of the Work within the applicable Contract Time(s) arises from unforeseeable causes beyond the control and without the fault or negligence of Contractor or its Subcontractors, Suppliers or other persons or organizations, and which Contractor could not have guarded against, and that such causes do or will cause extension of the schedule for that part of the Work beyond the applicable Contract Time. Examples of such causes include 1) acts of God or of the public enemy, 2) fires, floods, epidemics, quarantine restrictions, 3) strikes, freight embargoes, 4) unusually severe weather, 5) delays of Subcontractors or Suppliers at any tier arising from unforeseeable causes beyond the control and without fault or negligence of both Contractor and the Subcontractors, Suppliers or other persons organizations.

10.12.4 All time limits stated in the Contract Documents are of the essence. They have been developed by taking into account:

10.12.4.1 The scope of the Work under the Contract Documents;

10.12.4.2 Reasonable time for performance of the Work, or parts thereof, as a whole; and

10.12.4.3 The perceived sensitivity of the Work, or parts thereof, as a whole, to the potential delaying effect of causes meeting the requirements of paragraph 10.12.3.

10.12.4.4 Therefore, and as long as delays meeting the requirements of paragraph 10.12.3 are not to be considered by Contractor in the initial
development of the Progress Schedule pursuant to paragraph 1.6 of the General Conditions and the Progress Schedule Section of the Standard Specifications, the initial Progress Schedule developed by Contractor could show Total Float with respect to the Contract Time, or contract Times. Pursuant to the Float sharing requirements of the Contract Documents (as set forth in the provisions of Progress Schedule Section of the Standard Specifications) any such Total Float materializing between Contractor’s completion of the Work, or part thereof, as anticipated by Contractor’s approved progress Schedule, and the corresponding Contract Time(s) will be available to Department, Engineer, Contractor and others to absorb delays that cannot be mitigated by any other means.

10.12.5 The provisions of Section 10.11 of this Article shall govern and be applicable to the following:

10.12.5.1 Changes in Contract Time initiated by Department or Contractor due to delays which meet the requirements of paragraph 10.12.4.

10.12.5.2 Contractor proposals to accelerate the Progress Schedule, in lieu of the alternate extension of Contract Time, due to delays meeting the requirements of paragraph 10.12.3.

10.12.6 The provisions of paragraphs 10.11, 10.12.2, and 10.12.3 shall exclude recovery for damages arising out of an acceleration alternative to an extension in Contract Time on account of delays not meeting the requirements for extensions in Contract Time set forth in this Article.

10.12.7 The provisions of this Article 10 shall not exclude recovery for damages (including compensation for additional professional services and court costs) for delay by either party, except as otherwise specifically disallowed in this Article and in other provisions of the Contract Documents.

10.13 Failure, refusal or neglect by Contractor to comply with the time requirements for delivery of written Proposed Change Orders or notice of a claim shall be considered to be a waiver by Contractor of any request or claiming for extension in Contract Time.

10.13.1 Contractor proposals (or claims) substantiating Contractor’s proposed adjustment in Contract Price shall be delivered within the time period stipulated in paragraph 9.3 and 9.4, unless Department in writing, allows an additional period of time to ascertain accurate cost data. Contractor shall prove that additional costs were necessarily incurred, despite Contractor’s reasonable, prudent, and diligent efforts to prevent such costs and which meet the criteria set forth in this Article. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time.
10.13.2 Contractor proposals (or claims) shall be submitted on forms required by Contract Documents and shall remain firm for a period of at least 60 days from delivery of the proposal (or claim). Proposals (or claims) shall include itemized estimates of all costs and schedule adjustments that will result directly or indirectly from the changes described. Unless otherwise specified, itemized estimates shall be in accordance with the requirements of this Article of the General Conditions and in sufficient detail to reasonably permit an analysis by Engineer and Department of all quantities involved, labor and payroll costs, productivity rates, material costs, Subcontractor and Supplier costs, supplemental costs as described in paragraph 10.4.8, special consultant costs as described in paragraph 10.4.4, equipment costs, general and administrative overhead costs, field office overhead costs, and profit and shall cover all aspects of the Work involved in the change, whether such was deleted, added, changed, or impacted. Any amount claimed for Subcontractors, Suppliers or other persons or organizations shall be similarly supported. Itemized schedule adjustments shall be sufficiently detailed to permit an analysis of effects on the Progress Schedule as required in the Standard Specifications.

ARTICLE 11 - Unit Price Work and Cash Allowances

Cash Allowances:

11.1 Contractor shall include in the Contract Price all cash allowances named in the Contract Documents and all Work covered by those cash allowances shall be performed for an amount not to exceed those allowances without prior approval in writing by Engineer.

11.1.1 The allowances include the cost to Contractor (less any applicable trade discounts) of materials labor and equipment required by the allowances to be delivered at the site, and all applicable taxes; and the cost documentation requirements of Articles 9, 10, 11 apply to cash allowances.

11.1.2 Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

11.2 Where the Contract Documents provide that all or part of the Work to be performed on the basis of Unit Prices, the following shall apply:

11.2.1 The original Contract Price shall include the sum of the bid unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated on the Contract Bid Form.
11.2.2 Unless otherwise provided by the Contract Documents, the estimated quantities of Unit Price Work are not guaranteed and are solely for the purpose of comparing Bids and determining the initial Contract Price.

11.2.3 Engineer shall determine the actual quantities and classifications of Unit Price Work performed by Contractor and will review with Contractor preliminary determinations before recommending an Application for Payment for those items.

11.2.4 Contractor shall have included overhead and profit in the price of each separately stated unit price item bid.

11.2.5 The Unit price of an item of Unit Price Work shall be subject to re-evaluation, negotiation, and possible adjustment under the following conditions:

11.2.5.1 If the total cost of a particular item of Unit Price Work change by $30,000 or 5% or more of the total Contract Price, whichever is less, and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 15% from the estimated quantity of such item indicated in the Agreement; and

11.2.5.2 If Contractor justifies and adequately documents to the Department’s satisfaction additional expenses have been incurred as a result thereof, or

11.2.5.3 If Department believes that the quantity variation entitles Department to an adjustment in the Unit Price,

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

11.2.6 The negotiated Unit Price shall be applicable only to the variation in quantities above 115% or below 85% of the quantities estimated or indicated.

11.2.7 If Department or Contractor believes that the quantity variation requires an extension or shortening in Contract Time, either party shall within seven working days of knowledge of the variation in quantities, submit a written Proposed Change Order to the other party and to Engineer, and substantiate the request within fifteen days thereafter in accordance with the analysis and documentation provisions of the Standard and Supplementary Specifications.
ARTICLE 12 - Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work

Warranty and Guarantee:

12.1 Contractor warrants and guarantees to Department that all Work shall be in accordance with the Contract Documents and shall not be defective. Immediate notice of all defects shall be given to Contractor by Engineer. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

12.1.1 The obligations of Contractor under this paragraph 12.1 shall be in addition to and not in limitation of any obligation imposed upon it by special guarantees required by the Contract Documents or by Law.

12.1.2 Notwithstanding anything in these Contract Documents to the contrary, when a particular item of equipment or part of the Work reaches Substantial Completion upon successful performance of Pre-operational Testing, and a) is not placed in continuous service until the commencement of the Correction Period, or b) is placed in continuous service upon reaching Substantial Completion (as a segment of a completed Project) but use will be limited until all segments of the Project reach substantial completion thereby commencing the Correction Period, and notwithstanding anything in the Contract Documents to the contrary, Contractor shall maintain the particular item of equipment or part of the Work in good order and in proper working condition during the period between the particular Substantial Completion date and the commencement of the Correction Period, and for such maintenance Contractor shall receive no adjustment in Contract Price. Also, Contractor shall maintain the warranties and guarantees required under paragraph 12.1 of the General Conditions in full force and effect during the period between the particular item’s Substantial Completion date and the commencement of the Correction Period, and for such warranties and guarantees Contractor shall receive no adjustment in Contract Price.

12.1.3 The warranties and guarantees provided by Contractor under paragraph 12.1 of the General Conditions shall remain in full force and effect from the date of Substantial Completion of the Work, or part thereof, until one year after the date of commencement of the Correction Period or such a longer period as may be prescribed by Law or the terms of any applicable specific warranty or guarantee required by the Contract Documents or by any specific provision of the Contract Documents.

One Year Correction Period:

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

12.2.1 At the date of Substantial Completion of the Work, the parties have agreed on the date for commencement of the Correction Period. However, Department may at its sole option advance or delay the date for commencement of the Correction Period, and Contractor’s obligations to extend warranties and guarantees in accordance with paragraphs 12.1.2 and 12.1.3 or to maintain the Work in accordance with paragraph 12.1.2 and 12.1.3 until then shall remain absolute. Applicable Change Orders or Proposed Change Orders shall be executed by the parties to adjust the Contract Price, as appropriate, on the basis of the unit prices declared in Contractor’s Bid for extended warranty and extended maintenance requirements.

12.2.2 No later than 30 days before the date for commencement of the Correction Period, Engineer shall notify Contractor in writing of the date upon which the Correction Period is expected to commence, and Contractor shall ensure that the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service, are ready in their entirety by such date for use by Department as contemplated in the Contract Documents. In addition to any other damages payable by Contractor under these Contract Documents, Contractor shall also be liable for any damages suffered by Department on account of the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service at the beginning of the Correction Period because they were not ready for continuous utilization for the purposes for which they are intended.
12.2.3 Each month during the period between the date of Substantial Completion of parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing and the date of commencement of the Correction Period, Contractor shall certify to Engineer in writing that the said parts of the Work are being properly maintained and will be ready for use by Department upon commencement of the Correction Period.

12.2.4 During the period described in Section 12.2.3 until commencement of the Correction Period, Contractor shall bear all risks of injury, loss, or damage to any part of the Work arising from the elements or from any other cause. Contractor shall rebuild, repair, restore, and make good at no cost to Department all injuries, losses, or damage to any portion of the Work occasioned by any cause and shall at no expense to Department provide suitable drainage and erect such temporary structures and take all other actions as are necessary for the protection of the Work. Suspension of the Work or the granting of an extension in Contract Time for any cause shall not relieve Contractor of its responsibility for the Work as herein specified.

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

Access to Work:

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

Tests and Inspections:

12.4 Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals.

12.5 If a Law specifically requires any Work (or part thereof) to be inspected, tested or approved, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish to Engineer the required certificates of inspection, testing or approval. Except as provided in Article 5, Contractor shall be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Department’s or Engineer’s acceptance of materials or equipment proposed or submitted to Department and Engineer for approval prior or subsequent to Contractor’s purchase thereof for incorporation in the work. The cost of all inspections, tests and approvals in addition to the above which are required by the contract documents shall be paid by Contractor.
12.6 All inspections, tests or approvals other than those required by Law to be performed or given by public body having jurisdiction over the Work or any part thereof, shall be performed by organizations acceptable to **Department** and Engineer. Contractor shall perform sufficient inspection and testing of the Work to support the warranty and guarantee requirements of paragraph 12.1 and 12.2 of the General Conditions. Reference is made to the Supplementary Conditions, Standard Specifications and Supplementary Specifications for provisions applicable to the procurement of an independent testing laboratory.

12.7 If any Work, including the work of others, that is to be inspected, tested or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for inspection. Such uncovering shall be at Contractor’s expense unless Contractor has given Engineer timely notice of Contractor’s intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

12.8 Neither inspections by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor’s obligations to perform the Work in accordance with the Contract Documents.

**Uncovering Work:**

12.9 If any work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer’s inspection and replaced at Contractor’s expense.

12.10 If Engineer considers it necessary or advisable that covered Work be inspected by Engineer or inspected or tested by others, Contractor, at Engineer’s request, shall uncover, expose or otherwise make available for observation, inspection or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment.

12.10.1 If it is found that such Work is Defective, Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension of Contract Time or recovery of any delay damages due to the uncovering.

12.10.2 If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction pursuant to Articles 9, 10 and 11.

12.10.3 When covered Work is uncovered and found to be Defective, all direct, indirect and consequential costs as established in paragraph 12.10.1 shall be paid by
Contractor. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price, and if the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 9 and 10 of the General Conditions.

**Department May Stop the Work:**

12.11 If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Department may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Department to stop the Work shall not give rise to any duty on the part of Department to exercise this right for the benefit of Contractor or any other party.

12.11.1 Contractor shall bear all direct, indirect and consequential costs of such order to Contractor to stop Work including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, and Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to any extension of contract time or recovery of any delay damages due to the order to stop Work.

12.11.2 In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price. If the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions.

**Correction or Removal of Defective Work:**

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

Acceptance of Defective Work:

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

Department May Correct Defective Work:

12.14 If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and to correct Defective Work or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Department may, after seven days' written notice to Contractor, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, Department may exclude Contractor from all or part of the site, take possession of all or part of the work and suspend or terminate Contractor’s services related thereto, take possession of Contractor’s tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which Department has paid Contractor but which are stored elsewhere. Contractor shall allow Department, and Department’s representatives, agents and employees such access to the site as may be necessary to enable Department to exercise the rights and remedies provided by this paragraph and the Contract Documents. All direct, indirect and consequential costs of Department in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Department shall be entitled to an appropriate decrease in the Contract Price. If the
parties are unable to agree as to the amount thereof, Contractor may make a claim therefore as provided in Article 8, 9, 10, and 11. Such direct, indirect and consequential costs shall include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all costs of delay and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor’s Defective Work. Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Department of Department’s rights and remedies hereunder.

**ARTICLE 13 - Payments to Contractor and Completion**

**Schedule of Values:**

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

**Application for Progress Payment:**

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

13.2.1 An Application for Payment a) will not be approved if the as-built documents, including but not limited to Drawings legibly marked in accordance with Contract Documents to record actual construction, are not kept current, and b) will not be
approved until the completed as-built documents, showing all variations between
the Work as actually constructed and as originally shown on the Drawings and
other Contract Documents, have been inspected by Engineer. For the purpose of
this paragraph, the as-built documents will be considered current if they include
all of the documents itemized in paragraph 5.19 together with any other
information that supplements or changes the original Contract Documents which
has been delivered or otherwise made known to Contractor prior to the time when
Application for Payment is to be reviewed by Engineer.

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

Contractor’s Warranty of Title:

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

Review of Applications for Progress Payment:

13.4 Engineer shall, within five days after receipt of each Application for Payment, either
recommend payment in writing and present the Application to Department or return the
Application to Contractor indicating in writing Engineer’s reasons for refusing to
recommend payment. In the latter case, Contractor may make the necessary corrections
and resubmit the application. After presentation of the application for payment with
Engineer’s recommendation, the amount recommended shall be paid in accordance with
New York State Law upon approval of the Department.

13.5 Department may refuse to make payment of the full amount recommended by Engineer for
one or more of the following reasons: claims have been made against Department on
account of Contractor’s performance, or furnishing of the Work, Liens have been filed in
connection with the Work, there are other facts or circumstances entitling Department to a
set-off against the amount recommended, or Department has determined that Work
performed by Contractor does not conform to Contract Documents including, but not
limited to, moneys payable by Contractor to Department pursuant to the requirements of
Articles 5 and 12 of the General Conditions. In the event of such refusal to pay the full
recommended amount, Department must give Contractor prompt written notice (with a
copy to Engineer) stating the reasons for such action.

Substantial Completion:

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

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

**Partial Utilization:**

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

13.8.1 Department at any time may direct Contractor in writing to permit Department to use any such part of the Work, which Department believes to be ready for its intended use and substantially complete. Contractor may certify to Department and Engineer that said part of the Work is substantially complete and request Engineer to issue certificate of Substantial Completion for that part of the Work. Within a reasonable time after such direction, Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not determine that part of the Work to be substantially complete, Engineer will notify Department and Contractor in writing giving the reasons therefor. The provisions of paragraphs 13.6 and 13.7 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
Department may at any time direct Contractor in writing to permit Department to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer and within a reasonable time thereafter Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Department and Engineer that such part of the Work is not ready for separate operation by Department, Engineer shall submit to Department a list of items to be completed or corrected together with a written recommendation as to a division of responsibilities between Department and Contractor, including but not limited to security, operation, safety, maintenance, utilities, insurance and warranties pending final payment for such Work. Department shall have seven days to make written objection to Engineer’s list and recommended division of responsibilities to direct a revision thereof. Such directed revision or otherwise objected list and recommended division of responsibilities, shall become binding upon Department and Contractor at the time when Department takes over such operation unless they shall have agreed otherwise in writing. During such operation and prior to Substantial Completion of such part of the Work, Department shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

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:

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

**Final Payment and Acceptance:**

13.11 If, on the basis of Engineer’s inspection of the work during construction and final inspection, and Engineer’s review of the final application for payment and accompanying documentation, Engineer has determined that the work has been completed in substantial conformance with the contract documents and Contractor’s other obligations under the contract documents have been fulfilled, Engineer will, within ten days after receipt of the final application for payment, indicate in writing Engineer’s recommendation of payment and present the application to Department for payment along with a certificate that the work was completed in substantial conformance with the contract documents. Thereupon Engineer will give written notice to Department and Contractor that the work is acceptable subject to the provisions of paragraph 13.13. Otherwise, Engineer will return the application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. After presentation to Department of the application and accompanying documentation, in appropriate form and substance, and with Engineer’s recommendation and certification of substantial conformance with the Contract Documents, final payment will be paid by Department to Contractor in accordance with New York State Law. If Department believes deficiencies exist, it will so notify Engineer and Contractor in writing.

13.12 If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Department shall, upon receipt of Contractor’s final Application for Payment and recommendation of Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted.

**Waiver of Claims:**

13.13 The making and acceptance of final payment will constitute:

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

13.13.2 A waiver of all claims by Contractor against Department other than those previously made in writing and still unsettled.
ARTICLE 14 - Suspension of Work and Termination

Department May Suspend Work:

14.1 Department may for its convenience, order Contractor in writing at any time to suspend the Work or any portion thereof for such a period of time as Department may determine to be appropriate. A suspension of Work order will fix the date on which the Work, or portion thereof, will be resumed. Contractor shall resume the Work, or portion thereof, on the date so fixed.

14.1.1 If the performance of the Work or portion thereof is suspended for a period of time which exceeds the Total Float available in the approved Progress Schedule for the portion or portions controlling the Work affected by a suspension of Work order pursuant to paragraph 14.1, or by an act of Department or Engineer in the administration of the Contract, or by Department’s or Engineer’s failure to act within the applicable latest dates substantiated in the approved Progress Schedule, Contractor will be allowed an increase in Contract Price or an extension in Contract Time, or both, necessarily caused by such suspension which extends the applicable latest dates in the approved Progress Schedule. However, no adjustment will be made under this paragraph of the General Conditions for any suspension to the extent: 1) that performance would have been so suspended by any other cause, including the fault and negligence of Contractor, or 2) for which an adjustment is provided, limited as to extent, or excluded under any other provision of the Contract Documents.

14.1.2 Contractor shall deliver to Engineer a written Proposed Change Order including at a minimum, justification for the request within seven days or earlier if so required elsewhere in the Contract Documents, of the act or failure to act which Contractor believes gives rise to an adjustment in Contract Price or Contract Time pursuant to paragraph 14.1.1. Failure by Contractor to comply with the time requirements for delivery of written Proposed Change Orders will be considered to be a waiver by Contractor of any request for adjustment or claim for an increase in Contract Price or Contract Time for the period of time during which the Proposed Change Order has not been submitted.

14.1.3 Contractor’s proposal with all supporting data shall be delivered within 15 days of such notice or within twenty-two days of such occurrence, whichever is later, unless Department allows an additional period of time to obtain more accurate data. Contractor shall prove that additional costs and delays were necessarily incurred which meet the criteria set forth in Articles 9, 10 and 11 of the General Conditions, despite Contractor’s reasonable, prudent, and diligent efforts to prevent such costs or delays.

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

Department May Terminate:

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

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

14.3.1 If Contractor commences a voluntary case under any chapter of the Bankruptcy Code, as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

14.3.2 If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

14.3.3 If Contractor makes a general assignment for the benefit of creditors;

14.3.4 If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of Contractor’s creditors;
14.3.5 If Contractor admits in writing an inability to pay its debts generally as they become due;

14.3.6 If Contractor fails to perform the Work in accordance with the Contract Documents, including, but not limited to, failure to supply sufficient skilled workers, or suitable materials or equipment, or failure to adhere to the progress schedule established under paragraph 1.6 as revised from time to time or failure to submit an updated schedule as required by paragraph 5.6;

14.3.7 If Contractor disregards Laws or Regulations of any public body having jurisdiction;

14.3.8 If Contractor disregards the authority of Engineer;

14.3.9 If Contractor filed certification in accordance with New York State Finance Law '139-k which was intentionally false or intentionally incomplete; or

14.4 Where Contractor’s services have been so terminated by Department, the termination shall not affect any rights or remedies of Department against Contractor then existing or which may thereafter accrue. Any retention or payment or moneys due Contractor by Department will not release Contractor from liability.

14.5 The Department may without cause and without prejudice to any other right or remedy terminate the Contract for convenience upon seven days written notice to Contractor, it’s surety and Engineer, and elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work accepted by Department.

Contractor May Stop Work or Terminate:

14.6 If, through no act or fault of Contractor, Engineer fails to act on any Application for Payment within thirty days after it is submitted, or Department fails for one hundred and twenty days to pay Contractor any sum finally determined to be due by Department, then Contractor may, upon seven days' written notice to Department and Engineer, terminate the Agreement and recover from Department payment for all Work accepted by Department. In lieu of terminating the Agreement, if Engineer has failed to act on an Application for Payment or Department has failed to make any payment as aforesaid, Contractor may upon seven days' written notice to Department and Engineer stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve Contractor of the obligations under paragraph 5.31 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 All notices, demands, requests, instructions, approvals and claims shall be in writing.

15.1.1 Any notice to or demand upon Contractor shall be deemed sufficient if delivered to Contractor’s representative at the site or if delivered to the individual proprietor if Contractor is an individual, to a partner if Contractor is a partnership or to an officer of the corporation if Contractor is a corporation, at the office of Contractor specified in the Contract Documents, or if deposited in the United States mail in a sealed, postage prepaid envelope, addressed to the principal office of Contractor listed in the Agreement, or if delivered with charges prepaid to any telegraph company for transmission, in each case addressed to the office of Contractor specified in the Contract Documents or faxed to the number provided in the Contract Documents and followed by written notice.

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

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

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

Computation of Time:

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

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

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

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

**No Waiver of Legal Rights:**

15.6.1 Inspection by Engineer or by any of its duly authorized representatives, any measurement or report by Engineer, any order by Department for the payment of money, any payment for or acceptance or possession of any Work or any extension in Contract Time or any possession taken by Department shall not operate as a waiver of any provision of the Contract Documents, or any power therein preserved to Department, or of any right to damages therein provided. Any Waiver of any breach of this Contract shall not be held to be a waiver of any other or subsequent breach.

15.6.2 Department reserves the right to correct any error that may be discovered in any estimate that may have been paid, and to adjust the same to meet the requirements of the Contract Documents. Department further reserves the right, should proof of Defective Work on the part of Contractor be discovered after the final payment has been made, to claim, and recover by process of law, such sums as may be sufficient to correct the error, or make good the defects in the Work.

15.6.3 Any waiver of any provision of the Contract Documents shall be specific, shall apply only to the particular item or matter concerned and shall not apply to other similar or dissimilar items or matters.
Affidavit and Release of Lien:

15.7.1 When the Work has been completed, Contractor shall execute a final release of Lien and an Affidavit declaring that all bills have been paid in full, and that the requirements of the New York State Labor Law have been complied with.

15.7.2 These documents will be furnished to Department on the forms provided by Department.

15.7.3 Contractor shall be responsible for obtaining and submitting these forms to Department for all subcontractors involved in the Work.

Recovery Rights Subsequent to Final Payment:

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

General Guarantee:

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

Audit; Access to Records:

15.10.1 In addition to the rights of access set forth in Appendix A, if Contractor has submitted Cost and Pricing Data in connection with the pricing of any Change Order, Proposed Change Order or Claim related to this Contract, Department and Engineer or any of their duly authorized representatives shall have the right to examine and audit all books, ledgers, records, and documents pertinent to all Cost and Pricing data available and relied upon by Contractor including but not limited to that used by Contractor in the determination of its Bid for the Work, in order to evaluate the accuracy, completeness, and currency of the Cost or Pricing data.
15.10.2 Contractor shall make available at Contractor’s office at all reasonable times the materials described in paragraph 15.10.1 above, for examination, audit, or reproduction, until 6 years after final payment under this Contract.

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

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

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

**Price Reduction for Defective Cost or Pricing Data:**

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

15.11.1.1 Based on adequate price competition;

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

15.11.1.3 Set by New York State law.

15.11.2 If any price, including profit, negotiated in connection with any Change Order, Proposed Change Order or claim settlement under this provision, was increased because: 1) Contractor or a Subcontractor, Supplier, other person or organization furnished Cost and Pricing Data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data; 2) a designated or prospective Subcontractor, Supplier, other person or organization furnished Contractor Cost and Pricing Data that were not complete, accurate, and current as certified in the Contractor’s Certificate of Current Cost and Pricing Data; or 3) any of these parties furnished data of any description that were not accurate, the price shall be changed accordingly and the Contract shall be adjusted to reflect the change. This right to a change in Contract Price is limited to that resulting from defects in data relating to amendments to the Contract for which this provision becomes operative under paragraph 16.11.1 above.
15.11.3 Any decrease in Contract Price under paragraph 16.11.2 above due to defective data from a designated or prospective Subcontractor, Supplier, other person or organization that was not subsequently awarded the Subcontract or purchase order shall be limited to the amount, plus applicable overhead and profit markup, by which 1) the actual Subcontract or purchase order or 2) the actual cost to Contractor, if there was no Subcontract or purchase order, was less than the prospective Subcontract or purchase order, cost estimate submitted by Contractor; provided, that the actual Subcontract or purchase order price was not itself affected by defective cost or Pricing data.

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

15.11.4.1 Based on adequate price competition;

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

15.11.4.3 Set by New York State law.

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

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

No Waiver:

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

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

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

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

**Unlawful Provisions Deemed Stricken:**

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

**All Legal Provisions Included:**

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

**No Estoppel:**

15.16 Department or any officer, employee, servant or agent thereof, shall not be estopped, bound or precluded by any determination, return, decision, approval, order, letter, payment or certificate made or given by Engineer or any other officer, employee, servant or agent of Department, at any time, either before or after final completion and acceptance of the Work and payment therefor:

15.16.1 From showing the true and correct amount, classification, quality, and character of the Work completed and materials furnished by Contractor or any other person under the Contract, or from showing at any time that any determination, return, decision, approval, order, letter, payment, or certificate is untrue and incorrect, or improperly made in any particular, or that the Work or the materials or any part thereof, do not in fact conform to the Contract Documents; or,
15.16.2 From demanding the recovery of any overpayments made to Contractor, or such damages as Department may sustain by reason of failure to perform each and every term, provision or condition of the Contract in accordance with its terms.

Prohibited Interests:

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

No Third-Party Beneficiary:

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

Nothing herein shall release or waive any direct claim which the Department may have against any such separate contractor, including the Engineer, pursuant to the terms of the Department’s contract with such third party. Should any direct claim be brought by contractor against any third party in separate direct contractual relationship with the Department, contractor agrees to reimburse to the Department and to such separate contractor, including Engineer, their reasonable and necessary costs, including legal fees, incurred in the defense of such claim or claims.
SECTION IX

Supplementary Conditions
SECTION IX

Supplementary Conditions

Section VIII – General Conditions:

1. Article 4.2 c.

The CONTRACTOR shall name the State of New York, DEPARTMENT, ENGINEER, and West Islip Union Free School District as additional insured and shall provide each of those entities with certificates of insurance indicating the same.

For the NYSDOT permit, $1M of general liability insurance is required, with NYSDOT as additional insured.

If the value of the work taking place within the ROW is greater than $250,000:

- $5M of general liability insurance is needed (with NYSDOT as additional insured)
- $1M of Protective Liability insurance, with NYSDOT listed as additional insured

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 (See Section I, Section II, Section III, Article 3 and 21)

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 3, 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.”
Yes. You’ll need to contact our FReedom of Information officer at 631-952-6139 to request plans.

Eugene T. Smith, S.T.A.
Regional Permit Engineer
New York State Department of Transportation
250 Veterans Memorial Highway, Rm 6A7
Hauppauge, NY 11788
(631) 952 6028; Fax (631) 952-4967; mobile 631-978-1669
Eugene.Smith@dot.ny.gov
www.DOT.NY.gov
Thanks Gene. We are going to pass this information on to the bidders so they are aware of the requirements. What is the typical turn-around time for your office to review/approve a complete application package?

Adam

From: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>
Sent: Monday, September 10, 2018 10:15 AM
To: Etringer, Adam <aestringer@eaest.com>
Cc: Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>; Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>; Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>; Fonda, James (DOT) <James.Fonda@dot.ny.gov>; Okolo, Chuks L (DOT) <Chuks.Okolo@dot.ny.gov>
Subject: Re: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

Adam,
We just need plans showing the different types of operations you are doing and the type of work zone closure schemes you will be deploying to protect the work operation, traffic and pedestrians.

We then need restoration details to restore any damaged areas ...as equipment going over unpacked areas will likely damage sidewalk, curb and asphalt mow strips.

Otherwise we’ll be looking for insurance certs and bonding for the restoration. A $10k bond Perm44 for restoration will also be required. Look at contractors WC, Disability, and GL requirements in application.

So long as the WZ and restoration details are shown in a plans, there is no further review of plans.

Eugene T. Smith, S.T.A.
Regional Permit Engineer
New York State Department of Transportation
250 Veterans Memorial Highway, Rm 6A7
Hauppauge, NY 11788
(631) 952 6028; Fax (631) 952-4967; mobile 631-978-1669
Eugene.Smith@dot.ny.gov
www.DOT.NY.gov

From: Etringer, Adam <aestringer@eaest.com>
Sent: Friday, September 7, 2018 1:09:01 PM
To: Smith, Eugene (DOT)
Cc: Faisal, Mohammad (DOT); Tariq, Melik (DOT); Taylor, Karen (DOT); Fonda, James (DOT); Okolo, Chuks L (DOT)
Subject: RE: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.
Thank you Gene. I’ve been discussing with the design team and our current approach is to use a crane/outriggers to load the equipment. We understand the requirements as stated below. Two questions though:

- Do you have an example of an approved permit application package you can share?
- What is the typical turn-around time for approval of a complete permit application?

Thanks!
Adam

---

From: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>
Sent: Thursday, September 6, 2018 3:59 PM
To: Etringer, Adam <aettringer@eaest.com>
Cc: Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>; Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>; Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>; Fonda, James (DOT) <James.Fonda@dot.ny.gov>; Okolo, Chuks L (DOT) <Chuks.Okolo@dot.ny.gov>
Subject: Re: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

Then all but the temporary driveway is still required. Sidewalks can be damaged.

Eugene T. Smith, S.T.A.
Regional Permit Engineer
New York State Department of Transportation
250 Veterans Memorial Highway, Rm 6A7
Hauppauge, NY 11788
(631) 952 6028; Fax (631) 952-4967; mobile 631-978-1669
Eugene.Smith@dot.ny.gov
www.DOT.NY.gov

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From: Etringer, Adam <aettringer@eaest.com>
Sent: Thursday, September 6, 2018 3:51:17 PM
To: Smith, Eugene (DOT)
Cc: Faisal, Mohammad (DOT); Tariq, Melik (DOT); Taylor, Karen (DOT); Fonda, James (DOT); Okolo, Chuks L (DOT)
Subject: RE: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

It is likely that at least one set of outriggers would be on the sidewalk.

---

From: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>
Sent: Thursday, September 6, 2018 3:50 PM
To: Etringer, Adam <aettringer@eaest.com>
Cc: Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>; Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>; Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>; Fonda, James (DOT) <James.Fonda@dot.ny.gov>; Okolo, Chuks L (DOT) <Chuks.Okolo@dot.ny.gov>
Subject: Re: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

Almost everything is Still required.
Are you parking equipment on sidewalk or setting outrigger on sidewalk?

Eugene T. Smith, S.T.A.
Regional Permit Engineer
New York State Department of Transportation
250 Veterans Memorial Highway, Rm 6A7
Hauppauge, NY 11788
(631) 952 6028; Fax (631) 952-4967; mobile 631-978-1669
Eugene.Smith@dot.ny.gov
www.DOT.NY.gov

From: Etringer, Adam <aetringer@eaest.com>
Sent: Thursday, September 6, 2018 3:45:04 PM
To: Smith, Eugene (DOT)
Cc: Faisal, Mohammad (DOT); Tariq, Melik (DOT); Taylor, Karen (DOT); Fonda, James (DOT); Okolo, Chuks L (DOT)
Subject: RE: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

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Thank you for this detail Gene. I assume that all of this would be required if we were creating a construction entrance there (removing fence, establishing gate, creating a stabilized entrance/driveway). But what if all we intended to do was park a crane along the side of the road, and move equipment over the fence and into the lake that way? What sort of detail would you be looking for in that case?

Thanks,
Adam

From: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>
Sent: Thursday, September 6, 2018 3:03 PM
To: Etringer, Adam <aetringer@eaest.com>
Cc: Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>; Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>; Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>; Fonda, James (DOT) <James.Fonda@dot.ny.gov>; Okolo, Chuks L (DOT) <Chuks.Okolo@dot.ny.gov>
Subject: NYSDOT Case #72380 Lake Capri Remediation NY27A Islip RE: Permit Question Follow-up - Lake Capri NY27A, Islip

Adam,
I am awaiting a couple things, however I will send what we have so far:

Yes the application can be completed by DEC. We will need new application: https://www.dot.ny.gov/divisions/operating/oom/transportation-systems/repository/perm33.pdf

We will need updated access plans with


• and specialty imprinted brick paver utility strip are needed for completion of permit work.

---

I will pass along additional information as I receive them.

**Eugene T. Smith, S.T.A.**  
Regional Permit Engineer  
New York State Department of Transportation  
250 Veterans Memorial Highway, Rm 6A7  
Hauppauge, NY 11788  
(631) 952 6028; Fax (631) 952-4967; mobile 631-978-1669  
Eugene.Smith@dot.ny.gov  
www.DOT.NY.gov

---

*From: Etringer, Adam [mailto:aetringer@eaest.com]*

*Sent: Thursday, September 06, 2018 12:43 PM*
To: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>
Cc: Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>; Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Subject: RE: Permit Question Follow-up - Lake Capri NY27A, Islip
Importance: High

Gene –

Can you please provide me with an update on our inquiry? Our client (NYSDEC) is looking for an update on this permit application and what the requirements/expectations are.

Thank you,
Adam

From: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Sent: Wednesday, August 29, 2018 3:59 PM
To: Etringer, Adam <aetringer@eaest.com>
Cc: Smith, Eugene (DOT) <Eugene.Smith@dot.ny.gov>; Faisal, Mohammad (DOT) <Mohammad.Faisal@dot.ny.gov>
Subject: RE: Permit Question Follow-up - Lake Capri NY27A, Islip

Good afternoon Adam,

Gene is working on it and will respond in a few days.

Tariq

From: Etringer, Adam [mailto:aetringer@eaest.com]
Sent: Wednesday, August 29, 2018 1:59 PM
To: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Subject: RE: Permit Question Follow-up - Lake Capri NY27A, Islip

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Melik -

Please see below, and attached. The permit we would be seeking is associated with a New York Superfund project in West Islip. I am seeking direction on how to proceed with planning for this. I’ll follow up with a call to you if I don’t hear back via e-mail by tomorrow.

Thank you,
Adam

From: Etringer, Adam
Sent: Monday, August 20, 2018 10:48 AM
To: ‘Tariq, Melik (DOT)’ <Melik.Tariq@dot.ny.gov>
Subject: FW: Permit Question Follow-up
Importance: High

Melik – I am following up on the permit questions below.

Thank you,
From: Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>
Sent: Wednesday, August 15, 2018 4:04 PM
To: Etringer, Adam <aetringer@eaest.com>
Cc: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Subject: RE: Permit Question Follow-up

Adam –
I have been out of permits for a long time – but recently back kind of part time. The area you describe is within my CO-workers area. I forward your email to him. Should you want to reach out to him directly his information is:

Mr. Tariq Melik & Phone 631-952-6038

Thank you & Have a good day
Karen

From: Etringer, Adam [mailto:aetringer@eaest.com]
Sent: Monday, August 13, 2018 12:50 PM
To: Taylor, Karen (DOT) <Karen.Taylor@dot.ny.gov>
Subject: Permit Question Follow-up

Karen –
I left you a voicemail late last week regarding a permit question, but figured I’d follow up via e-mail as well. We are working on an environmental cleanup project in West Islip. The project is managed by the NYSDEC. Specifically, we will be dredging contaminated sediment from Lake Capri. I have attached the permit documents from 1999 when this project was partially completed, as a reference.

We will be seeking a highway work permit for an area along Montauk Highway that abuts the southern shore of Lake Capri – see attached screenshot. Since there is no public access to Lake Capri, the contractor will have to mobilize equipment by crane, or through a temporary gate in the fence along the lake. It is likely that we will need at least a partial lane closure to facilitate the equipment mobilization, especially if we need to stage a crane. I have a couple of questions relative to the permit application.

- Does the contractor need to be the permit holder, or can the NYSDEC file for, and hold the permit (like in 1999)?
- Can we file in advance for the permit, or do we have to wait until design plans are finalized?

Also, the outlet culvert for Lake Capri runs under Montauk Highway. Does DOT manage that culvert?

Thank you,
Adam
November 27, 2018

Adam Etringer
EA Engineering
6712 Brooklawn Pkwy
Syracuse, NY 13211

As Builts
Montauk Highway

VIA: E-Mail (No Hard Copy to Follow)

Dear Mr. Etringer:

This correspondence is in reference to your October 23, 2018 Freedom of Information Law (FOIL) request.

Enclosed are the records you requested.

Please indicate the FOIL request number when corresponding on this subject.

Sincerely,

John Hornak

for
Elizabeth Chamakkala, P. E
Records Access Officer
(631) 952-6139
(631) 952-6143 fax
EA Engineering is requesting as-built drawings for a section of Montauk Highway in West Islip. Specifically we are interested in the section of Montauk Highway adjacent to the southern shoreline of Lake Capri. We are working on a State Superfund cleanup project in Lake Capri and are in the process of designing the contaminated sediment removal. As such, it is important that we understand the subsurface construction details of that section of road, as well as the outlet structure that runs under Montauk Highway to Willetts Creek.

My contact information is listed below. Please let me know if you need any additional information.

Adam Etringer  
Senior Scientist/Project Manager  
EA Engineering, P.C.  
6712 Brooklawn Pkwy, Suite 104  
Syracuse, NY 13211  
office: (315) 565-6564  
cell: (518) 242-9773  
www.eaest.com
I hereby certify that this is an accurate description and map made from an accurate survey.

Date: May 15, 1947

[Signature]

[Address]

[City]

[State]  [Zip Code]

[Name]

[Title]

[Phone]

[Email]

[Note]: This document contains a legal description of a property, including boundaries and dimensions. It includes a certificate of accuracy from the surveyor. The document is part of a legal proceeding, possibly regarding the division or transfer of property. The text is dated May 15, 1947, and includes contact information for the surveyor or the landowner. The document is addressed to the Secretary of State of the State of Maine. The signature is present, indicating that the description is verified as accurate.
This page intentionally left blank
18 October 2018

TECHNICAL MEMORANDUM

TO: Sarah Saucier, P.E.  
LOCATION: New York State Department of Environmental Conservation

FROM: Frank DeSantis Jr.  
LOCATION: EA

COPY: Don Conan  
Bob Conden  
Adam Etringer  
LOCATION: EA

SUBJECT: Supporting Information for SPDES Permit Equivalent Contract/Work Assignment No: D007624-39  
Site/Spill No/Pin: Dzus Fastener Company Inc., West Islip, New York (152033)

The following information is intended to support the request for effluent criteria for direct discharges associated with the sediment remediation of Willetts Creek and Lake Capri. This project is expected to be completed by using both mechanical and hydraulic dredging technologies. The final means and methods will be determined by the selected remediation contractor. Remediation of Willetts Creek will likely be accomplished using a conventional excavator to remove contaminated sediment which will then be transported to an onsite sediment processing area where it will be dewatered and stabilized prior to being shipped to a permitted offsite disposal facility.

Water management during the Willetts Creek remediation will likely generate three sources of water, the majority from bypass pumping flow from the creek around the active remediation area. The second most volume will come from pumping water out of the active remediation area. The smallest volume of water will result from excess water in the sediment, and precipitation that lands on the sediment processing area.

EA is proposing that turbidity monitoring be performed for the discharge of Willetts Creek bypass water and that Outfalls 001 & 002 be created to monitor the discharge of water pumped to dewater the active remediation area, water resulting from sediment dewatering, and precipitation that lands on the sediment processing area(s). It is expected that the water treatment required for the Willetts Creek dredging operation will likely be limited to gravity settling in one or more frac tanks. Bag filters may be used prior to discharge at Outfalls 001 or 002, if needed to mitigate turbidity.
Removal of contaminated sediment from Lake Capri will likely be accomplished using a hydraulic dredge. Most of the water that will require treatment will be effluent from the dredging operation with a minor contribution of water resulting from precipitation that lands on the sediment processing area.

The information provided below is based on typical design requirements for solids removal, mechanical dewatering of solids, and the process flow diagram from the 1999 Lake Capri hydraulic dredging project (Figure 1). Treated effluent from the hydraulic dredging operation (including incidental precipitation) will be discharged to Outfall 003. The final design details of the water treatment systems, including water treatment chemicals, will be determined by the contractor following contract award.

1. Discharge Rate: For Outfalls 001 and 002 the discharge rate is expected to be 694 gallons per minute (gpm) or approximately one million gallons per day (MGD) for a 24-hr dewatering process. For Outfall 003 the anticipated treatment system design capacity is to be 1,000 gpm (1.44 MGD) for a 24-hr dredging operation.

2. The anticipated treatment system for Outfalls 001 & 002 will include one or more frac tanks and bag filters (if needed) to settle/remove incidental solids resulting from dewatering the active Willetts Creek remediation area and precipitation that lands on the sediment processing area(s). The anticipated treatment system for Outfall 003 will likely include a screen to remove debris, one or more hydrocyclones to separate coarse sand, an equalization tank(s) to provide 2-hrs of residence time (capacity to be determined by contractor), one or more mixing tanks for water treatment chemical addition, two clarifiers, and one or more filter presses to dewater solids. The treatment systems for all Outfalls (001, 002, and 003) will include effluent holding tank(s) for treated wastewater (capacity to be determined by contractor) until effluent testing results demonstrate permit discharge requirements have been met. The effluent discharge will be designed to provide adequate diffusion techniques to minimize sediment resuspension and erosion. The anticipated water treatment system flow for Outfall 003 is depicted in Figures 1 and 2.

3. There are three separate outfalls anticipated for use during the remediation; two are in Willetts Creek and one is in Lake Capri. Willetts Creek is a north-south flowing, slow moving creek, approximately 15 to 20 feet wide and less than 6 in. in depth in most parts. The creek is fed by both upstream surface water runoff and groundwater base flow. Willetts Creek drains to Lake Capri, which is an 8-acre privately owned man-made lake. Lake Capri drains to the tidal portion of Willetts Creek through a culvert located under Montauk Highway. Willetts Creek then flows into Babylon Cove and Great South Bay. Figure 2 shows the anticipated locations of the three outfalls.
   a. Outfall 001 is associated with the mechanical dredging being conducted in the northern part of Willetts Creek.
   b. Outfall 002 is associated with the mechanical dredging being conducted in the southern part of Willetts Creek.
   c. Outfall 003 is associated with Lake Capri dredging.

4. Available wastewater monitoring data is presented on the attached Application for SPDES Permit Equivalent Requirements.

5. The anticipated first day of discharge is:
   a. Outfall 001: 19 June 2019
b. Outfall 002: 13 September 2019
   c. Outfall 003: 4 January 2020
6. The anticipated duration of discharge at each outfall is:
   a. Outfall 001: 3 months
   b. Outfall 002: 2 months
   c. Outfall 003: 4 months
7. This project is being conducted under the New York State Superfund program.
8. The responsible DER project manager is Sarah Saucier, P.E.; (518) 402-9813.
9. The DER site number is 152033.
10. Compliance monitoring will be sent to the DER project manager, Sarah Saucier, P.E.
11. The surface water in Willetts Creek has been shown to have elevated concentrations of metals, for example iron concentrations as high as 4.6 mg/l, manganese as high as 2.7 mg/l, cadmium 5.6 μg/l; in Lake Capri surface water concentrations of iron as high as 0.8 mg/l have been documented during previous investigations.

Attachments:

Application for SPDES Permit Equivalent Requirements
Figure 1: Solids Separation/Water Treatment – Process Flow Diagram
Figure 2: Proposed Outfall Locations
APPLICATION FOR SPDES PERMIT EQUIVALENT REQUIREMENTS

1. Conventional Monitoring Information - Table 1

The following monitoring information must be included.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Raw Wastewater or Monitoring Well</th>
<th>Projected or Actual Treated Wastewater (if available)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Units</td>
<td>Min</td>
</tr>
<tr>
<td>Outfall 1 – Middle School</td>
<td>MGD</td>
<td>0.5</td>
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<tr>
<td>(mechanical dredging)</td>
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<td></td>
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<tr>
<td>Outfall 2 – High School</td>
<td>MGD</td>
<td>0.5</td>
</tr>
<tr>
<td>(mechanical dredging)</td>
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<td></td>
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<td>Outfall 3 – High School</td>
<td>MGD</td>
<td>0.75</td>
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<tr>
<td>(hydraulic dredging)</td>
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<td>NA</td>
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<td></td>
</tr>
<tr>
<td>Ammonia</td>
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<td></td>
</tr>
</tbody>
</table>

Notes: Projected flow rates are estimated. pH and TSS values as presented in the December 1998 Design Analysis Report for OU2.

MGD = million gallons per day.

2. Sampling Information - Priority Pollutants, Toxic Pollutants, and Hazardous Substances

i. Do you know or have reason to believe that any of the pollutants listed in Tables 6, 7, or 8 of the instructions are present in the discharge from this outfall?

X  Yes - If yes, monitoring data must be included in table 2 (next pg)

No - Go to Item ii. below.
ii. Do you know or have reason to believe that any of the pollutants listed in Table 9 or Table 10 of the instructions, or any other toxic, harmful, or injurious chemical substances not listed in Tables 6-10, are present in the discharge from this outfall?

- Yes - Source or reason for presence in discharge attached
- Yes - Quantitative or qualitative data attached
- No

2. Monitoring Information for Priority Pollutants, Toxic Pollutants, and Hazardous Substances - Table 2

<table>
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<tr>
<th>CAS #</th>
<th>Parameter</th>
<th>Raw Wastewater or Monitoring Well</th>
<th>Projected or Actual Treated Wastewater (if available)</th>
</tr>
</thead>
<tbody>
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<td>Aluminum</td>
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</tr>
<tr>
<td>Cadmium</td>
<td>mg/L</td>
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<td>mg/L</td>
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<td>mg/L</td>
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<td>Iron</td>
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<tr>
<td>Zinc</td>
<td>mg/L</td>
<td>NA</td>
<td>NA</td>
</tr>
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Notes: Average concentrations based on values presented in the December 1998 Design Analysis Report for OU2 (Lake Capri).
PROCESSING CAPACITIES

1. **Settling tank** was based on the solids settling velocity of 0.2 ft/min. A polymer, equivalent to NALCO unit capacities. In the event CONTRACTOR employs units of capacity greater than those shown, the following allowance for initial start-up operations. In the event facilities do not attain the Required.

2. **Hydraulic Dredge** - Peak rate based on two dredges at 1000 GPM each peak flow. If larger dredges are used, the required capacity will be based on the actual peak flow rate.

3. **Flocculation and solids settling** - Flocculent is a polymer, and a settling rate (0.2 ft/min) was following allowance for initial start-up operations. In the event facilities do not attain the Required.

**SOLIDS PROCESSING AND WATER TREATMENT**

a. These specifications are inclusive of all equipment, materials, labor, and engineering as may be performed with an instrument capable of measuring to 0.1 NTU.

b. Filter presses shall be recessed plate and frame type or equivalent.

c. Not less than two hydrocyclone units shall be installed, operated, and maintained. Cyclones shall be separate solids from water.

d. Sand separated in cyclones shall be discharged to bins of at least 40-CY capacity and further

e. Each cyclone shall be provided with inlet isolation to allow independent service of the cyclone units.

f. Filter presses and associated equipment shall be located inside of the temporary building.

g. Additives refers to materials added to sludge prior to filter press processing or the filter cake which

1. **General**

2. **Screen**

3. **Hydrocyclone**

4. **Filter Press**

5. **Polymer Mix Tank**

6. **Dredging**

7. **Equalization Tank**

8. **Decantation Tank**

9. **Dewatering Tank**

10. **Roll-off Bin**

**TAG NUMBER 1  2  3  4  5  6  7  8  9  10  11  12  13  14**

**SOLIDS CONTENT % SOLIDS - (TYPICAL)**

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<tr>
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<td>6.59%</td>
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<tr>
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<td>7.00%</td>
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<td>25.00%</td>
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<td>0.28%</td>
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<tr>
<td>12</td>
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<tr>
<td>13</td>
<td>0.0061%</td>
</tr>
<tr>
<td>14</td>
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**DAILY SOLIDS PROCESSED - (TONS / DAY)**

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<td>0.0001</td>
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</tbody>
</table>
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Figure 2
Outfall Locations
OU3/OU4 Remedial Design
Dzus Fastener Company, Inc.
West Islip, NY

Map Date: 10/17/2018
Projection: NAD83 State Plane New York Long Island

Legend

1 inch = 0.125 miles

Outfall 001
Lat: 40.704626 Long: -73.300187

Outfall 002
Lat: 40.699423 Long: -73.300826

Outfall 003
Lat: 40.697984 Long: -73.300957
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SECTION X

Standard Specifications
SECTION X
Standard Specifications

00001  Progress Schedule
00002  Cast in Place Concrete
00003  Minimum Requirements for Health and Safety
00004  Surveys
00005  Project Coordination
00006  Field Offices
00007  Project Identification and Signs
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00011  Site Security
00012  Monitoring Wells
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00015  Offsite Transportation and Disposal
00016  Quality Control
00017  Demolition and Removal
00019  Clearing and Grubbing
00020  Fences
00023  Access Roads
00025  Schedule of Values and Bid Breakdown
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<td>00204</td>
<td>Excavation Support Systems</td>
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<tr>
<td>00207</td>
<td>Planting</td>
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<tr>
<td>00303</td>
<td>Non-Woven Filter Fabric</td>
</tr>
<tr>
<td>00304</td>
<td>Erosion Control Blankets</td>
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</table>
1) **Terms and Definitions**

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

a) **Activity** - A part of the Work identified in the Progress Schedule, assigned a description, duration, certain codes, and other related Submittal data, and Cost and Pricing data, and evaluated to start and finish in accordance with Early and Late Schedules.

b) **Activity, Critical** - An Activity is considered to be Critical when it is evaluated to have the minimum value of Total Float Time available in the Progress Schedule.

c) **Activity, Value** - That portion of the contract Price which represents a fair value for the part of the Work identified by that Activity.

d) **As-Built Schedule** - Term used to denote record schedule drawings and data substantiating how the Work was performed as to timing, sequencing and rate of progress.

e) **Bar Chart Diagram** - A graphical representation of how the Work is to be performed as shown by timing each activity between a single choice of anticipated start and finish dates.

f) **Critical Path** - The sequence of Critical Activities from the Date for Commencement of the Contract Time, or Contract Times, to Substantial Completion of the Work, or part thereof.

g) **Critical Path Method Diagram** - A graphical representation of how the Work is to be performed as represented by the sequencing and timing of the Activities. A CPM Diagram shall either follow an "arrow" (I-J) format, wherein the start of an Activity is dependent upon the finish of preceding Activities, or a "precedence" format, wherein either the start or finish of an Activity is dependent upon either the start or finish of preceding Activities.

h) **Dummy restraints** - Activities not identifying a part of the Work, and used to preserve proper logic sequencing, avoid duplicate Activity numbering, to enforce Work Sequences indicated in or required by the Contract Documents, or to achieve other preferential sequencing chosen by Contractor.

i) **Duration (Activity)** - Estimated or required time of performance for the part of the Work represented by that Activity.

j) **Free Float** - Working days by which an Activity may be delayed from its Early Schedule, without delaying any other Activities from their Early Schedules.

k) **Contract Float** - Working days between the date(s) for Substantial Completion shown for the Work, or part thereof, in Contractor's anticipated Early Schedule, and the corresponding Contract Time or Contract Times.
l) **Total Float** - Working days between the Early Schedule and the Late Schedule for an Activity by which that Activity may be delayed without necessarily extending the Contract time, or Contract Times.

m) **Early Schedule (Late Schedule)** - The proposed Early Dates (Late Dates) of performance for the parts of the Work represented by the Activities. The Early dates are predicated on proceeding with the Work, or part thereof, exactly on the date when the Contract Time, or applicable Contract Time, commences to run; and the Late dates are based on achieving Substantial Completion of the Work, or part thereof, exactly on the Contract Time, or applicable Contract Times.

n) **Percent Complete** - That portion of an Activity which when multiplied by the Activity Value will yield a fair proportion of the Contract Price for that part of the Work completed.

o) ** Preferential Logic** - Contractor's approach to sequencing of the Work over and above those sequences indicated in or required by the Contract Documents. Examples include equipment restraints, crew movements, form reuse, special logic (lead/lag) restraints, etc. factored into the Progress Schedule instead of disclosing the associated Float Times.

2) **Requirements Included**
   
a) Pursuant to the requirements of the Contract Documents, Contractor shall prepare and submit, finalize, and periodically adjust the Progress Schedule as required herein.

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

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

b) Total Float and Contract Float are not for the exclusive benefit of Owner, Engineer, Contractor, or others, but is time available to all parties as needed for the Contract as a whole. Such Float times shall be shared between Owner, Engineer, Contractor and others to absorb delays which could not be mitigated by any other reasonable means.

c) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.
4) **Critical Path Method (CPM) Description**

a) The Progress Schedule shall be based on the Critical Path Method (CPM) of planning and scheduling, and prepared, finalized, and revised in accordance with the principles, definitions and terms described hereafter and those standards of the industry for CPM scheduling which are not in conflict with this Specification.

b) CPM Diagrams shall show in detail the priority, sequencing and interdependence of Activities, and the sequence in which the Work is to be accomplished to: a) to comply with the Contract Time(s), named allowances, and those sequences of Work indicated in or required by the Contract Documents; b) to anticipate foreseeable events that may in any manner affect cost, progress, schedule, performance, and furnishing of the Work; and c) to reflect the means, methods, techniques, sequences, and procedures of construction anticipated by Contractor, subject to the limitations on Float sequestering set forth by this Specification.

c) Total Float and contract Float are not for the exclusive benefit of Owner, Engineer, Contractor, OR OTHERS, but is time available to all parties as needed for the Contract as a whole. Such Float Times shall be shared between Owner, Engineer, Contractor and others to absorb delays which could not be mitigated by any other reasonable means. Use of Float Time shown in the approved progress Schedule for interim milestones or Contract Times will be available to Owner, if required to effect proper interfacing between work performed.

d) Use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended Activity times, imposed Activity dates, scheduling items of Work required for Final Completion as though they were prerequisites to Substantial Completion, and others, and 2) use of Float time disclosed or implied by the use of alternate Float suppression techniques will be allowed, provided: a) that Contractor not engage in Float manipulations which have the net effect of "sequestering" Float, that is to reduce unilaterally otherwise available Float Time by more than 50 percent; and b) that Contractor agrees that in order to mitigate the impact of delays to the Work, or parts thereof, adjustment or removal of such Float suppression techniques will be a prerequisite to consideration of any requests for compensation for delay or acceleration or for extensions in Contract Time.

e) The finalized Schedule of Values will be acceptable to Engineer as to form and substance and will serve as the basis for progress payments.

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

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

a) All CPM Diagrams, Schedule of Values, Schedule of Submittal submissions, associated computer reports, and narratives submitted by Contractor shall be consistent with the requirements of this Specification.

b) The "Preliminary" submittal set shall consist of:

1) A CPM Diagram and associated Schedule of Values and a supporting narrative.
2) A User Manual for the scheduling software to be used by Contractor for the purposes of computation of the Progress Schedule.

c) The "Interim" submittals shall consist of the interim CPM Diagram and associated Schedule of Values and Schedule of Submittal submissions and a supporting narrative.

d) The "Detailed" submittal set shall consist of:

1) The Detailed CPM Diagram, and the reports associated with the Schedule of Values, and Schedule of Submittal submissions, and a supporting narrative.

2) The five associated Activity reports described in paragraph 18.A sorted by each of the first four sequencing criteria described in paragraph 18.D.

e) "Status" submittal sets shall consist of "mark-up" versions of the current Detailed CPM Diagram, Schedule of Values, and Schedule of Submittals, together with a supporting narrative.

f) "Update" submittal sets shall consist of revised Detailed CPM Diagrams, Schedule of Values and Schedule of Submittals, a detailed Contractor's Cost report, and a supporting narrative.

g) The "Contract Completion" submittal set shall consist of the Detailed Contract Completion Schedule, and associated computer reports.

h) The "As-Built" submittal set shall consist of the As-Built CPM Diagram, and a "Schedule Reconciliation" report.

6) **Quality Assurance of Progress Schedule**

a) **Engineer** will review and if acceptable, approve the Progress Schedule.

b) In preparing a version of the Progress Schedule, pursuant to paragraph 1.6 of the General Conditions and Supplementary Conditions, it is the responsibility of Contractor 1) to inspect the preaward "Preliminary Progress Schedule" submitted in compliance with Article 11 of Section III of the Contract Documents, 2) to verify site conditions that may in any manner affect cost, scheduling, progress, performance and furnishing of the Work, 3) to work with each major Subcontractor, Supplier, or other relevant person or organization to obtain information on Activities, sequencing, and Activity Durations for incorporation into the Progress Schedule, and 4) to request and obtain written interpretations from Engineer as needed.

c) The Detailed Progress Schedule shall break down the Work into Activities in sufficient detail to identify clearly all individual parts of the Work and those factors which may in any manner affect the cost, schedule, progress, performance, and furnishing of the Work. At a minimum, the break-down of the Work in the detailed Progress Schedule submittal for CPM schedules only, shall delineate the following:

1) Those Activities designating the date for commencement of the Contract Time, or Contract Times; those Activities leading to Substantial Completion of the Work, or parts thereof; and those Activities identifying parts of the Work to be
performed or furnished leading from Substantial Completion to Final Completion.

2) All special Work sequences, schedule milestones, intermediate Contract Times, and named allowances set forth in the Contract Documents.

3) Items pertaining to securing prerequisite permits and approvals from those agencies with jurisdiction over Work to be performed under the Contract.

4) All items of Work involved in the preparation, submittal, review and approval of Submittals and samples required by the Specifications.

5) Appropriate times required for the fabrication, delivery, receipt and inspection, and storage of items of materials and equipment.

6) Work associated with installation, erection and other field construction activities.

7) Items of Work required to work around existing physical conditions and Underground Facilities which are at or contiguous to the site including the time for permanent or temporary relocation of such existing physical conditions and/or underground facilities.

8) Items of interface which relate to the responsibilities of Owner, Engineer or other contractors performing work under separate contracts with Owner.

9) Work required to implement cut-offs or closures, power shutdowns or temporary or permanent take-down or interruptions to existing facilities or affecting the operations of Owner, utilities or similarly involved third-parties. Specific dates when such cut-offs, etc. are to take place shall be shown as milestone dates on the appropriate Activities.

10) All items of Work related to shop and field testing, associated trimout activities and specified manufacturer or supplier training required prior to placing the facilities in service, including but not limited to manufacturer or supplier installation checks; leak, disinfection and pressure tests; removal or erection of temporary components; tie-ins; flushing and chemical/mechanical cleaning operations; specified performance tests; and other necessary non-operating tasks adjustments, cold-alignment checks, corrections, housekeeping and spare parts stocking required of Contractor to conform to the Pre-operational testing requirements of the Contract Documents.

11) All items of Work associated with the performance of the Start-Up Testing requirements of the Contract Documents, including, but not limited to, trial operation tests and operator training, performance tests under simulated and design operating conditions, emission testing, final acceptance or guarantee tests.

12) Work related to the tentative list of items to be completed or corrected before and subsequent to Pre-operational, Startup Testing and Final Testing.

d) The following limitations shall also apply to the selection and scoping of Activities for CPM schedules only:
1) Activity Durations shall be in working days and represent Contractor's best estimate of the time required for completion based on the Work included and the resources planned for that Activity. The computation of the Activity dates shall be based on a calendar recognizing the applicable holidays and the limitations on Work during hours other than the normal working hours set forth in the General Conditions and the Supplementary Conditions.

2) Unless otherwise provided in the Special Progress Schedule Requirements, all Activities, except those identifying Work related to Submittals and deliveries, shall span twenty working days or less, and their Values shall not exceed $45,000. Duration requirements for Activities identifying Work related to Engineer's review of Submittals or sample submissions are prescribed in the Special progress Schedule Requirements.

3) Installation Activities shall not combine Work located in separate structures, buildings or facilities, nor Work corresponding to different Divisions of the Specifications. Submittal and associated delivery Activities shall identify each submittal required by the Sections of the specifications. Activities identifying Work in connection with Pre-Operational or Start-up Testing shall not combine Work pertaining to the different Division within the specifications.

4) Reference is made to Article 1.11 of this specification for the identification of allowances and their incorporation into the Progress Schedule.

5) Items that qualify as (a) on-site stored materials, fixtures and equipment and (b) undelivered equipment, shall be separately identified on the Progress Schedule.

7) **References for CPM Schedules**

   a) The text "Precedence and Arrow Networking Techniques for Construction," by R.B. Harris (Wiley, 1978), provides principles, definitions and terms common to CPM arrow and precedence diagrams, and schedule computations therefrom.

   b) The provisions of this Section are binding on Contractor in the event of a conflict between the Standard Specifications and this Specification.

8) **Review of Progress Schedule Submittals**

   a) Engineer's and Owner's review of Contractor's Progress Schedule submittals will be only for conformance with the Contract Time(s), those sequences of Work indicated in or required by the Contract Documents, the Float sharing concepts established in the Contract Documents, and for compliance with the requirements of this Specification and the information given in the Contract Documents. Engineer's and Owner's review, comments and exceptions taken, if any, shall not extend to, nor constitute directions nor approval of, the means, methods, techniques, sequences, or procedures of construction or safety precautions, the correctness of which shall be the sole responsibility of Contractor.

   b) Engineer's and Owner's review of progress schedule submittals will be predicated on a Contractor's stamp of approval signed off by Contractor. Contractor's stamp of approval on Progress Schedule submittals shall constitute a representation to Owner that
**Contractor** has either determined or verified all data on the Progress Schedule submittal, or assumes full responsibility for doing so, and that **Contractor** and his Subcontractors, Suppliers or other persons or organizations have reviewed and coordinated the sequences shown in the Progress Schedule with the requirements of the Work under the Contract Documents.

c) **Engineer's** and **Owner's** review will not be intended to be for the purpose of determining the accuracy of other matters that may be contained in the submittals. When the review of a Progress Schedule results in a number of comments or exceptions taken, **Engineer** and **Owner** does not warrant that these comments are inclusive of all variations, as it shall remain the responsibility of **Contractor** to meet the requirements of the contract documents and to identify expressly any proposed variations.

d) **Engineer's** and **Owner's** review of progress schedule submittals shall not relieve **contractor** from responsibility for any variations from the requirements of the Contract Documents unless **Contractor** has in writing, by means of a specific notice, called **Engineer's** attention to each variation, and **Engineer** has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Progress Schedule submittal.

e) **Engineer's** approval of Progress Schedule submittals will not relieve **Contractor** from responsibility for errors and omissions in the submittals or from responsibility for having complied with the provisions of General Conditions and Supplementary Conditions. Approval of a Progress Schedule with undisclosed variations or errors such as omitted Work or erroneous sequences will not relieve **Contractor** from completing the omitted or impacted Work within the applicable Contract Time(s).

f) Progress Schedules that include Activities with negative Float Times, or Activities scheduled beyond the applicable Contract Time(s), will not be approved until a specific Change Order or Proposed Change Order authorizing appropriate changes to the impacted Contract Time(s) is agreed upon between **Owner** and **Contractor**.

g) When reviewed by **Engineer** and **Owner**, each progress schedule submittal will be returned stamped as either "approved," "approved as noted," "resubmit with revisions," or "disapproved." Submittals stamped as "approved" or "approved as noted" will indicate approval thereof, subject to the limitations set forth, and will be considered to represent the approved progress schedule as of the date in the approval stamp until an updated progress schedule is submitted by **Contractor** and approved by **Owner** and **Engineer**.

h) If **Contractor** believes that **Engineer's** approval of a progress schedule justifies an increase or decrease in contract price or an extension or shortening in contract time, **Contractor** shall be required to deliver a proposed change order thereof to **Engineer** in accordance with the provisions of article 9 of the general conditions. If **Owner** and **Contractor** are unable to agree as to amount and extent thereof, a claim maybe made pursuant to Articles 10 and 11 of the General Conditions.

i) Costs associated with **Engineer's** and **Owner's** review and return of a progress schedule submission after the **Engineer's** second time review shall be borne by **Contractor**. **Owner's** charges to **Contractor** for additional reviews will be equal to **Engineer's** charges to **Owner** under the terms of **Engineer's** agreement with **Owner**. In the event
**Contractor** fails to pay such costs within 30 days after receipt of an invoice from **Owner**, a change order or proposed change order will be issued incorporating the unpaid amount, and **Owner** will be entitled to an appropriate decrease in Contract Price.

j) No partial submittals will be reviewed. Submittals not complete will be returned to **Contractor** for resubmittal.

9) **Delays and Recovery**

a) Reference is made to the General Conditions and the Supplementary Conditions for Contract requirements related to delays, conditions warranting extensions in Contract Time(s), and conditions applicable to reimbursement for delay costs.

b) Whenever **Contractor** fails to complete an activity within its late date on the approved progress schedule, **Contractor** shall, within five days or with the next application for payment, whichever comes earlier, submit a written statement to **Engineer** describing the cause for the slippage in the Activity and the actions being considered by **Contractor** to recover the time lost and to prevent or mitigate any derived slippage beyond the applicable Contract Time(s).

c) A written schedule recovery statement shall include, but not be limited to, such actions as overlapping of dependent Activities, sequencing changes to accommodate increased Activity concurrency, assignment of additional labor or equipment, shift or overtime Work, expediting of submittals or deliveries, or any combination of the foregoing.

d) If **Contractor** refuses, fails or neglects to submit a required written schedule recovery statement, **Owner** may, at its option, withhold additional retainage pursuant to the Contract Documents and/or initiate default termination proceedings in accordance with Contract Documents or request **Engineer** to identify and to order alternate recovery actions on the basis of the information in the current Progress Schedule. If **Contractor** believes that a written order to recover schedule from **Engineer** justifies an increase in Contract Price or an extension in Contract Time, **Contractor** shall be required to deliver a written request thereof in accordance with the provisions of Article 9 of the General Conditions. If **Owner** and **Contractor** are unable to agree as to responsibility for the slippage in the schedule or the amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.

10) **Early-Completion Progress Schedules**

a) Progress Schedules anticipating achievement of Substantial Completion ahead of the corresponding Contract Time(s) and disclosing appropriate Contract Float Time(s) for the Work, or parts thereof, shall be considered equivalent or equal to Progress Schedules anticipating Substantial Completion exactly on the Contract Time(s). In accordance with requirements of the Contract Documents, the contract Float Time in these equivalent or equal Progress Schedules will be available to **Owner**, **Engineer**, **Contractor** and others to absorb delays to the Work as a whole which cannot be mitigated by any other means.

b) Progress Schedules anticipating achievement of Substantial Completion ahead of the corresponding Contract Time(s), but with zero Contract Float as opposed to positive Contract Float, will be returned as either "Approved as Noted," "Resubmit with
Revisions," or "Disapproved." Submittals stamped as "Approved as Noted" will indicate Engineer's approval thereof, subject to the limitations set forth, including Engineer's computation of the appropriate Contract Float implied by the anticipated early completion.

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

11) Cash Allowance - Scheduling Subcontractor

a) It is understood that Contractor has included in the Contract Price the allowance stipulated in the Bid Form so named in the Contract Documents and shall cause the Work so covered to be done by the Scheduling Subcontractor and for such sums within the allowance as maybe acceptable to Owner and Engineer.

b) It is also understood that Contractor has included in the Contract Price sufficient funds to cover all costs in excess of the allowance in connection with Work to be done by the Scheduling Subcontractor.

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

12) Time Allowance Requirements for Document Review and Other Activities

a) Contractor shall make allowances for time required for a) document review and approval of submittals and samples specified in this Specification, b) the requirements for anticipated repeat submissions for particular items of materials or equipment, and c) the
requirements for anticipated or required time intervals for the performance of specific parts of the Work by **Contractor**.

b) **Contractor** shall make allowances for time required by a) those other activities indicated in or required by the contract Documents which are the responsibility of **Owner** or **Engineer**, b) the potential time requirements of **Owner** and **Engineer** to investigate instances of potential differing site conditions, and c) those other named time allowances required by the Contract Documents.

c) It is understood that **Contractor** has included in the Contract Price the effect of accommodating all of these time allowances and requirements in the planning, scheduling and execution of the Work; that **Contractor's** Progress Schedule will incorporate Activities and sequences contemplated by the time allowances based on the information indicated in or required by the Contract Documents; and that **Contractor** shall cause the Work or requirements covered by such time allowances to be done within the limits of the Contract Time(s).

13) **Measurement and Payments**

a) All costs in connection with these requirements, including the Work to be performed by the Scheduling Subcontractor, shall be borne by **Contractor**. Payments made to **Contractor** under the allowance for the Scheduling Subcontractor provided for in paragraph 11.A shall be disbursed in their entirety to the Scheduling Subcontractor.

b) Payments for Work performed under this Section of the Specifications will be made pursuant to Article 9 of the Agreement. Payment for Work performed shall be in accordance with the schedule of payments in the Special Progress Schedule Requirements.

14) **Compliance**

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

15) **Acceptable CPM Diagrams**

a) Interim and Detailed CPM Diagrams shall be based on an arrow or precedence diagram format, and sequenced by the separate structures, facilities, buildings or site areas.

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

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

a) Activity schedule information shall, at a minimum, include the following data:

1) Activity identified, i.e., I-J numbers in arrow format, or alphanumeric numbers in precedence format, such that not more than one Activity, dummy, or restraint may have the same identifier.

2) Activity Description for each Activity, dummy or preferential restraint shall fully convey the scope of the Work included.

3) Special Activity codes designating: a) location of the Work, e.g., site areas, elevations, etc., b) Work breakdown, e.g., process, trade, performing organization, c) responsibility, e.g., Contractor, Owner, Subcontractors, etc., d) as-awarded from amended (added or deleted by a Change Order or Proposed Change Order) items of Work.

4) Activity labor requirements, based on a proportionate share of the (direct) labor man hours and quantities in the associated items from the Contract Price Breakdown developed pursuant to the requirements of the Supplementary Conditions.

5) The use of start or finish restraint dates must be annotated as to the basis for the chosen restraints.

17) **Acceptable Activity Value and Submittal Data**

a) Activity data pertaining to the Schedule of Values shall at a minimum include the following for each Activity:

1) Activity code and description as on the CPM Diagram.

2) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.

3) Activity Values shall breakdown Value for anticipated stored materials from Value for Work installed, as applicable.

4) Cost of equipment or materials to be incorporated in the Work shall be assigned to the appropriate fabrication and delivery Activities.
b) Activity data pertaining to the Schedule of Submittal submissions shall at a minimum include the following for each Activity:

1) Activity code and description as on the CPM Diagram.

2) A list of specific submissions, Specification Section, Contract Drawing sheet numbers, and applicable submission dates.

c) The Schedule of Values and the Schedule of Submittal submissions shall be provided on forms acceptable to Engineer.

18) **Acceptable Scheduling Software**

a) **Contractor's** evaluation of the CPM Diagrams shall be based on scheduling software meeting the data management, computational, and reporting requirements of this Specification. Activity reports provided by the scheduling software selected shall, at a minimum, display the following data for each Activity, dummy, or restraint:

1) Activity identifier, activity description, activity duration, activity man-days, computed or restrained Early Start date, computed Early Finish date, computed Late Start date, computed or restrained Late Finish date, Total Float and Free Float, Activity Value, Percent Complete, Activity Value for Work performed, and associated Activity list items (e.g., Submittal submissions).

2) Dates shall be in calendar form. Contract Times representing Substantial Completion requirements shall be set as restrained Late Finish Dates where applicable; Contract Times representing Commencement of Work conditions shall be shown as restrained Early Start Dates as applicable. Contract Float times shall be computed and shown pursuant to the definition in Attachment A.

b) If the CPM Diagram is based on the precedence format, an additional computer report tabulating the sequences on the Diagram shall be provided showing: a) each Activity together with a listing of all of its preceding and succeeding Activities, and b) the relationship type, lead/lag types, and lead/lag times between each Activity and each of its preceding and succeeding Activities.

c) The scheduling software shall have the capability of sorting out computer reports by the special Activity codes designated in 17(a) above.

d) The scheduling software shall have the capability of sequencing computer reports by:

1) Activity identifier, in order of ascending I-J number.

2) Activity identifier, in order of descending J-I number.

3) Total Float, in order of ascending Total Float values, and by ascending Early Start Dates, or by ascending I-J numbers, or by descending J-I numbers, within the same Total Float values.

4) Early Start dates in chronological order of Early Start dates, and by ascending I-J numbers within the same Early Start Dates.
5) Late Finish dates, in chronological order of Late Finish Dates and by descending J-I numbers within the same Late Finish Dates.

6) Change Order or Proposed Change Order No.

e) In addition to the ability to process the required Activity data, the scheduling software shall offer the following features: a) the capability of accepting and processing schedules with actual start and actual finish dates for the Activities; b) processing of CPM schedules with negative Total Float values; c) printing or plotting of rate of progress data, such as labor utilization and payment curves; d) the ability of drawing CPM Diagrams using plotter graphics.

19) **Acceptable Progress Schedule Narratives**

a) A narrative shall include sufficient information to substantiate the basis of the data used to develop that Progress Schedule submittal, and detail:

1) The status of the Progress Schedule in terms of number of days ahead or behind the Contract Time, or Contract Times.

2) The progress status (i.e., progress achieved vs. that forecasted) for a) Activities designating accomplishment of Substantial Completion, b) Critical and other significant Activities, c) Work related to achieving milestones set forth by the Work Sequences indicated in or required by the Contract Documents, d) long-lead delivery items of material or equipment.

3) The assumptions made in incorporating Work related to pending or authorized Change Orders and Proposed Change Orders.

4) Actual or potential delays, including causes, the steps taken or anticipated to mitigate their impact, and the anticipated effect on the Progress Schedule as a whole.

5) Schedule recovery statement describing actions under consideration by Contractor to recover from a negative float or overrun in Late Finish Date condition.

6) Any significant changes in Progress Schedule sequences, and their basis thereof. Significant sequencing changes shall be those affecting Critical Activities or causing a substantial reduction or increase in the Total Float Times available.

7) **Owner** and **Engineer** Activities which become due over the next two months on account of Contractor's requirements for performing Work which follows such **Owner** and **Engineer** Activities.

8) Rate of progress or "momentum" curves showing: a) the anticipated levels of labor utilization, e.g., man-days per week, and b) the anticipated level of payments for Work to be performed, all in accordance with the Activity time frames supported by the Early and Late Dates in the Progress Schedule.

9) Other information relevant to or of concern in the planning, scheduling and execution of Work over the next two months.
10) Contractor's responses to Engineer's comments raised in the review of the previous Progress Schedule submittal.

11) Actions taken to address schedule noncompliance issues which have negated Engineer's approval of a previous Progress Schedule submittal.

20) Acceptable Contractor's Cost Data

a) Cost data for inclusion in the Contractor's Cost reports required with each Progress Schedule Update submittal shall detail contract financial and budget data available to and customarily relied upon by Contractor to monitor financial and cost performance.

b) Acceptable financial and cost data for each cost account used by Contractor to apportion the contract Price to separable parts of the Work shall include:

1) Account number and description.

2) Account estimate data, identifying labor, material and equipment, and Subcontract costs for that account is included in the Contractor's Bid estimate, together with the sum increase or decrease in associated authorized Change Orders or Proposed Change Orders, and those sums anticipated by proposed Change Orders in negotiation or claims pending resolution.

3) Current labor, material and equipment, and Subcontract cost data for the account; percent complete for the Work designated by that account; and Contractor's current forecast of the cost to complete Work designated by the account.

END OF SECTION
# Part 1 General

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CAST IN PLACE CONCRETE

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Fibrous Reinforcement: Section 032101.

1.02 REFERENCES

A. Except as shown or specified otherwise, the Work of this Section shall conform to the requirements of Specifications for Structural Concrete for Buildings ACI 301-16 of the American Concrete Institute.

1.03 DEFINITIONS (Amendments to ACI 301, Section 1.2):

A. Exposed Construction: Exposed to view.

1.04 SUBMITTALS

A. Submittals Package: Submit product data for design mix(es) and materials for concrete specified below at the same time as a package.

B. Shop Drawings: Placing drawings for bar reinforcement.

C. Product Data:

1. Concrete design mix(es) with name and location of batching plant.

2. Portland Cement: Brand and manufacturer’s name.

3. Fly Ash: Name and location of source, and DOT test numbers.

4. Air-entraining Admixture: Brand and manufacturer’s name.

5. Water-reducing Admixture: Brand and manufacturer’s name.

6. Aggregates: Name and location of source, and DOT test numbers.

7. Lightweight Coarse Aggregate: Brand and manufacturer’s name

8. Chemical Hardener (Dustproofing): Brand and manufacturer’s name, and application instructions.

9. Chemical Curing and Anti-Spalling Compound: Brand and manufacturer’s name, and application instructions.


11. Expansion Joint Filler: Brand and manufacturer’s name.
12. Emery Aggregate: Brand and manufacturer’s name, and application instructions.

D. Samples:
1. Fabric Reinforcement: 8 inches square.

E. Quality Control Submittals:
1. Certificates: Affidavit required under Quality Assurance Article.

1.05 QUALITY ASSURANCE

A. Concrete batching plant shall be currently approved as a concrete supplier by the New York State Department of Transportation.

B. Fly ash supplier shall be currently approved as a fly ash supplier by the New York State Department of Transportation.

C. Certifications: Affidavit by the bar reinforcement manufacturer certifying that bar material meets the contract requirements.
1. Submit evidence consisting of certification of source of material, copies of purchase orders and manufacturer's certifications. For stock material, submit copies of latest mill or purchase orders for material replacement.
   a. Documentation to confirm compliance with General Conditions Article 25.4 Domestic Steel.
2. Fabricator's and Erector's Qualifications Data: Name and experience of fabricator and erector.

D. The Contractor agrees, that if the value of this contract exceeds $100,000 all structural steel, reinforcing steel and other major steel items to be incorporated in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.

E. Source Quality Control: The Director reserves the right to inspect and approve the following items, at his own discretion, either with his own forces or with a designated inspection agency:
1. Batching and mixing facilities and equipment.
2. Sources of materials.

1.06 STORAGE

A. Store materials so as to insure the preservation of their quality and fitness for the Work. Materials, even though accepted prior to storage, are subject to inspection and shall meet the requirements of the Contract before their use in the Work.
PART 2 PRODUCTS

2.01  MATERIALS (Amendments to ACI 301, Section 4, for Normal Weight Concrete and Section 7, for Lightweight Concrete):

A.  Water-reducing Admixture:  ASTM C 494, Type A, and on the New York State Department of Transportation’s current “Approved List”.

B.  Fly Ash (Pozzolans):  ASTM C 618, including Table 1A (except for footnote A), Class F except that loss on ignition shall not exceed 4.0 percent.

C.  Chemical Curing and Anti-Spalling Compound:  ASTM C 309, Type 1D, Class B, with a minimum 18 percent total solids content.  No thinning of material allowed.
   1.  SureCure Emulsion, Kaufman Products, Inc. 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372.

D.  Chemical Hardener (Dustproofing):  Colorless aqueous solution of magnesium-zinc fluosilicate.  Approved products include:
   1.  MasterKure HD 300WB by Master Builders/ BASF Building Systems, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 628-9990.
   2.  Surfhard by The Euclid Chemical Co., 19218 Redwood Rd., Cleveland, OH 44110, (216) 531-9222.

A.  Type 1 Expansion Joint Filler:  Preformed, resilient, non-extruding cork units; ASTM D 1752, Type II.

B.  Chamfer Strips:  Wood, metal, PVC or rubber; one-inch chamfer.

C.  Epoxy Bonding Agent (Adhesive):  100 percent solids epoxy-resin-base bonding compound, complying with ASTM C 881, Types I, II, IV and V,
Grade 2 (horizontal areas) or Grade 3 (overhead/vertical areas), and Class B (40-60 degrees Fahrenheit) or Class C (60-degree Fahrenheit and above).

2. Sikadur Hi-Mod 32 by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, (800) 933-7452.

D. Emery Aggregate: Natural emery, crushed, polyhedral in shape, with not more than 10 percent flat or elongated pieces, properly screened, graded and packaged in the manufacturer’s plant, and delivered to the site in sealed, labeled packages. Approved products include:


2.02 PROPORTIONING (Amendments to ACI 301, Sections 4 & 7):

A. Compressive Strength: As required by ACI 318-14 Table 19.3.2.1. “Requirements for concrete by exposure class”.

B. Weight: Normal, except as indicated below:

1. Lightweight Concrete (for floor fills): Air-dry unit weight between 95 and 115 lb/cu ft.

C. Durability: Concrete shall be air-entrained. Design air content shall be according to ACI 318-14 Table 19.3.2.1 “Requirements for concrete by exposure class”, and ACI 318-14 Table 19.3.3.1 “Total air content for concrete exposed to cycles of freezing and thawing”, with an allowable tolerance of plus or minus 1.5 percent for total air content. Entrained air shall be provided by use of an approved air-entraining admixture. Air-entrained cement shall not be used.

D. Slump: Maximum 4 inches; minimum 1 inch before the addition of any water-reducing admixtures or high-range water-reducing admixtures (superplasticizers) at the Site.

E. Admixtures: Do not use admixtures in concrete unless specified or approved in writing by the Director.

F. Selection of Proportions: Concrete proportions shall be established on the basis of previous field experience or laboratory trial batches, unless otherwise approved in writing by the Director.
1. Optional Material: Fly ash may be substituted for (Portland) cement in normal weight concrete up to a maximum of 15 percent by weight of the required minimum (Portland) cement. If fly ash is incorporated in a concrete design mix, make necessary adjustments to the design mix to compensate for the use of fly ash as a partial replacement for (Portland) cement.

   a. Adjustments shall include the required increase in air-entraining admixture to provide the specified air content.

   b. Lower early strength of the concrete shall be considered in deciding when to remove formwork.

2.03 REINFORCEMENT (Amendments to ACI 301, Section 3):
   A. Bar Reinforcement: ASTM A 615, Grade 60, deformed steel bars.
   B. Fabric Reinforcement: ASTM A 185, welded wire fabric, fabricated into flat sheets unless otherwise indicated.
   C. Bar Supports: Galvanized steel or AISI Type 430 stainless steel, and without plastic tips.
   D. Tie Wire: Black annealed wire, 16-1/2 gage or heavier.

2.04 JOINTS AND EMBEDDED ITEMS (Amendments to ACI 301, Section 5.3.2.6):
   A. Obtain bond at construction joints by the use of bonding agent (adhesive) in accordance w/section 5.2.1.7 or the use of cement grout.

2.05 PRODUCTION (Amendments to ACI 301, Section 5):
   A. Provide ready-mixed concrete, either central-mixed or truck-mixed.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION
   A. Do not use items of aluminum for mixing, chuting, conveying, forming or finishing concrete, except magnesium alloy tools may be used for finishing.
   B. Keep excavations free of water. Do not deposit concrete in water.
   C. Hardened concrete, reinforcement, forms, and earth which will be in contact with fresh concrete shall be free from frost at the time of concrete placement.
   D. Prior to placement of concrete, remove all hardened concrete spillage and foreign materials from the space to be occupied by the concrete.
3.02 FORMWORK (Amendments to ACI 301, Section 2):

A. The formwork shall be designed for loads, lateral pressure, and allowable stresses outlined in Chapter 4 - Design of “Guide to Formwork for Concrete” (ACI 347-14).

B. All formwork shall be removed after the concrete has sufficiently hardened, except in inaccessible spaces where approved.

C. After the ends or end fasteners of form ties have been removed, the embedded portion of the ties shall terminate not less than 3/4 inch from the formed surfaces of concrete.

3.03 PLACING REINFORCEMENT (Amendments to ACI 301, Section 3):

A. At the time concrete is placed, reinforcement shall be free of mud, oil, loose rust, loose mill scale, and other materials or coatings that may adversely affect or reduce the bond.

3.04 PLACING CONCRETE (Amendments to ACI 301, Section 5):

A. Operation of truck mixers and agitators and discharge limitations shall conform to the requirements of ASTM C 94.

B. Do not allow concrete to free fall more than 4 feet.

3.05 FINISHING FORMED SURFACES (Amendments to ACI 301, Section 5.3.3):

A. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:

1. Rough Form Finish for concrete surfaces not exposed to view.
2. Smooth Form Finish for concrete surfaces exposed to view.

3.06 FINISHING SLABS (Amendments to ACI 301, Section 5.3.4):

A. Slabs On Grade: Provide key type joints unless otherwise shown. Tool exposed joints.

B. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:

1. Floated Finish for:
   a. Treads and platforms of exterior steps and stairs.
   b. Slabs and fill over which waterproofing, roofing, vapor barrier, insulation, terrazzo, or resin bound flooring is required.

2. Troweled Finish for:
   a. Interior slabs that are to be exposed to view.
b. Slabs and fill over which resilient wood flooring, resilient tile or sheet flooring, carpet, or thin-film coating system is required.
c. Slabs and fill over which thin-set ceramic tile is required, except fine-broom finished surface.
d. Treads and platforms of interior steps and stairs.

3. Broom or Belt Finish for:
   a. Exterior slabs. Texture, as approved by the Director’s Representative.

4. Scratched Finish for:
   a. Surfaces to be covered with ceramic tile set in a bonded thick mortar bed, except screed to a Class B tolerance.
   b. Surfaces to be covered with floor topping.

5. Integral Emery Aggregate Surfacing with Floated Finish for:
   a. Interior pedestrian ramps.

C. Finishing, General: Provide monolithic finishes on concrete floors and slabs without the addition of mortar or other filler material. Finish surfaces in true planes, true to line, with particular care taken during screening to maintain an excess of concrete in front of the screed so as to prevent low spots. Screed and darby concrete to true planes while plastic and before free water rises to the surface. Do not perform finishing operations during the time free water (bleeding) is on the surface.

D. Integral Emery Aggregate Surfacing: Provide a nonslip “dry shake” finish with emery aggregate. Apply emery aggregate in accordance with the manufacturer’s printed application instructions for a moderate duty nonslip surface, unless otherwise indicated.

3.07 CURING AND PROTECTION (Amendments to ACI 301, Section 5.3.6):

A. Maintain concrete surfaces in a moist condition for at least 7 days after placing, except where otherwise indicated. Do not use curing compound.

1. For surfaces of exterior slabs (on grade), apply chemical curing and anti-spalling compound in accordance with the recommendations of the manufacturer.

3.08 CHEMICAL HARDENER (DUSTPROOFING)

A. Apply chemical hardener to all troweled finished interior floors which are to be left exposed.

B. Do not apply chemical hardener until concrete has cured the number of days recommended in manufacturer’s instructions.
C. Prepare surfaces and apply chemical hardener in accordance with manufacturer’s printed instructions and recommendations.

3.09 FIELD QUALITY CONTROL (Amendments to ACI 301, Section 1):

A. Make available to the Director's Representatives whatever test samples are required to make tests. Furnish shipping boxes for compression test cylinders.

END OF SECTION
SPEC 00003

MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY

1. GENERAL

1.1 DESCRIPTION

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.

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). Onsite 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 onsite work in contaminated areas until an acceptable HASP addressing all comments has been developed.

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.

Any discrepancies between this HASP and the specifications (or OSHA requirements) shall be resolved in favor of the more stringent requirements as determined by the ENGINEER.

1.2 BASIS

The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (20 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (EPA), Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and EPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the EPA and the National Institute for Occupation Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

The safety and health of the public and project personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Any additional costs will be considered only after the cause for suspension of operations is addressed and work is resumed. The ENGINEER's on-site representative and the CONTRACTOR's Superintendent will be kept appraised, by the Safety Officer, of conditions which may adversely
affect the safety and health of project personnel and the community. The **ENGINEER** may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the **ENGINEER**. The cost of work stoppage due to health and safety is the responsibility of the **CONTRACTOR** under this Contract.

### 1.3 HEALTH AND SAFETY DEFINITIONS

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

- **A. Project Personnel:** Project personnel include the **ENGINEER**, the **ENGINEER's On-site Representatives**, **CONTRACTOR**, Subcontractors, and Federal and State Representatives, working or having official business at the Project Site.

- **B. Authorized Visitor:** Authorized visitors who work for the State of New York shall receive approval to enter the site from the **DEPARTMENT**. The Safety Officer has primary responsibility on determining who is qualified and may enter the site. The Site Safety Officer will only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.

- **C. Health and Safety Coordinator (HSC):** The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the **CONTRACTOR**. The HSC will be responsible for the development and implementation of the HASP.

- **D. Safety Officer (SO):** The SO will be the **CONTRACTOR's** on-site person who will be responsible for the day-to-day implementation and enforcement of the HASP.

- **E. Health and Safety Technicians (HST):** The HST(s) will be the **CONTRACTOR's** on-site personnel who will assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.

- **F. Medical Consultant (MC):** The MC is a physician retained by the **CONTRACTOR** who will be responsible for conducting physical exams as specified under the Medical Monitoring Programs in this section.

- **G. Project Site:** The area designated on the Site Drawings, which includes the Contractor Work Area.

- **H. Contractor Work Area:** An area of the project site including the Support Zone, access road, staging area, and Exclusion Zone.

- **I. Contractor Support Zone:** An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.
J. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.

K. Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination. Protective clothing and breathing apparatus as specified in the health and safety requirements and in the CONTRACTOR's approved HASP must be worn.

L. Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.

M. ENGINEER's on-site representative: The ENGINEER's representative assigned responsibility and authority by the ENGINEER for day-to-day field surveillance duties.

N. Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by the ENGINEER.

O. Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases and/or vapor, which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials and hazardous conditions.

1.4 RESPONSIBILITIES

The ENGINEER will be responsible for the following:

A. Reviewing the HASP for the acceptability for its personnel and the impact on the site and human health.

B. Reviewing modifications to the HASP.

The CONTRACTOR will be responsible for the following:

A. The CONTRACTOR will perform all work required by the Contract Documents in a safe and environmentally acceptable manner. The CONTRACTOR will provide for the safety of all project personnel and the community for the duration of the Contract.

The CONTRACTOR shall:

A. Employ an SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the CONTRACTOR shall be responsible for obtaining the services of an "alternate" SO
meeting the minimum requirements and qualifications contained herein. No work will proceed on this project in the absence of an approved SO.

B. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract.

C. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations.

D. Be responsible for the implementation of this HASP, and the Emergency Contingency and Response Plan.

E. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary.

F. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the respective emergency services.

G. Have sole and complete responsibility of safety conditions for the project, including safety of all persons (including employees).

H. Be responsible for protecting the project personnel and the general public from hazards due to the exposure, handling, and transport of contaminated materials. Barricades, lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.

I. Ensure all OSHA health and safety requirements are met.

J. Maintain a chronological log of all persons entering the project site. It will include organization, date, and time of entry and exit. Each person must sign in and out.

1.5 HEALTH AND SAFETY PLAN

The HASP is a deliverable product of this project. The ENGINEER will review and comment on the CONTRACTOR's HASP. Agreed upon responses to all comments will be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this contract.

The HASP shall address, at a minimum, the following items in accordance with 29 CFR 1910.120(I)(2):

A. Health and Safety Organization
B. Site Description and Hazard Assessment
C. Training
D. Medical Surveillance
E. Work Areas
F. Standard Operating Safety Procedures and Engineering Controls
G. Personal Protective Equipment (PPE)
H. Personnel Hygiene and Decontamination
I. Equipment Decontamination
J. Air Monitoring
K. Emergency Equipment/First Aid Requirements
L. Emergency Response and Contingency Plan
M. Confined-Space Entry Procedures
N. Spill Containment Plan
O. Heat and Cold Stress
P. Record Keeping
Q. Community Protection Plan.

The following sections will describe the requirements of each of the above-listed elements of the HASP.

1.6 HEALTH AND SAFETY ORGANIZATION

The CONTRACTOR shall list in the HASP a safety organization with specific names and responsibilities. At a minimum, the CONTRACTOR shall provide the services of a Health and Safety Coordinator, SO, Health and Safety Technician, and a Medical Consultant.

Health and Safety Coordinator: The CONTRACTOR must retain the services of a Health and Safety Coordinator (HSC). The HSC must be an American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP). The HSC must have a minimum of two years’ experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations. The HSC must be familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.

In addition to meeting the above requirements the HSC will have the following responsibilities:

A. Responsibility for the overall development and implementation of the HASP.

B. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.

C. Availability during normal business hours for consultation by the Safety Officer.

D. Availability to assist the Safety Officer in follow-up training and if changes in site conditions occur.

Safety Officer: The designated SO must have, at a minimum, two years of experience in the remediation of hazardous waste sites or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have
experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.

In addition to meeting the above qualifications, the SO will be responsible for the following minimum requirements:

A. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.

B. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction, including:

1. Potential hazards.
2. Personal hygiene principles.
3. PPE.
4. Respiratory protection equipment usage and fit testing.
5. Emergency procedures dealing with fire and medical situations.
6. Conduct daily update meetings in regard to health and safety.

C. Responsibility for alerting the ENGINEER's on-site representative prior to the CONTRACTOR starting any particular hazardous work.

D. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).

E. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.

Health and Safety Technicians: The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid. The HST will be under direct supervision of the SO during on-site work. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.

Medical Consultant: The CONTRACTOR is required to retain a Medical Consultant (MC) who is a physician, certified in occupational medicine. The physician shall have experience in the occupational health area and shall be familiar with potential site hazards of remedial action projects. The MC will also be available to provide annual physicals and to provide additional medical evaluations of personnel when necessary.
1.7 SITE DESCRIPTION AND HAZARD ASSESSMENT

The CONTRACTOR shall perform a hazard assessment to provide information to assist in selection of PPE and establish air monitoring guidelines to protect on-site personnel, the environment, and the public. The CONTRACTOR shall provide a general description of the site, its location, past history, previous environmental sampling results, and general background on the conditions present at the site.

A. Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:

1. Nature of potential contaminants
2. Location of potential contaminants at the project site
3. Potential for exposure during site activities; and
4. Effects of potential contaminants on human health.

B. Biological Hazards: A qualitative evaluation of biological hazards consisting of the elements listed for chemical hazards.

C. Physical Hazards: The CONTRACTOR shall assess the potential for physical hazards affecting personnel during the performance of on-site work.

The CONTRACTOR shall develop a hazard assessment for each site task and operation established in the HASP.

1.8 TRAINING

OSHA Training

The CONTRACTOR is responsible to ensure that all project personnel have been trained in accordance with OSHA 1910.120 regulations.

The CONTRACTOR shall ensure that all employees are informed of the potential hazards of toxic chemicals to the unborn child and of the risks associated with working at the project site.

The CONTRACTOR shall be responsible for, and guarantee that, personnel not successfully completing the required training are not permitted to enter the project site to perform work.

Safety Meetings

The SO will conduct daily safety meetings for each working shift that will be mandatory for all project personnel. The meetings will provide refresher courses for existing equipment and protocols and will examine new site conditions as they are encountered.

Additional safety meetings will be held on an as-required basis.

Should any unforeseen or site-specific safety-related factor, hazard, or condition become evident during the performance of work at this site, the CONTRACTOR will bring such to the attention of the SO in writing as quickly as possible for resolution. In the interim, the CONTRACTOR will take prudent
action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.

1.9 MEDICAL SURVEILLANCE

The CONTRACTOR shall utilize the services of a Physician to provide the minimum medical examinations and surveillance specified herein. The name of the Physician and evidence of examination of all CONTRACTOR and Subcontractor on-site personnel shall be kept by the SO.

CONTRACTOR and Subcontractor project personnel involved in this project shall be provided with medical surveillance prior to onset of work. Immediately at the conclusion of this project, and at any time there is suspected excessive exposure to substances that would be medically detectable, all project personnel will be medically monitored. The costs for these medical exams, including state field representatives, (four maximum) are to be borne by the CONTRACTOR.

Physical examinations are required for:

A. Any and all personnel entering hazardous or transition zones or performing work that required respiratory protection.

B. All CONTRACTOR personnel on site who are dedicated or may be used for emergency response purposes in the Exclusion Zone.

C. CONTRACTOR supervisors entering hazardous or transition zones, or on site for more than 16 hours during the length of the contract.

Physical examinations are not required for people making periodic deliveries provided they do not enter hazardous or transition zones.

In accordance with good medical practice, the examining Physician or other appropriate representative of the Physician shall discuss the results of such medical examination with the individual examined. Such discussion shall include an explanation of any medical condition that the Physician believes required further evaluation or treatment and any medical condition which the Physician believes would be adversely affected by such individual's employment at the project site. A written report of such examination shall be transmitted to the individual's private physician upon written request by the individual.

The examining Physician or Physician group shall notify the SO in writing that the individual has received a medical examination and shall advise the SO as to any specific limitations upon such individual's ability to work at the project site that were identified as a result of the examination. Appropriate action shall be taken in light of the advice given pursuant to this subparagraph.

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)

K. Complete medical history.

1.10 SITE CONTROL

Security

Security shall be provided and maintained by the CONTRACTOR as specified in Section 00011. Security identification, specific to the project site, shall be provided by the CONTRACTOR for all project personnel entering the project site. The CONTRACTOR shall be responsible for and ensure that such identification shall be worn by each individual, visible at all times, while the individual is on the site. Vehicular access to the site, other than to designated parking areas, shall be restricted to authorized vehicles only.

Use of on-site designated parking areas shall be restricted to vehicles of the ENGINEER, ENGINEER's on-site representative, CONTRACTOR, subcontractor, and service personnel assigned to the site and actually on duty but may also be used on short-term basis for authorized visitors.

The CONTRACTOR shall be responsible for maintaining a log of security incidents and visitor access granted.
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.

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.

Site visitors shall not be permitted to enter the hazardous work zone unless approved by the **DEPARTMENT** with appropriate site access agreement.

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.

**Site Control**

The **CONTRACTOR** shall provide the following site control procedures as a minimum:

- A site map
- A map showing site work zones
- A map showing route to hospital
- The use of a "buddy system"
- Standard operating procedures or safe work practices.

**Work Areas**

The **CONTRACTOR** will clearly lay out and identify work areas in the field and will limit equipment, operations and personnel in the areas as defined below:

A. Exclusion Zone (EZ) – This will include all areas where potential environmental monitoring has shown, or it is suspected that a potential hazard may exist to workers. The level of PPE required in these areas will be determined by the SO after air monitoring and on-site inspection has been conducted. The area will be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The Exclusion Zone will be delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing).

B. Contamination Reduction Zone – This zone will occur at the interface of "Hazardous" and "Clean" areas and will provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and clothing prior to entering the "Clean" area, and for the physical segregation of the "Clean" and "Hazardous" areas. This area will contain all required emergency equipment, etc. This area will be clearly delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing). It shall also delineate an area that although not contaminated at a particular time may become so at a later date.
C. Support Zone – This area is the remainder of the work site and project site. The Support Zone will be clearly delineated, and procedures implemented to prevent active or passive contamination from the work site. The function of the Support Zone includes:

1. An entry area for personnel, material and equipment to the Exclusion Zone of site operations through the Contamination Reduction Zone

2. An exit for decontamination personnel, materials and equipment from the "Decontamination" area of site operations

3. The housing of site special services; and

4. A storage area for clean, safety, and work equipment.

1.11 STANDARD OPERATING SAFETY PROCEDURES, ENGINEERING CONTROLS

GENERAL SOP

A. The CONTRACTOR will ensure that all safety equipment and protective clothing is kept clean and well maintained.

B. All prescription eyeglasses in use on this project will be safety glasses and will be compatible with respirators. No contact lenses shall be allowed on site.

C. All disposable or reusable gloves worn on the site will be approved by the SO.

D. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.

E. 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.

F. All PPE used on site will be decontaminated or disposed of at the end of the work day. The SO will be responsible for ensuring decontamination of PPE before reuse.

G. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.

H. 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.
I. The **CONTRACTOR** will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.

J. On-site personnel found to be disregarding any provision of this plan will, at the request of the SO, be barred from the project.

K. Used disposable outerwear such as coveralls, gloves, and boots shall not be reused. Used disposable outerwear will be removed upon leaving the hazardous work zone and will be placed inside disposable containers provided for that purpose. These containers will be stored at the site at the designated staging area and the **CONTRACTOR** will be responsible for proper disposal of these materials at the completion of the project. This cost shall be borne by the **CONTRACTOR**.

L. Protective coveralls that become torn or badly soiled will be replaced immediately.

M. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.

N. All personnel will thoroughly cleanse their hands, face, and forearms and other exposed areas prior to eating, smoking or drinking.

O. Workers who have worked in a hazardous work zone will shower at the completion of the work day.

P. All personnel will wash their hands, face, and forearms before using toilet facilities.

Q. No alcohol, firearms or drugs (without prescriptions) will be allowed on site at any time.

R. 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.

**Engineering Controls - Air Emissions**

The **CONTRACTOR** shall provide all equipment and personnel necessary to monitor and control air emissions.

**1.12 Personal Protective Equipment**

**General**

The **CONTRACTOR** shall provide all project personnel with the necessary safety equipment and protective clothing, taking into consideration the chemical wastes at the site. The **CONTRACTOR** shall supply the ENGINEER'S on-site personnel (average two people for the project duration) with PPE as specified. The ENGINEER will require specific manufacturers and styles of PPE, which are detailed in the Safety Equipment Specifications portion of this section. At a minimum, the **CONTRACTOR** shall supply all project personnel with the following:
A. Two (2) sets of cotton work clothing to include underwear, socks, work shirts, and work pants. Leather steel-toed work boots, and such other clothing and outer garments as required by weather conditions (e.g., insulated coveralls and winter jacket);

B. Sufficient disposable coveralls;

C. One pair splash goggles;

D. Chemical-resistant outer and inner gloves;

E. Rubber overshoes (to be washed daily);

F. Hard hat;

G. U.S. Coast Guard-approved personal floatation device (PFD) or buoyant work vest, if required per OSHA Standard 29 CFR 1926.106;

H. One full-face mask with appropriate canisters. The ENGINEER and the DEPARTMENT will supply their own full-face mask. The CONTRACTOR will supply the appropriate canisters to all on-site project personnel including the ENGINEER and the DEPARTMENT. The CONTRACTOR shall supply MSA canisters; and

I. For all project personnel involved with Level B protection, a positive-pressure SCBA or in-line air. A 5-minute escape bottle must be included with the in-line air apparatus.

Levels of Protection

It is planned that Levels C and D PPE will be required in this remediation. Although Levels A and B are not planned, site conditions may be encountered that require their use. The following sections described the requirements of each level of protection.

A. Level A Protection

1. PPE:

   a. Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and NIOSH. Respirators may be:

      • Positive-pressure SCBA; or
      • Positive-pressure airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere).

   b. Fully encapsulating chemical-resistant suit.

   c. Coveralls.
d. Cotton long underwear.*

e. Gloves (inner), chemical-resistant.

f. Boots, chemical-resistant, steel toe and shank. (Depending on suit construction, worn over or under suit boot.)

g. Hard hat (under suit).*

h. Disposal gloves and boot covers (worn over fully encapsulating suit).

i. Cooling unit.*

j. Two-way radio communications (inherently safe).*

* Optional

2. Criteria for Selection:

Meeting any of these criteria warrants use of Level A protection:

a. The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on:
   • Measures (or potential for) high concentration of atmospheric vapors, gases, or particulates, or
   • Site operations and work functions involves high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials highly toxic to the skin.

b. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible.

c. Operations must be conducted in confined, poorly ventilated areas until the absence of substances requiring Level A protection is determined.

d. Direct readings on field Flame Ionization Detectors (FID) or Photoionization Detectors (PID) and similar instruments indicate high levels of unidentified vapors and gases in the air.

3. Guidance on Selection:
a. Fully encapsulating suits are primarily designed to provide a gas- or vapor-tight barrier between the wearer and atmospheric contaminants. Therefore, Level A is generally worn when high concentrations of airborne substances could severely affect the skin. Since Level A requires the use of SCBA, the eyes and respiratory system are also more protected.

Until air surveillance data become available to assist in the selection of the appropriate level of protection, the use of Level A may have to be based on indirect evidence of the potential for atmospheric contamination or other means of skin contact with severe skin affecting substances.

Conditions that may require Level A protection include:

• Confined spaces: Enclosed, confined, or poorly ventilated areas are conducive to the buildup of toxic vapors, gases, or particulates. (Explosive or oxygen-deficient atmospheres are also more probable in confined spaces). Confined-space entry does not automatically warrant wearing Level A protection but should serve as a cue to carefully consider and to justify a lower level of protection.

• Suspected/known highly toxic substances: Various substances that are highly toxic, especially skin absorption, for example, fuming corrosives, cyanide compounds, concentrated pesticides, DEPARTMENT of Transportation Poison "A" materials, suspected carcinogens, and infectious substances may be known or suspected to be involved. Field instruments may not be available to detect or quantify air concentrations of these materials. Until these substances are identified and concentrations measured, maximum protection may be necessary.

• Visible emissions: Visible air emissions from leaking containers or railroad/vehicular tank cars, as well as smoke from chemical fires and others, indicate high potential for concentrations of substances that could be extreme respiratory or skin hazards.

• Job Functions: Initial site entries are generally walk-throughs, in which instruments and visual observations are used to make a preliminary evaluation of the hazards.

In initial site entries, Level A should be worn when:

• There is a probability for exposure to high concentrations of vapors, gases, or particulates; and
• Substances are known or suspected of being extremely toxic directly to the skin or by being absorbed.

Subsequent entries are to conduct the many activities needed to reduce the environmental impact of the incident. Levels of protection for later operations are based not only on data obtained from the initial and subsequent environmental monitoring, but also on the probability of contamination and ease of decontamination.

Examples of situations where Level A has been worn are:

• Excavating of soil to sample buried drums suspected of containing high concentrations of dioxin;
• Entering a cloud of chlorine to repair a valve broken in a railroad accident;
• Handling and moving drums known to contain oleum; and
• Responding to accidents involving cyanide, arsenic, and undiluted pesticides.

b. The fully encapsulating suit provides the highest degree of protection to skin, eyes, and respiratory system if the suit material resists chemicals during the time the suit is worn. While Level A provides maximum protection, all suit material may be rapidly permeated and degraded by certain chemicals from extremely high air concentrations, splashes, or immersion of boots or gloves in concentrated liquids or sludges. These limitations should be recognized when specifying the type of fully encapsulating suit. Whenever possible, the suit material should be matched with the substance it is used to protect against.

B. Level B Protection

1. PPE:
   a. Positive-pressure SCBA (MSHA/NIOSH approved); or
   b. Positive-pressure air-line respirator (with escape bottle for IDLH or potential for IDLH atmosphere) MSHA/NIOSH approved;
   c. Chemical-resistant clothing (overalls and long-sleeved jacket; coveralls or hooded, one- or two-piece chemical-splash suit; disposable chemical-resistant, one-piece suits);
   d. Cotton long underwear;*
e. Coveralls;
f. Gloves (outer), chemical-resistant;
g. Gloves (inner), chemical-resistant;
h. Boots (inner), leather work shoe with steel toe and shank;
i. Boots (outer), chemical-resistant, (disposable);
j. Hard hat (face shield*);
k. 2-way radio communication; * and
l. Taping between suit and gloves, and suit and boots.

*Optional

2. Criteria for Selection:

Any one of the following conditions warrants use of Level B Protection:

a. The type and atmospheric concentration of toxic substances have been identified and require a high level of respiratory protection, but less skin protection than Level A. These atmospheres would:

   • Have IDLH concentrations; or
   • Exceed limits of protection afforded by an air-purifying mask; or
   • Contain substances for which air-purifying canisters do not exist or have low removal efficiency; or
   • Contain substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard.

b. The atmosphere contains less than 19.5% oxygen.

c. Site operations make it highly unlikely that the work being done will generate high concentrations of vapors, gases or particulates, or splashes of material that will affect the skin of personal wearing Level B protection.

d. Working in confined spaces.

e. Total atmospheric concentrations, sustained in the breathing zone, of unidentified vapors or gases range from 5 ppm above background to 500 ppm above background as measured by direct
reading instruments such as the FID or PID or similar instruments, but vapors and gases are not suspected of containing high levels of chemicals toxic to skin.

3. Guidance on Selection Criteria:

Level B equipment provides a reasonable degree of protection against splashes and to lower air contaminant concentrations, but a somewhat lower level of protection to skin than Level A. The chemical-resistant clothing required in Level B is available in a wide variety of styles, materials, construction detail, permeability, etc. Taping joints between the gloves, boots and suit, and between hood and respirator reduces the possibility for splash and vapor or gas penetration. These factors all affect the degree of protection afforded. Therefore, the SO should select the most effective chemical-resistant clothing based on the known or anticipated hazards and/or job function. (It is anticipated that Level B protection will not be required under this contract.)

Level B does provide a high level of protection to the respiratory tract. Generally, if SCBA is required, Level B clothing rather than a fully encapsulating suit (Level A) is selected based on needing less protection against known or anticipated substances affecting the skin. Level B skin protection is selected by:

a. Comparing the concentrations of known or identified substances in air with skin toxicity data;

b. Determining the presence of substances that are destructive to or readily absorbed through the skin by liquid splashes, unexpected high levels of gases, vapor or particulates, or other means of direct contact; and

c. Assessing the effect of the substance (at its measured air concentrations or splash potential) on the small area of the head and neck left unprotected by chemical-resistant clothing.

For initial site entry at an open site, Level B protection should protect site personnel, providing the conditions described in selecting Level A are known or judged to be absent.

C. Level C Protection

1. PPE

a. Full-face, air-purifying, cartridge- or canister-equipped respirator (MSHA/NIOSH approved) with cartridges appropriate for the respiratory hazards;

b. Chemical-resistant clothing (coveralls, hooded, one-piece or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls);
c. Coveralls;
d. Cotton long underwear; *
e. Gloves (outer), chemical-resistant;
f. Gloves (inner), chemical-resistant;
g. Boots (inner), leather work shoes with steel toe and shank;
h. Boots (outer), chemical-resistant (disposable); *
i. Hard hat (face shield); *
j. Escape SCBA of at least 5-minute duration;
k. 2-way radio communications (inherently safe); * and
l. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection

Meeting all of these criteria permits use of Level C protection:

a. Measured air concentrations of identified substances will be reduced by the respirator to, at or below, the substance's Threshold Limit Value (TLV) or appropriate occupational exposure limit and the concentration is within the service limit of the canister.

b. Atmospheric contaminant concentrations do not exceed IDLH levels.

c. Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect the small area of the skin left unprotected by chemical-resistant clothing.

d. Job functions do not require SCBA.

e. Total readings register between background and 5 ppm above background as measured by instruments such as the FID or PID.

f. Oxygen concentrations are not less than 19.5% by volume.

g. Air will be monitored continuously.

3. Guidance on Selection Criteria
Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing air-purifying devices. The air-purifying device must be a full-face mask (MSHA/NIOSH approved) equipped with a cartridge suspended from the chin or on a harness. Cartridges must be able to remove the substances encountered.

A full-face, air-purifying mask can be used only if:

a. Oxygen content of the atmosphere is at least 19.5% by volume;

b. Substance(s) is identified and its concentrations(s) measured;

c. Substance(s) has adequate warning properties;

d. Individual passes a qualitative fit-test for the mask; and

e. Appropriate cartridge is used, and its service limits concentration is not exceeded.

An air monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators (Level C). Continual surveillance using direct-reading instruments and air sampling is needed to detect any changes in air quality necessitating a higher level of respiratory protection. Total unidentified vapor/gas concentrations exceeding 5 ppm above background require Level B.

D. Level D Protection

1. PPE:

a. Coveralls, chemical resistant;

b. Gloves (outer), chemical resistant;

c. Gloves (inner), chemical resistant; *

d. Boots (inner), leather work shoes with steel toe and shank;

e. Boots (outer), chemical resistant (disposable); *

f. Hard hat;

g. Face shield; *

h. Safety glasses with side shields or chemical splash goggles; * and
i. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection:

a. No atmospheric contaminant is present.

b. Direct reading instruments do not indicate any readings above background.

c. Job functions have been determined not to require respirator protection.

3. Guidance on Selection Criteria:

   Level D protection is distinguished from Level C protection in the requirement for respiratory protection. Level D is used for non-intrusive activities or intrusive activities with continuous air monitoring. It can be worn only in areas where there is no possibility of contact with contamination.

E. Anticipated Levels of Protection

   It is anticipated that most of the work shall be performed in Level D. A respirator shall be immediately available in the event that air monitoring indicates an upgrade to Level C is required. The determination of the proper level of protection for each task shall be the responsibility of the CONTRACTOR. These task specific levels of protection shall be stated in the CONTRACTOR's HASP.

Safety Equipment Specifications

Note: Prior to purchasing any equipment or supplies required by this HASP, the CONTRACTOR shall notify the ENGINEER of the type, model and manufacturer/supplier of that particular safety equipment he is proposing to use or purchase for use on this project. The specifications for PPE that the CONTRACTOR is to supply to the ENGINEER and which differ from the minimum requirements shown below are provided at the end of this section.

Self-Contained Breathing Apparatus

The CONTRACTOR shall provide positive-pressure SCBA for possible upgrades in respiratory protection. The CONTRACTOR shall further supply all the SCBA for all field personnel for the duration of normal work activities. The units must be a MSHA/NIOSH-approved pressure-demand type with a 30-minute service life, manufactured/supplied by Scott, MSA, or other appropriate manufacturers. The CONTRACTOR shall inspect and maintain respirators in accordance with OSHA regulations (29 CFR 1910.134) and as recommended by the manufacturer.
Disposable Coveralls

The CONTRACTOR shall provide, as necessary, protective coveralls for all project personnel each day with extra sets provided for authorized visitors. The coveralls shall be of the disposable type made of Tyvek or equivalent material, and shall be manufactured/supplied by Durafab, Koppler, or other appropriate manufacturers. To protect project personnel from exposure to liquids, splash-resistant suits (Saranex suits, from appropriate manufacturers) shall be provided. Ripped suits will be immediately replaced after all necessary decontamination has been completed to the satisfaction of the SO.

Hard Hat

The CONTRACTOR shall provide and maintain one hard hat per person on site (authorized visitors included). The hard hats shall comply with OSHA Health and Safety Standards (29 CFR 1910.135).

U.S. Coast Guard-approved Personal Floatation Device or Buoyant Work Vests

The CONTRACTOR shall provide and maintain one PFD per person working on or near water (29 CFR 1926.106). The PFDs or work vests shall be inspected for defects which would alter their strength or buoyancy prior to and after each use.

Face Shields

The CONTRACTOR shall provide and maintain one face shield per person on site. The face shields shall be of the full-face type meeting OSHA Health and Safety Standards (29 CFR 1910.133) and shall have brackets for mounting on hard hats. Hard hats and face shields shall be from the same manufacturer to ensure proper fit and shall be manufactured/supplied by Bullard, Norton, or other appropriate manufacturers.

Work Clothing

The CONTRACTOR shall provide a minimum of two sets of work clothing per personnel to allow for changing if contaminated. The work clothing shall include a minimum of underwear, socks, work shirts, work pants, and other clothing as weather conditions dictate. All work clothes shall be put on clean, before entering the site and shall not be kept in same lockers as the workers street clothes. All project personnel shall shower and change to street clothing prior to leaving the site. All contaminated work clothing shall be laundered on site with wash water drained to the decontamination water holding tank.

Escape-Type Respirator

The CONTRACTOR shall provide and maintain one self-contained breathing escape-type respirator per person working on site. The small self-contained device shall be capable of providing oxygen to the worker while protecting an escaping worker from toxic gases. The respirator shall be made by Scott, MSA, or other appropriate manufacturer. The CONTRACTOR shall inspect and ensure all devices are in working order before issuing to personnel. Employees must be trained to use equipment prior to being allowed to work on site and carry the escape-type respirator with them. An escape-type respirator must be provided if positive-pressure SCBA are not part of the ensemble worn by each person on site.
Full Face Organic Vapor Respirator

The CONTRACTOR shall provide and maintain a dedicated air-purifying organic vapor respirator per person working in hazardous work and neutral work zones. The respirator shall be of the full-face canister type with cartridges appropriate for the respiratory hazards. Respirators and cartridges shall be MSHA/NIOSH approved, manufactured/supplied by MSA, Scott, or other appropriate manufacturers. The CONTRACTOR shall inspect and maintain respirators and canisters in accordance with OSHA regulations (29 CFR 1910.134) and in accordance with manufacturer's instructions. The CONTRACTOR shall ensure that proper fit testing training and medical surveillance of respirator users is in accordance with OSHA regulations (29 CFR 1910.134).

Gloves (outer)

The CONTRACTOR shall supply a minimum of one pair of gloves per workman in areas where skin contact with hazardous material is possible. Work gloves shall consist of nitrile (NCR) or Neoprene material. Other gloves may be selected if required based on the potential chemical present. Cotton liners will be provided by the CONTRACTOR during cold weather.

Gloves (inner)

The CONTRACTOR shall supply Latex or equivalent surgical gloves to be worn inside the outer gloves.

Boots (inner)

The CONTRACTOR shall supply one pair of safety shoes or boots per workman and shall be of the safety-toe type meeting the requirements of 29 CFR 1910.136.

Boots (outer)

The CONTRACTOR shall provide and maintain one pair of overshoes for the on-site person entering a hazardous work area. The overshoes shall be constructed of rubber and shall be 12 inches high minimum.
<table>
<thead>
<tr>
<th>Description</th>
<th>Manufacturer</th>
<th>Model Number</th>
<th>Size</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyvek coveralls</td>
<td>Kappler/Abanda</td>
<td>1427/1428</td>
<td>xl/lg</td>
<td>NA</td>
</tr>
<tr>
<td>Saranex coveralls</td>
<td>Kappler/Abanda</td>
<td>77427/77428/77434</td>
<td>xl/lg</td>
<td>NA</td>
</tr>
<tr>
<td>Sijal acid suit</td>
<td>Chemtex Bata</td>
<td>91522-G</td>
<td>xl/lg</td>
<td>NA</td>
</tr>
<tr>
<td>Surgical gloves</td>
<td>Best</td>
<td>7005</td>
<td>xl/lg</td>
<td>NA</td>
</tr>
<tr>
<td>Neoprene gloves</td>
<td>Edmont</td>
<td>8-354</td>
<td>xl/lg</td>
<td>NA</td>
</tr>
<tr>
<td>Nitrile gloves</td>
<td>Granet</td>
<td>1711</td>
<td>10</td>
<td>NA</td>
</tr>
<tr>
<td>Butyl gloves</td>
<td>North</td>
<td>B-161</td>
<td>10</td>
<td>NA</td>
</tr>
<tr>
<td>Viton gloves</td>
<td>North</td>
<td>F-124</td>
<td>10/11</td>
<td>NA</td>
</tr>
<tr>
<td>Long gauntlet neoprene</td>
<td>Edmont</td>
<td>19-938</td>
<td>xl</td>
<td>NA</td>
</tr>
<tr>
<td>Cotton work gloves</td>
<td>North</td>
<td>Grip-N/K511M</td>
<td>men's</td>
<td>or equal</td>
</tr>
<tr>
<td>Latex booties</td>
<td>Rainfair</td>
<td>1250-Y</td>
<td>xl</td>
<td>NA</td>
</tr>
<tr>
<td>PAPR pesticide cartridges</td>
<td>Racal</td>
<td>AP-3</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>PAPR asbestos cartridges</td>
<td>Racal</td>
<td>SP-3</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>APR organic cartridges</td>
<td>MSA</td>
<td>GMC-H</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>APR asbestos cartridges</td>
<td>MSA</td>
<td>Type H</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>APR pesticide cartridges</td>
<td>MSA</td>
<td>GMP</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

1.13 Personnel Hygiene and Decontamination

On-Site Hygiene Facility

The CONTRACTOR shall provide a hygiene facility on site. The hygiene facility shall include the following:

- Adequate lighting and heat;
- Shower facilities for project personnel;
- Laundry facilities for washing work clothes and towels;
- Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
- Clean and "dirty" locker facilities; and
• Storage area for work clothing, etc.

**Portable "Boot Wash" Decontamination Equipment**

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.

**Personnel Decontamination**

The **CONTRACTOR** shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.

**Disposal of Spent Clothing and Material**

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.

Containers/55-gallon capacity drums shall conform to the requirements of 40 CFR Part 178 for Transportation of Hazardous Materials. The containers/drums containing excavated and other hazardous material shall be transported by the **CONTRACTOR** to the staging area.

The **CONTRACTOR** is responsible for the proper container packaging, labeling, transporting, and disposal.

**1.14 Equipment Decontamination**

**General**

All equipment and material used in this project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. With the exception of the excavated materials, all other contaminated debris, clothing, etc. that cannot be decontaminated shall be disposed at the **CONTRACTOR's** expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization the unit prices bid for disposal of decontamination liquids or as otherwise directed on this project. All vehicles and equipment used in the "Dirty Area" will be decontaminated to the satisfaction of the SO in the decontamination area on site prior to leaving the project. The **CONTRACTOR** will certify, in writing, that each piece of equipment has been decontaminated prior to removal from the site.

Decontamination shall take place within the designated equipment and materials decontamination area. The decontamination shall consist of degreasing (if required), followed by high-pressure, hot-water cleaning, supplemented by detergents as appropriate. Wash units shall be portable, high-pressure with a self-contained water storage tank and pressurizing system (as required). Each unit shall be capable of heating wash waters to 180 degrees Fahrenheit and providing a nozzle pressure of 150 psi.
Personnel engaged in vehicle decontamination will wear protective clothing and equipment as determined in the HASP. If the CONTRACTOR cannot or does not satisfactorily decontaminate his tools or equipment at the completion of the project, the CONTRACTOR will dispose of any equipment which cannot be decontaminated satisfactorily and will bear the cost of such tools and equipment and its disposal without any liability to the ENGINEER. At the completion of the project the CONTRACTOR shall completely decontaminate and clean the decontamination area.

Decontamination Station

The CONTRACTOR shall construct a decontamination station as shown on the Contract Drawings. The decontamination station shall be located in the Contamination Reduction Zone and shall be used to clean all vehicles leaving the Exclusion Zone prior to entering the Support Zone or leaving the site.

1.15 Air Monitoring Program

General

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.

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. 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.

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.

To protect the public in the neighboring residential neighborhood, the CONTRACTOR must include in the AMP provisions for suspending work and implementing engineering controls based upon detectable odors, as well as upon instrument monitoring results.

During the progress of active remedial work, the CONTRACTOR will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work site will be conducted on a continuous basis. Any departures from general background will be reported to the SO prior to entering the area. The SO will determine when and if operations should be shut down.

Air monitoring (both real time and documentation monitoring) shall be conducted by a minimum of one dedicated person with communication to the foreman whenever intrusive activities (such as excavation, tank removal, and soil treatment) are performed in an exclusion zone. After
completion of intrusive activities involving contaminated materials and removal of the exclusion zone, air monitoring may be discontinued.

Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the ENGINEER's on-site representative.

**Action Levels**

The CONTRACTOR is responsible for developing level of protection site action levels for organic vapors and/or inorganic species.

The SO, CONTRACTOR, and their personnel will be responsible for implementing, maintaining and enforcing the respirator program.

In addition to these on-site action levels, the following action levels will be established for work area and perimeter monitoring of particulates. If the following levels are attained at the perimeter of the exclusion zone, then work will cease until engineering controls bring levels down to acceptable limits. These levels are general and shall be used as minimum action levels. The CONTRACTOR shall develop site-specific work area and perimeter monitoring action levels based on contaminants found in the work areas.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Action Level</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total particulates</td>
<td>2.5 times background and/or greater than 150 μg/m³</td>
<td>Work ceases until mitigated</td>
</tr>
<tr>
<td>Visible Dust</td>
<td>Visible dust as determined by the ENGINEER.</td>
<td>Work ceases until mitigated</td>
</tr>
</tbody>
</table>

The following action levels shall be used as minimum action levels for organic vapors and odors.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Action Level</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Organic Vapors</td>
<td>5 ppm at work zone</td>
<td>Workers use respirators</td>
</tr>
<tr>
<td></td>
<td>25 ppm at work zone</td>
<td>Work ceases until mitigated</td>
</tr>
<tr>
<td>Odors</td>
<td>Noticeable odors outside the exclusion zone as determined by the ENGINEER.</td>
<td>Work ceases until mitigated</td>
</tr>
</tbody>
</table>

(Continued on next page)
Real-Time Monitoring

The CONTRACTOR shall submit a written copy of the real time air monitoring results for each Workday, by 10:00 a.m. the following Workday, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

Real-time monitoring shall be conducted using the following equipment:

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.

Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPD-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM$_{10}$) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols
Measurement Ranges: 0.001 to 400 mg/m$^3$ (1 to 400,000 μg/m$^3$)
Precision (2-sigma) at constant temperature:
+/- 10 μg/m$^3$ for one second averaging; +/- 1.5 μg/m$^3$ for sixty second averaging
Accuracy:
+/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 μm, g= 2.5, as aerosolized)
Resolution: 0.1% of reading or 1 μg/m$^3$, whichever is larger
Particle Size Range of Maximum Response: 0.1-10 μ
Total Number of Data Points in Memory: 10,000
Logged Data:
Each Data Point: average concentration, time/date, and data point number
Run Summary:
overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
Alarm Averaging Time (user selectable):
real-time (1-60 seconds) or STEL (15 minutes)
Operating Time: 48 hours (fully charged NiMH battery); continuously with charger
Operating Temperature: -10 to 50°C (14 to 122°F)

Automatic alarms are suggested.

Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although
the instrument’s design does not allow it to make a sharp differentiation of particulates at the PM\textsubscript{10} standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10\(\mu\) range in the immediate vicinity of construction activities.

Monitor the air, using the same equipment, for 10-15 minutes upwind of the work site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m\(^3\) or 2.5 times the established background level at the work site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m\(^3\) above background, monitor the downwind site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m\(^3\) above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m\(^3\) over background concentration, the CONTRACTOR shall immediately suspend work at the site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.

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 the CONTRACTOR action levels have been exceeded at the excavation face or at a minimum of twice a day.

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.

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 PM\textsubscript{10} 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.

### Documentation Monitoring

Documentation monitoring will be conducted at the perimeter at a minimum of four locations (one upwind and three downwind) for total dust. Documentation monitoring will be conducted only during excavation, consolidation, staging, removal, or decontamination activities (i.e., intrusive activities).

A. Collect total nuisance dust using PVC collection filter and personnel sampling pump and analyze gravimetrically according to NIOSH 89-127 Method 0500.

B. Documentation samples will be collected at established perimeter locations. The four locations will be chosen according to site activities and expected wind direction.
C. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site. Samples will be collected at a height of 6 feet above ground surface.

D. Documentation samples will be collected continuously, during the normal work hours when activities are occurring on site. At the end of the week two samples will be selected by the ENGINEER for analysis.

E. The documentation samples will be collected over an eight (8) hour work period.

F. In addition to perimeter monitoring, personnel documentation samples will be collected on site once a week. On-site samples will be collected by choosing “high risk” workers to wear appropriate collection media for pesticides, metals, and particulate. “High risk” workers are those who are most likely to encounter contamination on a particular task. At a minimum, two high risk workers will be chosen to wear collection media for a particular day each week and the media will be analyzed with the documentation air monitoring samples.

G. The CONTRACTOR shall submit a written copy of the documentation air monitoring results within 7 days of sampling, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

H. The documentation sampling submitted shall also identify the “high risk” workers chosen to wear appropriate collection media for contaminants; date media was worn; task involved; analytical results and applicable standards.

I. Payment for air monitoring will not be approved until the above submittals have been received and approved by the ENGINEER.

Community Air Monitoring

Real-time air monitoring, for particulate levels at the perimeter of the work area is necessary:

A. Particulates should be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 150 ug/m³ greater than the upwind particulate level, then dust suppression techniques must be employed. All readings must be recorded and be available for ENGINEER's review.

The CONTRACTOR shall install a meteorological station on site that will be capable of recording, at a minimum, wind velocity and direction.

1.16 Emergency Equipment and First Aid Requirements

Communications

The CONTRACTOR shall provide telephone communication at the site field office. Emergency numbers, such as police, sheriff, fire, ambulance, hospital, poison control, NYSDEC, EPA, NYSDOH, and utilities, applicable to this site shall be prominently posted near the telephone.
The CONTRACTOR shall establish a signaling system for emergency purposes.

Emergency Shower and Emergency Eye Wash

The CONTRACTOR shall supply and maintain one portable eyewash/body wash facility per active hazardous work zone. The facility shall have a minimum water capacity of 10 gallons and shall conform to OSHA regulations 29 CFR 1910.151. The portable eyewash/body wash facility shall be manufactured/supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

Fire Extinguishers

The CONTRACTOR shall supply and maintain at least one fire extinguisher in the CONTRACTOR's office and one at each hazardous work zone. The fire extinguisher shall be a 20-pound Class ABC dry fire extinguisher with UL-approval per OSHA Safety and Health Training Standards 29 CFR 1910.157. The fire extinguisher shall be manufactured/supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

First Aid Kit

The CONTRACTOR shall supply and locate in his project office and at each and every hazardous work zone one 24-unit (minimum size) "industrial" or "Contractor" first aid kit, required by OSHA requirements 29 CFR 1910.151. The first aid kit shall be manufactured/supplied by Norton, Scott, or other appropriate suppliers.

Emergency Inventory

In addition to those items specified elsewhere, the SO will maintain the following inventory of equipment and protective clothing for use at the site in the event of emergencies.

a. Washable coveralls;
b. Gloves (outer);
c. Gloves (inner);
d. SCBA;
e. Escape SCBA (authorized visitor use);
f. Face shields;
g. Safety glasses;
h. Respirators and appropriate cartridges;
i. Disposable coveralls;
j. Chemical-resistant boots and latex boot covers;
k. Hard hats;
1. Bottled breathing air; and
m. Rain suits.

1.17 Emergency Responses/contingency Plan and Procedures

Daily Work

During the progress of work, the CONTRACTOR will monitor the quality of the air in and around each active hazardous operation prior to personnel entering these areas. Sampling shall be conducted on a continuous basis. Based on the air monitoring data, the proper level of protection will be chosen by the SO.

Emergency Vehicle Access

In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is blocked by the working crew operations, those operations (equipment, materials, etc.) will be immediately moved to allow those vehicles access. Emergency crews will be briefed as to site conditions and hazards by the SO. All vehicles and personnel will be decontaminated prior to leaving the site.

The CONTRACTOR shall schedule a site briefing with the local Fire Department at the completion of mobilization to familiarize emergency response personnel with his operations and site layout.

Personal Injury Response Plan

In cases of personal injuries, the injured person or the crew personnel in charge will notify the SO. The SO will assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO will arrange for an ambulance if required.

If soiled clothing cannot be removed, the injured person will be wrapped in blankets for transportation to the hospital.

Personnel, including unauthorized personnel, having skin contact with chemically contaminated liquids or soils shall be flushed with water after any wet or soiled clothing has been removed.

These personnel should be observed by the SO to ascertain whether there are any symptoms resulting from the exposure. If there is any visible manifestation of exposure such as skin irritation, the project personnel will refer to a consulting physician to determine whether the symptoms were the result of a delayed or acute exposure, a secondary response to exposure such as skin infection, or occupational dermatitis. All episodes of obvious chemical contamination will be reviewed by the SO in order to determine whether changes are needed in work procedures.

Route to the Hospital

The CONTRACTOR shall post in conspicuous places in the Support Zone a map with written directions to the nearest hospital or emergency medical treatment facility.
Fire Service

The CONTRACTOR will make arrangements to take immediate firefighting and fire protection measures with the local Fire Chief. If there is a fire, the crewmen or their person in charge will immediately call the SO. The SO will immediately call the fire personnel.

The air downwind from any fire or explosion will be monitored immediately in order to protect workers and the nearby community. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan are to be followed.

Master Telephone List

The attached master telephone list will be completed and prominently posted at the field office. The list will have telephone numbers of all project personnel, emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the DEPARTMENT for emergency reference purposes.

<table>
<thead>
<tr>
<th>Emergency Service</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Department</td>
<td>911</td>
</tr>
<tr>
<td>Police Department</td>
<td>911</td>
</tr>
<tr>
<td>Ambulance</td>
<td>911</td>
</tr>
<tr>
<td>Hospital/Emergency Care Facility</td>
<td>(631) 376-3000</td>
</tr>
<tr>
<td>(Good Samaritan Hospital)</td>
<td></td>
</tr>
<tr>
<td>Poison Control Center</td>
<td>(800) 336-6997</td>
</tr>
<tr>
<td>Chemical Emergency Advice</td>
<td>(800) 424-9300</td>
</tr>
<tr>
<td>(CHEMTREC)</td>
<td></td>
</tr>
<tr>
<td>NYSDEC Albany Office</td>
<td>(518) 457-7878</td>
</tr>
<tr>
<td>Work Hours After Hours</td>
<td>(800) 342-9296</td>
</tr>
<tr>
<td>Suffolk County Dept. of Health</td>
<td>(631) 854-0000</td>
</tr>
<tr>
<td>New York State Dept. of Health - Albany</td>
<td>(518) 402-7890</td>
</tr>
</tbody>
</table>

1.18 Heat Stress Monitoring

Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion, and heat stroke can be experienced, which, if not remedied, can threaten life or health. Therefore, an American Red Cross Standard First Aid book or equivalent will be maintained on site at all times so that the SO and site personnel will be able to recognize symptoms of heat emergencies and be capable of controlling the problem.

When protective clothing is worn, especially Levels A and B, the suggested guidelines for ambient temperature and maximum wearing time per excursion are:
<table>
<thead>
<tr>
<th>Ambient Temperature (F)</th>
<th>Maximum Wearing Time Per Excursion (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 90</td>
<td>15</td>
</tr>
<tr>
<td>85 to 90</td>
<td>30</td>
</tr>
<tr>
<td>80 to 85</td>
<td>60</td>
</tr>
<tr>
<td>70 to 80</td>
<td>90</td>
</tr>
<tr>
<td>60 to 70</td>
<td>120</td>
</tr>
<tr>
<td>50 to 60</td>
<td>180</td>
</tr>
</tbody>
</table>

One method of measuring the effectiveness of employees' rest-recovery regime is by monitoring the heart rate. The "Brouha guideline" is one such method:

- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minute.

- Double the count.

If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.

In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages will return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard.

This liquid refreshment will be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:

A. Personnel shall wash and rinse their outer gloves and remove them.

B. Personnel shall remove their hard hats and respirators and place on table.

C. Personnel shall remove their inner gloves and place them on table.

D. Personnel shall wash and rinse their face and hands.

E. Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.
F. The used bottle or cups will not be returned to the cooler but will be placed in a receptacle or container to be cleaned or disposed of.

G. Personnel shall replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

When personnel are working in situations where the ambient temperatures and humidity are high-and especially in situations where protection Levels A, B, and C are required--the SO must:

• Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);

• Assure that frequent breaks are scheduled so overheating does not occur; and

• Revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

**Cold Stress**

Whole-body protection shall be provided to all site personnel that have prolonged exposure to cold air. The right kind of protective clothing shall be provided to site personnel to prevent cold stress. The following dry clothing shall be provided by the **CONTRACTOR** as deemed necessary by the SO:

• Appropriate underclothing (wool or other);

• Outer coats that repel wind and moisture;

• Face, head, and ear coverings;

• Extra pair of socks;

• Insulated safety boots; and

• Glove liners (wool) or wind- and water-repellant gloves.

The SO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

Site personnel working continuously in the cold are required to warm themselves on a regular basis in the on-site hygiene facility. Warm, sweet drinks will also be provided to site personnel to prevent dehydration. The SO shall follow the work practices and recommendations for cold stress threshold limit values as stated by the 1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.
1.19 Logs, Reports and Record Keeping

Security Log

A daily log of security incidents and visitors granted access to the site will be maintained, as well as a log of all personnel entering and exiting the site.

All approved visitors to the site will be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors will not be permitted to enter a hazardous work zone.

Project site shall be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence.

Safety Log

The CONTRACTOR's SO will maintain a bound safety logbook. The log will include all health and safety matters on site and include, but not be limited to, the following information:

- Date and weather conditions on site;
- A description of the proposed work for the day;
- Times when site personnel arrive and depart;
- Air monitoring data;
- Heat and/or cold stress monitoring;
- Decontamination procedures;
- Type and calibration of air sampling/monitoring equipment used;
- Safety meeting summaries; and
- Accidents.

Emergency or Accident Report

Any emergency or accident will be reported immediately to the SO. The ENGINEER will also be notified. The CONTRACTOR will submit a written report immediately, but no later than 24 hours of its concurrence. The report will include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the CONTRACTOR will institute to minimize future occurrences. All spills will be treated as emergencies.
Daily Work Report

The CONTRACTOR shall maintain a daily work report that summarizes the following:

- Work performed,
- Level of protection,
- Air monitoring results,
- Safety-related problems, and
- Corrective actions implemented.

1.20 Posting Regulations

The CONTRACTOR will post signs at the perimeter of the Exclusion Zone that state "Warning, Hazardous Work Area, Do Not Enter Unless Authorized." In addition, a notice directing visitors to sign in will be posted at the project site. Also, the CONTRACTOR will post a sign stating that any questions about the site should be directed to the New York State Department of Environmental Conservation.

Safety regulations and safety reminders will be posted at conspicuous locations throughout the project area. The following safety regulations and safety reminders are at a minimum to be posted around the job site.

SAFETY REGULATIONS

(To be Posted for Project Personnel)

The main safety emphasis is on preventing personal contact with gases, soils, sludge and water. Towards that end, the following rules have been established.

Regulations

A. Eating, drinking and smoking on the site is PROHIBITED except in specifically designated areas.

B. All project personnel on the site must wear clean or new gloves daily.

C. If you get wet to the skin, you must wash the affected area with soap and water immediately. If clothes in touch with the skin are wet, these must be changed.

D. You must wash your hands and face before eating, drinking or smoking.

E. Observe regulations on washing and removing boots before entering the dressing room or a clean area and showering before going home.
Recommendations

A. Do not smoke on site with dirty hands; better yet, do not smoke.

B. Check for any personal habit which could get soil or water into your body.
   Examples: food off your fingers, wiping your face or nose with a dirty hand or running a dirty hand through your hair.

C. Check that any regularly worn clothing is clean. Examples include dirty watchbands, neck chains and a dirty liner on your safety helmet. Safety practices with poisonous chemicals can be summed up with a few words:

   **Don't breathe in chemical odors and don't touch the water, soil, and sludge.**

   If you do get dirty or wet, clean up as soon as possible.

   **SAFETY REMINDER FOR TOXIC CHEMICALS**

   (Post for Project Personnel)

   Chemicals can't cause problems unless you breathe them, eat them, or put them on your skin.

   **Chemicals in Gases, Soils, Sludge, and Water**

   Don't let them go into your mouth, nose, or stay on your skin.

   Use common personal hygiene.

   A. Don't eat or drink on the site.

   B. No smoking in the area of work.

   C. Wear protective clothing.

   D. Glove liners must be clean.

   E. Wash your hands whenever practical. Wash before eating, drinking, or smoking.

   F. Don't carry chemicals home to your family. (For example, on clothing, mud in the car, dirty hands.)

   G. Follow strictly the HASP.
1.21  Community Protection

1.22  Confined Space Work

2.  PRODUCTS

Not Used.

3.  EXECUTION

Not Used.

END OF SECTION
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SPEC 00004

SURVEYS

1. GENERAL

1.1 Description

This section identifies land survey requirements to be completed and sealed by a licensed land surveyor in the State of New York. Where hydrographic surveys are required, refer to supplementary specifications, Section 02 21 19.

1.2 References

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.


1.3 Related Sections

Not used.

1.4 Submittals

The submittals described below are minimum requirements for surveying. Additional surveys needed to document quantities for payment will also be performed as directed by the ENGINEER.

1.4.1 Surveyor Qualifications

A. The qualification of the land surveyors shall be submitted in the Work Plan per SPEC 00014. The ENGINEER or the DEPARTMENT reserves the right to disallow the person(s) selected by CONTRACTOR for surveying. If, in the ENGINEER’S or the DEPARTMENT’S opinion, the person is not qualified to do the work, CONTRACTOR shall select another surveyor and submit qualifications until a qualified person is approved. Use of alternative surveyors shall be at no additional cost to DEPARTMENT.

B. The land surveyor selected by the CONTRACTOR shall be a Professional Land Surveyor licensed in the State of New York with qualifications acceptable to the ENGINEER and the DEPARTMENT and shall have actively engaged in land survey operations during the past 3 years.

1.4.2 Survey Plan (To be included in Work Plan per SPEC 00014)

The Survey Plan shall include, but not be limited to the following:

A. Survey methods
B. Identification of areas to be surveyed using Topographic and Hydrographic methods (if required).

1.4.3 Drawings

A. Initial topographic map

Provide topographic maps of site property, property boundary survey and utilities prior to site disturbance. Elevations will be provided for all control points. Engineer will provide the Contractor with project control points that were used to establish the Contract Drawing layout. The Contractor shall verify control points and existing conditions prior to the start of the work. Additional control points may be added by the Contractor using the established baseline.

B. Intermediate drawings

Provide intermediate survey drawings delineating the area and depth of all excavations prior to backfilling per SPEC 00201 and the location of all confirmatory soil and sediment sample points, upon completion of all rough shaping and grading and prior to placement of cover materials. Also show all installed utilities (water, sanitary sewer and storm sewer), including inverts at all changes in vertical alignment. Intermediate drawings to be submitted at a minimum monthly with Contractor’s application for payment.

C. As-built topographic maps

Upon completion of the final backfill materials and restoration of all disturbed surfaces.

1.4.4 Records

A. AutoCAD Civil 3D 2017 or higher electronic files of all surveys (provide data in electronic format)

B. Field Data

Original final survey book (hard bound) upon completion of each phase of survey work. Include all field notes, notations, and descriptions used and compiled during the field survey. Photocopies are not acceptable.

C. Coordinate List

Final coordinate list as text file of all survey points with specific coordinates and elevations.

D. Volume Quantity Calculations

All calculations required to support requests for payments and verifications of volumes and areas involved shall be computed to the nearest tenth of a cubic yard of volume. All requests for payment that
include dredging or excavation volumes to be confirmed by survey shall be accompanied by excavation or dredge prisms and associated volumes calculated, signed and certified by a licensed land surveyor.

2. PRODUCTS

Provide in accordance with NYSDOT Specification Section 626.

3. EXECUTION

3.1 General

A. The following surveys must be conducted during the project, and will form the basis of measurement for payment of most cubic yard, linear foot, and square foot pay items:

1. An initial site survey to establish and verify existing site conditions, and to properly lay out the work as shown on the Drawings.

2. Spot elevations and locations shall be established and surveyed as necessary to ensure that work is installed to the grades shown on the Drawings, including spot elevations of any drainage structures.

3. Following soil and sediment excavations, the limits shall be surveyed to document the volumes of material that have been removed, as a base survey for measurement of materials. This survey shall include the locations and elevations of all final verification samples which were the basis of limiting further excavations.

4. During construction of any concrete slab, the subbase will be surveyed before installation of the concrete, and the concrete surface will be surveyed.

5. Well locations and their corresponding elevations of the top of casing shall be surveyed in.

6. For all surveys, measurements shall be taken for every 4-inch change in elevation. At a minimum, shot density shall be on a 10-ft by 10-ft basis.

B. Survey verification, in the form of a professional land surveyor certified letter shall be provided as backup to each Contractor’s Application for Payment.

C. All work in this section shall be performed by a licensed professional land surveyor registered to practice in the State of New York.

3.2 Accuracy

A. For elevation, to the nearest 0.01 ft
B. For horizontal distance, plus or minus 0.01 ft

3.3 Horizontal and Vertical Control

Horizontal and vertical control points shall be identified in the drawings and referenced to the permanent site control monuments, to an accuracy of one part in ten thousand. Control points shall be provided at each location of work using closed traverse and leveling loops. The Contractor shall provide temporary benchmarks every 200 ft outside the work limits for use during the work.

Provide grade and offset stakes to control the location and depth of excavation and fill. Survey the location and elevation of all excavation and fill limits to document the areas remediated.

3.4 Site Control

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.

3.5 As-built Topographic Maps

Reproducible base map at a scale of 1 inch = 40 feet, maximum with 1-foot elevation contours upon which the CONTRACTOR shall plot the required survey information for each required submittal.

Mapping shall conform to the National Map Accuracy Specifications and shall bear the seal of a licensed land surveyor registered in New York. Map shall contain a title block with the name and address of the CONTRACTOR and the seal and signature of the registered surveyor. As-built drawings shall include labeled contour lines, property line locations, horizontal grid systems, cross-sections and details modified to show “as-built” conditions, details and cross-sections not on original drawings, and any field changes of elevations, dimensions, and details.

Indicate locations of physical features on the site including: utilities, roadways, culverts, manholes, utility poles, fences, gates, drainage ditches, monitoring wells, piezometers, leachate pipes, tanks, benchmarks and other significant items.

Indicate on a separate drawing: excavation limits and verification sampling points.

Indicate on a separate drawing final underground structures including: force mains and leachate collection system.

3.6 Coordinate List

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.
3.7 Survey Notes

Record all field work in a clear, legible, and complete manner. The Field Notes shall contain a complete description of the nature and location of the new and existing points. The record shall also include a sketch of the point locations, and the monument witness points.

3.8 Utilities

Scan the construction site with electromagnetic or sonic equipment and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing pipe, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated or discovered during scanning in locations to be traversed by piping, ducts and other work to be installed. Verify elevations before installing new work closer than nearest manhole or other structure at which an adjustment in grade can be made. Record locations and elevations of all utilities.

3.9 Survey Checks

Provide the Engineer with survey, level, tripod, rod and measuring tape to perform survey checks of the work. Provide an individual to assist Engineer in performing survey checks.

END OF SECTION
SPEC 00005

PROJECT COORDINATION

1. GENERAL

1.1 Description

This section includes: requirements for contractor coordination, subcontractor approvals and project schedule, including status updates.

1.2 Submittals

Submit the following in accordance with Section VIII, Article 5.23-5.29, “shop Drawings and Samples.”

1. Subcontractor List: submit for review and approval. This list shall be updated and submitted each time a new subcontractor is proposed for employment on the project (see section VIII, article 5.8.1).

2. Uniform Contracting Questionnaire: submit in accordance with instructions in Section V, Article 2(e). Submit properly executed New York State Uniform Contracting Questionnaire for subcontracts valued at greater than $10,000. The DEPARTMENT requires a minimum of two (2) weeks to review.

3. Project Schedule Status Reports: submit biweekly 48 hours prior to project meetings.

4. Project Schedule Updates: submit proposed updates for approval prior to updating the project schedule.

2. PRODUCTS

2.1 Subcontractor List

The CONTRACTOR shall submit a complete list of proposed subcontractors (including disposal facilities if applicable) identifying name, address, telephone number, contact, type of work to be subcontracted, dollar amount and M/WBE status. No subcontractors can begin work without the written approval of the DEPARTMENT.

2.2 Project Schedule Status Reports and Updates

Project Schedule status reports shall be based on the current approved Project Schedule and shall show the previous two weeks and succeeding two weeks as of the corresponding project meeting date. The schedule shall include status updates illustrating progress.
Project schedule updates shall be in accordance with Section X, Spec 00001.

3. EXECUTION

3.1 Schedule

The CONTRACTOR shall be solely responsible for the coordination of schedules for any and all of his subcontractors. The ENGINEER shall approve all schedules and the CONTRACTOR shall coordinate with the ENGINEER to make any appropriate changes to the schedule.

The CONTRACTOR shall cooperate with the ENGINEER’S review of the project schedule and promptly furnish the ENGINEER with such data as may be requested in accordance with ENGINEER's review of the project schedule and incorporate required revisions.

It shall be the duty of the CONTRACTOR to conform to the specified schedule and to arrange his work in such a manner that it will be completed within the time limits indicated.

The CONTRACTOR shall coordinate his letting of subcontracts (if any), material purchases, delivery of materials and sequence of operations to conform to the schedule and shall furnish proof of same as required by the ENGINEER.

See Section X, Specification 00001 for further requirements.

3.2 Shop drawings, Product Data and Samples

The CONTRACTOR shall coordinate a list of required submittal packages with the ENGINEER prior to any submittals being made, beyond those described in Section III, Article 5 as Required Bid Submittals.

The CONTRACTOR shall coordinate with the ENGINEER the transmittal form and content prior to any submittals.

3.3 Time and Material (T&M) Work

If T&M work is initiated, the CONTRACTOR shall submit labor classes, materials and equipment, along with associated rates for time and material work to the ENGINEER for review and approval.

The ENGINEER and CONTRACTOR shall agree on the format of a time and material work sheet prior to initiating any T&M work. NYSDEC forms Murk 11a, 12c and 17 shall be used as a basis for the developing the format of the time and material work sheets.
ENGINEER’S and CONTRACTOR’S field representatives will sign a T&M record of work on a daily basis. Signatures from field representatives do not represent that the work shown is an extra or that rates are acceptable; rather, it is merely to document that the materials, labor and equipment shown were in fact used for the work in question.

Agreements for additional costs (if any) will be formalized in a change order in accordance with the terms of the Contract Documents.

Daily T&M worksheets without the signature of the ENGINEER’S representative will not be the basis for a claim for additional compensation. The CONTRACTOR is solely responsible for the costs arising from the CONTRACTOR’S own inefficiencies.

END OF SECTION
SPEC 00006

FIELD OFFICES

PART 1  GENERAL

The CONTRACTOR shall erect, furnish and maintain separate field offices with internet during the entire period of work, as approved by the ENGINEER. The CONTRACTOR, or an authorized agent, shall be present at his office at all times while his work is in progress. Readily accessible copies of both the Contract Documents and the latest approved working drawings shall be kept at his field office.

The CONTRACTOR shall provide one separate and lockable field office at the site for the exclusive use of the DEPARTMENT and the ENGINEER.

The Dzus site is bisected by a residential circle and divides the site into two (2) non-contiguous parcels. The CONTRACTOR shall maintain a third (shared) office on the parcel that does not include the main field office.

1.1  SUBMITTALS

Submit the following in accordance with Section VIII, Articles 5.23-5.29 “Shop Drawings and Samples:”

1. Floor plan of field office for DEPARTMENT/ENGINEER showing layout of rooms, furnishings, facilities and utilities.

2. Plan for maintenance of the DEPARTMENT's and the ENGINEER's office facilities.

1.2  SCHEDULING

The Field Office Trailer shall be ready for occupancy within fourteen (14) days following the notice to proceed and shall be provided until substantial completion.

PART 2  PRODUCTS

The DEPARTMENT's and the ENGINEER's Field Office Trailer shall be furnished as stipulated herein and, in a location, directed by the DEPARTMENT/ENGINEER. All necessary installations shall be provided.

2.1  OFFICE UNIT REQUIREMENTS

1. Exterior Doors: Minimum 2, with key in knob lock sets.
2. Air conditioning system with sufficient capacity to maintain field office temperature below 75 degrees Fahrenheit.
3. Heating system with sufficient capacity to maintain field office temperature above 70 degrees Fahrenheit.

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4. Sufficient lighting in all rooms sufficient to maintain a minimum of 60-foot candles at desk top level.
5. Bulletin board (4 feet X 6 feet) in meeting room.
6. White board (4 feet X 6 feet) in meeting room.
7. Electric energy for the duration of contract.
8. Two full height partitioned offices with locking doors, each having a minimum of 96 square feet of floor area.
9. A full height partitioned closet with door having a minimum 4 square feet of floor area.
10. Meeting area having approximately 140 square feet of floor area.
11. One (1) mailbox.
12. Sufficient supply of outlets.

2.2 FURNITURE AND EQUIPMENT

Furniture

1. Two (2) two-drawer, fireproof, file cabinets with locks and keys.
2. One drafting table.
3. Two (2) flat-top movable desks with lockable drawers.
4. One bookshelf or wall shelves with a total of 12 feet of shelf space.
5. Four (4) office chairs.
6. One drafting stool.
7. Three (3) large wastebaskets.
8. One conference room table
9. Eight straight backed chairs.
10. 3'x8' carpet runners at entrances.

Equipment

1. One dedicated telephone with auto dial and auto receive features.
2. One photcopying machine.
   a. Supplies: 1 box of 8.5x11 paper for every month of project.  
   b. Service: Provide a service contract for duration of project.
3. One ten (10)-pound class ABC fire extinguisher.
4. One refrigerated bottled water dispenser with hot and cold service, cups and bottled water for the duration of the project.
5. First aid kit (Bullard Mfg. Co., Model 136 or equal).
6. Hewlett-Packard Desk Jet or equal with cable, spare printer cartridges, and paper.
7. 4-plug surge protector.
8. Supplies
9. 3.1 CF Refrigerator/Freezer

2.3 INTERNET SERVICE

1. Provide FiOS or DSL internet service available for use by the ENGINEER, with wireless capability in the ENGINEER’s work space

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2.4 DIGITAL CAMERA

Provide one SONY MVCF-FD81 digital camera (or equivalent) for use by the DEPARTMENT and ENGINEER.

PART 3 EXECUTION

3.1 INSTALLATION

Install field offices in approved locations.

Provide proper stairs with platform and railings at each exterior door.

Provide temporary utility service to field offices.

The ENGINEER's/DEPARTMENT's trailer shall be located and installed in such a location as to provide free access for any individual wishing to communicate with the ENGINEER and/or DEPARTMENT's representative. The public access to this trailer shall be provided directly for the public road and shall be marked on both sides with an orange snow fence. The CONTRACTOR shall provide signage as necessary to direct visitors, mailpersons, and delivery persons to specific areas of the site as appropriate. The entrance for the public shall be clearly posted.

3.2 SIGN

A sign shall be furnished on the outside of the DEPARTMENT/ENGINEER's Field Office. The sign shall be 2' x 3' x 3/4" thick marine plywood (or aluminum) with white background and black letters.

The sign shall read as follows:

FIELD OFFICE  
NEW YORK STATE DEPARTMENT  
OF  
ENVIRONMENTAL CONSERVATION

Telephone: /____-____

Note: The CONTRACTOR shall include telephone number on the trailer sign, when available.

3.3 MAINTENANCE AND CLEANING

Maintain and clean the field offices for the duration of the contract, including daily removal of rubbish, weekly sweeping and mopping of floors and weekly dusting of surfaces.

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Maintain approaches free of mud and snow.

3.4 OWNERSHIP

All trailers and equipment supplied to the ENGINEER and DEPARTMENT will remain the CONTRACTOR's property, except for consumable supplies.

3.5 REMOVAL

Remove the field office(s), furniture and equipment when directed. Restore the area used for the units to the original condition or better.

END OF SECTION
SPEC 00007

PROJECT IDENTIFICATION AND SIGNS

1. GENERAL

The sign shall be 4' high by 8' wide and constructed of 3/4- to 1-inch medium density overlay plywood, with a resin coating on both sides. The edges shall be framed with a snap trim edge cap consisting of an aluminum channel with a polyvinyl coating. An aluminum sign of equal size may also be used. The sign's background will be painted with white exterior oil base sign enamel. The fourth line will have green letters. The first, second and third lines will have blue letters. The NYSDEC logo will be painted as noted. All adhesives will be solvent resistant.

1.1 References


1.2 Quality Assurance

Painter’s Qualifications: All paint shall be applied by a professional sign painter.

2. PRODUCTS

2.1 Materials

Posts: Standard Grade Douglas Fir, White Pine or Southern Pine; preservative treated; 4-inch x 4-inch x 12 feet long.

Plywood: Overlaid Plywood; MDO B-B EXT-APA; 3/4 to 1 inch.

Framing: Snap trim edge of polyvinyl coated aluminum channel.

Paint:

Background Enamel: Exterior, alkyd, glass enamel with primer as recommended by finish coat manufacturer.

Lettering and Striping Enamel: Exterior, long oil, alkyd; high gloss enamel manufactured for lettering signs.
Colors: As per attached illustration.

2.2 Fabrication

Painting:

Paint both sides and all edges of signs with two coats of primer and one coat of background enamel.

Paint lettering and striping with two coats of lettering enamel.

Do not apply succeeding coat until previous coat has completely dried.

Apply even coats of uniform thickness without brush marks, runs or lap marks.

Lettering and striping shall be uniform with sharp, neat profiles.

3. EXECUTION

3.1 Installation

Install signs within two weeks of Notice to Proceed.

Install signs where directed by Engineer.

Set posts plumb, 4 feet into the ground. Compact backfill around posts.

Fasten sign, in a level position, securely to posts. The center of the sign should be located approximately 6 to 7 feet from ground level.

3.2 Maintenance and Removal

Maintain the signs plumb and level for the duration of the work.

When directed, at the completion of the project, remove the signs.

END OF SECTION
STATE SUPERFUND PROGRAM

DZUS FASTENER CO., INC. SITE

SITE NO. 152033

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GOVERNOR ANDREW M. CUOMO

COMMISSIONER BASIL SEGGOS

TOWN OF ISLIP SUPERVISOR ANGIE M. CARPENTER

TRANSFORM THE PAST…. BUILD FOR THE FUTURE

FIGURE 00007-1
PROJECT SIGN

END OF SECTION
SPEC 00008

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

This section includes:

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.

1.02 SUBMITTALS

A. As-Built Documents

Make available for review prior to submission of each monthly pay estimate.

B. Supplemental Record Drawings

See SPEC 00004.

C. Project Record Documents

Submit preliminary and final as specified in Part 3 of this section.

PART 2 PRODUCTS

2.01 AS-BUILT DOCUMENTS

A. The Contractor shall clearly and neatly mark up in red ink one set of Contract Documents to show the record conditions.

B. These records marked documents (As-Built Documents) shall be kept current and available on the job site at all times.

C. 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.
D. The As-Built Documents shall be jointly inspected for accuracy and completeness by the **Engineer** and a responsible representative of the **Contractor** prior to submission of each monthly pay estimate.

E. The documents shall include but not be limited to the following:

1. Installations of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
2. 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.
3. Correct grade or alignment of roads, structures, utilities, or project components.
4. Correct elevations.
5. Changes in details or dimensions.
6. The topography and grades of all drainage structures installed or affected as part of the project construction.
7. Additional information obtained from working drawings.
8. Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the As-Built Documents.
9. Additional work ordered by the **Engineer** or **Department**.
10. Depths of various elements of foundation in relation to datum.
11. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
12. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.

### 2.02 SUPPLEMENTAL RECORD DRAWINGS

A. The Surveyor retained by the **Contractor** shall prepare Supplemental Record Drawings (see SPEC 00004).

B. The Supplemental Record Drawings shall include but not be limited to the following:

1. 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.
2. Locations and elevations of all groundwater monitoring wells.
PART 3 EXECUTION

3.01 MAINTENANCE OF DOCUMENTS

A. Maintain in Contractor’s field office in clean, dry, legible condition complete sets of the following:

1. Drawings
2. Specifications
3. Addenda
4. Approved Shop Drawings
5. Samples, Photographs
6. Change Orders
7. Other modifications to Contract Documents
8. Test Records
9. Survey Data
10. Field Orders
11. Other documents pertinent to Contractor’s work

B. Provide files and racks for proper storage and easy access.

C. File in accordance with filing format of Construction Specification Institute (CSI), unless otherwise approved by the Engineer.

D. Make documents available at all times for inspection by Engineer and Department.

E. Record documents shall not be used for any other purpose and shall not be removed from Contractor’s office without the Engineer’s approval.

3.02 PRELIMINARY SUBMITTAL

A. The Contractor shall prepare two (2) copies of As-Built Documents and the Surveyor shall prepare two (2) copies of 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.
3.03 FINAL PROJECT RECORD DOCUMENT PREPARATION

A. Upon approval of the As-Built Documents and Supplemental Record Drawings submitted, these Project Record Documents shall be modified by the Engineer, as necessary, to add any additional information which is pertinent to the project.

B. Contractor shall submit electronic files of the approved As-Built Documents and the Surveyor shall submit electronic files of the Supplemental Record Drawings.

C. These documents shall be part of the permanent records of this project.

D. Each document to be submitted by the Contractor shall be lettered or stamped with the words “RECORD DOCUMENT” in 1-inch high printed letters followed by the name of the Contractor and Engineer.

E. All original Contract Documents shall be marked by the Engineer either “Record,” denoting no revisions on the sheet, or “Revised Record,” denoting one or more revisions.

F. The Supplemental Record Drawings to be submitted by the Surveyor shall:

   Be stamped and signed by the Surveyor retained by the Contractor.

   Be prepared on a 24" by 36" reproducible sheet with the same ledger and title block used for the contract drawings.

   Locate all work referenced to the limits of the project area.

   Have all locations referenced to the site horizontal coordinate system.

   The grid coordinate system shall be shown on all record drawings.

   Elevations shall be referenced to the established vertical control.

G. The Contractor shall provide all site surveys and drawing files electronically.

END OF SECTION
SPEC 00009

TRAFFIC CONTROL

PART 1   GENERAL

This section covers minimum requirements for temporary traffic regulation and control during the course of the project.

1.01 REFERENCES

The publications listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by basic designation only.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

MUTCD   Manual of Uniform Traffic Control Devises
NYS DOT  Standard Specifications (17 NY CRR, Chapter V)

1.02 SUBMITTALS

Submit the following in accordance with Section VIII, Articles 5.23-5.29, “Shop Drawings and Samples.”

Traffic Control Plan: incorporate the anticipated impacts of traffic controls into the work plan for various work areas. The Plan shall include, but not be limited to:

1. Access routes for project traffic to each work area.
2. Estimated daily project traffic flows for each phase of the work.
3. Procedures for cleaning debris and spillage from public roads.
4. This plan shall identify equipment and describe procedures to minimize the creation and dispersion of dust and the removal of earthen materials tracked onto site and off-site roadways by construction vehicles. The plan shall address major construction activities that will contribute to these situations and the Contractor’s approach to control them.

1.03 INTENT

Maintain safe conditions for the Contractor’s workers, the general public and all vehicles.

Minimize the inconvenience to the general public and adjacent property owners affected. Give the right of way to emergency vehicles in all situations.
PART 2  PRODUCTS

2.01 OWNERSHIP

The products specified herein shall be leased or owned by the Contractor and will not become the property of the Department. All products specified herein shall be removed from the work site when no longer needed.

2.02 TRAFFIC CONTROL DEVICES

All the following items shall conform to NYSDOT Section 619-2 and MUTCD requirements:

- Flashing barricade lights
- Construction and maintenance signs
- Channelizing devices
- Arrow boards
- Barricades
- Traffic cones

2.03 MISCELLANEOUS EQUIPMENT

Other items, which include orange safety vests, flags or signs for flagmen, and communication devices, shall be standard and adequate for their intended function. They shall be in accordance with the NYSDOT-MUTCD where applicable or as required by NYSDOT Work Permit.

PART 3  EXECUTION

3.01 GENERAL

All work under this section shall be performed in accordance with NYSDOT Standard Specifications, the MUTCD, and as stated herein.

Protect workers and provide for safe and convenient public travel by furnishing, erecting, and maintaining all signs, signals, markings, traffic cones, barricades, warning lights, flaggers, and other traffic control devices required for the type of operation being performed.

Keep all roads free of debris and spillage from hauling equipment at all times. Haul routes shall be cleaned at least once per day to limit dust generation. Dry brooming is prohibited.

Provide access at all times to private property.
All work-related vehicles and non-operating equipment that are parked for a short period of time (2 hours or less) shall be parked at the support area. Longer periods of time shall be in accordance with requirements for non-working hours.

Furnish the name of the individual in direct employ of the Contractor who is to be responsible for the installation and maintenance of the traffic control for the project. If the installation and maintenance are to be accomplished by a subcontractor, consent shall be requested of the Engineer at the time of the pre-construction conference. This shall not relieve the Contractor of the foregoing requirement for a responsible individual in his direct employ.

The Contractor shall take necessary measures, in addition to those required by Federal, State and local laws and regulations, to minimize the migration of dust and earthen material from construction areas including the utilization of wind indicators and air monitoring.

Dust generating surfaces within the active work limits shall be sprayed with clean water from approved sources (i.e. hydrants for which permits have been obtained) to provide complete moistening of the ground, or as otherwise directed by the Engineer.

The Contractor shall be responsible for the removal and disposal of earthen material that is tracked onto site and off-site roadways by construction vehicles. The Contractor shall continually inspect roadways and remove the materials immediately to maintain a clean and hazard free driving surface.

3.02 COORDINATION AND SCHEDULE

No traffic shall be disrupted over holiday weekends.

Permits for work in all rights of way shall be prepared, submitted and accepted prior to any work in the areas affected.

END OF SECTION
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SPEC 00010

TEMPORARY FACILITIES AND CONTROLS

1. GENERAL

1.1 Scope of Work

A. Provide temporary facilities or contingency equipment as required herein to properly carry out the Project scope of work.

1.2 Submittals

A. Submit the following in accordance with 01 33 01 Project Submittals and Procedures:

- Electrical Permits (Application)
- Manufacturer’s Catalogue Data
- Silt fence specifications
- Temporary chain-link fence specifications
- Erosion control matting specifications
- Records
- Emergency services meeting minutes for the project record within seven days of the meeting.

2. PRODUCTS

2.1 Materials and Equipment

A. Provide new or used materials and equipment that are undamaged and in working condition.

B. Provide only materials and equipment that are recognized as being suitable for the intended use (through compliance with appropriate standards and regulations).

C. Materials for erosion control shall comply with the guidelines contained in the approved storm water and erosion control plan.

D. Unless otherwise indicated, type of temporary chain link fencing shall meet the following minimum specifications:

  a. New materials or previously used salvaged chain link fencing in good condition.
  b. Height: 8’-0” (minimum)
  c. Posts: 2” min. Schedule 40 standard weight pipe, in accordance with ASTM F1083, 1.8 oz/ft2 hot dip galvanized zinc exterior and 1.8 oz/ft2 hot dip galvanized zinc interior coating. Post shall be suitable for setting
in concrete footings, driving into ground, anchoring with base plates, or inserting in precast concrete blocks.

d. Fencing Fabric:
   i. Zinc-Coated Steel Fabric: ASTM A392 hot dipped galvanized before weaving (GBW) or after weaving (GAW). Class 1 - 1.2 oz/ft² (366 g/m²).
   ii. 2” diamond woven galvanized steel wire mesh. 11-gauge core.
   Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.

e. Privacy Fabric: Temporary fencing shall be outfitted with privacy fabric as directed by the ENGINEER:
   i. Color: Green or as directed by ENGINEER
   ii. Material Requirement: Polyethylene, 4.9 oz/sq. yd., Burst Strength: 210 psi

f. Gates: Provide personnel and vehicle gates of the quantity and size indicated on the Drawings or required for functional access to site.
   i. Fabricate of same material as used for fencing.
   ii. Vehicle gates:
      a. Minimum width: 20 feet to allow access for emergency vehicles.
      b. Capable of manual operation by one person.

2.2 Water Service

A. Provide valves with adequate temperature and pressure ratings for the intended use.

B. Provide back flow protection or adequate vacuum breakers.

C. Provide heavy-duty, abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water system.

2.3 Electrical Service

A. Provide written plan for electrical service while on site with appropriate approvals as necessary.

B. Provide materials that comply with applicable NEMA, NECA, and UL standards and governing regulations of temporary electrical services.

C. Provide grounded extension cords with waterproof connectors. Use "hard service" cords where there is exposure to abrasion and traffic.

D. 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.
2.4 Sanitary Facilities

A. The CONTRACTOR shall provide men’s and women’s porta-johns. Two sets are required, one set at Middle School area (station 0+00 to 21+00) and one set at High School area (station 21+00 to 42+50).

3. EXECUTION

3.1 General

A. Use qualified tradesmen for installation of temporary utilities, facilities, and constructions. Provide utility services as required to perform the work for the duration of the project.

B. Locate all temporary items where they are approved and in such a manner to cause minimum interference with the project work and operation of the other site activities. Locate services per approved work plan.

C. Relocate, modify, and extend services and facilities as required to accommodate the Project, or as directed by the ENGINEER, throughout the course of the work.

D. Install temporary utilities in accordance with the servicing utility's requirements.

E. Provide all temporary utilities and connections including electric, water and telephone. Remove Temporary utilities and connections upon completion of work. Obtain all necessary permits and permission prior to installation or connection. Further details regarding temporary utilities are presented in the section below.

3.2 Temporary Utilities

A. Temporary Power

1. 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.

2. Install overload protection and disconnect switches for each temporary circuit at the power source.

3. Install all cable or extension cords in the work area in such a manner that visual surveillance is easily accomplished.

4. In the event electrical power service is not available, appropriately sized generators are acceptable.

B. Temporary Light
1. The **CONTRACTOR** shall provide temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of work. Minimum lighting shall be 5-foot candles.

2. Wiring in the work area shall be in UL-approved cable and located in such a manner that visual surveillance is easily accomplished.

C. Temporary Water for Construction

1. The **CONTRACTOR** shall install a temporary potable water service to adequately supply the temporary enclosure areas.

2. Limit the flow on each hot and cold-water line to 10 gallons per minute.

3. Provide hot water at a minimum temperature of 100°F.

4. Maintain piping, hoses, connections, and valves in leak-proof condition. Where finish surfaces may be damaged by spillage or leakage, provide drip pans of suitable size. Drain water promptly from pans as it accumulates.

5. The **CONTRACTOR** shall obtain the necessary permission for source of water, make all connections, and remove same at completion of the work. Any damage to the existing system shall be repaired at no cost to this Contract.

6. If the water is obtained by connecting to the public water system, the connection shall include suitable back flow preventer and shall be appropriately decommissioned.

3.3 Temporary Facilities

A. 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. 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 20-mil HDPE 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. Cover staged clean materials with 10-mil liner. Dispose of cover when staging area is no longer needed.

B. 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.

C. Sanitary Facilities
1. The CONTRACTOR shall provide self-contained chemical toilet units from mobilization to demobilization in an amount based on the total number of workers employed on the Project in accordance with the provisions of the Health and Sanitary Codes of the State of New York. A combination toilet/urinal unit shall count as one facility. The CONTRACTOR may locate some of them in the work area. Those that are located outside the work area shall be located where approved by NYSDEC and screened from public view. At the completion of the abatement work, units within the work area shall be decontaminated prior to their removal from the enclosures. Units shall be maintained throughout the work. Provide separate facilities for males and females. Include provisions for pest control and elimination of odors.

D. Temporary Access Roads (Section 00023)

Construct and maintain temporary access roads for the duration of the contract as necessary to ensure unimpeded completion of this contract. This includes areas necessary for installation of the decontamination station, staging areas and all work site facilities.

E. Temporary chain link fencing

1. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants. CONTRACTOR shall maintain 3 feet diameter clear space around fire hydrants. Where fire hydrant or hose connection is blocked by fencing, provide access gate.
   b. Field verify gate locations with the ENGINEER.

2. Installation of chain link posts:
   a. Post spacing shall be 10-ft maximum.
   b. Drive posts minimum of 3 ft, set in holes and backfill, or anchor in precast concrete blocks.
   c. For soft and unstable ground conditions, cast concrete plug around post.
   d. Posts over pavement: Use steel post plates or precast concrete blocks.

3. Installation of gate posts: Use bracing or concrete footings to provide rigidity for accommodating size of gate.


5. Gates: Install with required hardware.

6. Maintain fencing in good condition. If damaged, CONTRACTOR shall immediately repair at no additional cost to the ENGINEER.

7. Remove excess fencing materials, soil, concrete and any other debris from Site which resulted from installation of fences and/or gates.
3.4 Temporary Controls

A. Fire Prevention

1. Take all precautions necessary and required to prevent fires.

2. Do not use or store flammable liquids, other than those specified, within a building or temporary facility.

3. Provide a minimum of two extinguishers for each separate and active enclosure. Locate one in the dirty room of the decontamination unit and one in the clean room.

4. The CONTRACTOR shall contact the local Fire Company, schedule, and conduct a site visit for Fire Company personnel after mobilization is complete to ensure familiarity with the CONTRACTOR's operations. Discuss the operation plan and fire safety considerations. Provide minutes of the meeting for the project record.

B. Noise, Vibration, Dust and Odor Control

1. Conduct operations to cause least annoyance to residents in vicinity of work and comply with West Islip School District restrictions and applicable local ordinances. Working hours are limited to 7 am to 8 pm Monday through Saturday, per Town of Islip noise ordinance.

2. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise, vibration, dust and odor. Equip compressors with silencers on intake lines.

3. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.

4. 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.

5. 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.

6. Control noise levels associated with site operations to not exceed the energy equivalent ambient sound level (Leq) of 35 dBA at the site perimeter.

8. Measurements shall be made at site perimeter directly between occupied spaces and the source of the noise.

9. 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.

10. Measurements shall be documented and reported to the ENGINEER.

11. 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. No visible dust shall be permitted. Use work procedures and dust suppression techniques to achieve this, including such as the following:

   Apply water or dust suppressants to exposed soil, haul roads or routes, and other areas disturbed by operations.

   Provide a means of removing dirt or mud from vehicle wheels before they are permitted to exit the site.

   Dry power brooming will not be permitted.

   Only wet cutting of concrete will be permitted.

   Do not unnecessarily shake bags of dry product such as cement, concrete mortar or fertilizer.

14. The CONTRACTOR shall, at a minimum, minimize odors by covering all material stockpiled at the site each night with tarps or plastic sheeting. Materials and methods used for covering the stockpiled material shall be submitted to the ENGINEER for approval.

15. Odor control measures such as an odor-control foam, or other odor control measures selected by the CONTRACTOR shall be approved by the Engineer.

16. Materials for one (1) application of the CONTRACTOR’s odor control measures shall be available on-site at all times. Application of odor control measures shall be implemented to control, eliminate, or mask odors in response to threshold exceedences or complaints. Odor control applications shall only be implemented as conditions warrant and as approved by the ENGINEER. Each application shall consist of a one-time treatment of the entire stock piling, treatment and other staging
areas as appropriate with the CONTRACTOR’s selected odor control measure.

17. ENGINEER may stop work at any time when CONTRACTOR's control of odors is inadequate to meet the designated requirements.

C. Water Control

1. Exercise care in project drainage practice to prevent pollution of watercourses.

2. The CONTRACTOR shall be fully responsible for any and all damages to life and property that occur as a result of his activities. Damages resulting from polluting watercourses shall be repaired, restored, or compensated for by the CONTRACTOR.

3. Grade construction areas so as to minimize retention of rainwater, except as specified hereafter. Provide temporary rainwater runoff diversion around construction areas.


5. Temporary erosion controls may include, but are not limited to, surface stabilization which shall be accomplished with vegetation and mulch, dewatering, erosion matting, temporary earthen diversion berms and ditches; and minimization of disturbed acreage. CONTRACTOR is responsible for preventing excessive on-site erosion during construction as well as protecting the work included in this Contract.

6. Temporary sedimentation controls may include, but are not limited to, silt fences, traps, temporary earthen diversion berms and ditches, rock dams, stabilized construction entrance and appurtenances at the foot of sloped surfaces. CONTRACTOR is responsible for preventing migration of sediment into wetland areas, streams, and adjacent properties during construction. The performance of CONTRACTOR’s sedimentation controls is subject to approval by DEPARTMENT.

7. Stockpiles shall be protected from transfer of material due to erosion by providing sedimentation controls along the toe of the slopes, seeding the side slopes (with the exception of soil-bentonite mixture stockpiles which shall be covered with plastic) and by maintaining stable slopes.

8. CONTRACTOR shall be responsible for maintaining all temporary and existing permanent erosion control structures on the site. Maintenance shall include but not be limited to making all repairs necessary to maintain the structures as well as remove all accumulated sediment as necessary to maintain the structures in proper working condition. The
frequency of sediment removal from all on-site erosion control structures shall be bi-monthly at a minimum. Silt fence shall be installed as needed to insure against off-site runoff until all diversion structures are constructed and operational.

9. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results which comply with the requirements of DEPARTMENT, CONTRACTOR shall immediately take whatever steps are necessary to correct the deficiency at his own expense.

D. 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 EPA or USDA 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.
E. Traffic Control (Section 00009)

1. The CONTRACTOR shall maintain all temporary road access routes. Temporary access roads will be repaired as necessary to insure unimpeded daily operations. This may include at a minimum, routine grading of the temporary access roads.

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.

F. 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.

3.5 Protection of Natural Resources

A. General

1. Preserve the natural resources within the project site that are not specified for removal or change.

2. Preserve the natural resources outside the project site impacted by the work.

3. Conform to federal, state and local permitting requirements.

4. Restore disturbed resources to an equivalent or improved condition upon completion of work.

5. 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.

B. Land Resources

1. Except in areas specified to be cleared, do not remove, cut, deface, injure, or destroy existing vegetation.

2. Protect vegetation, that is to remain, from damage by construction operations.

3. Vegetation, intended to remain, that is scarred or damaged by construction operations shall be removed and replaced with equivalent undamaged vegetation.

4. Removal of scarred or damaged vegetation shall be in accordance with the specifications.
5. Trees or shrubs with 30 percent or more of their root systems damaged shall require removal and replacement.
6. Replacement vegetation shall be approved by the Engineer before replacement.

A. Water Resources
   1. Prevent oily or hazardous substances from entering the ground, drainage areas, or local bodies of water.
   2. 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.

B. Fish and Wildlife Resources
   1. Do not alter or significantly disturb water floes on or adjacent to the project site, except as indicated or specified.
   2. Do not later or significantly disturb native habitat on or adjacent to the project site, except as indicated or specified.

3.6 Protection of Existing Facilities
A. Fencing
   1. Protect existing fencing from damage due to construction operations.
   2. Where fences and posts are temporarily removed for access they shall be reinstalled or replaced with new.
   3. Reuse of existing fence shall be allowed only if it can be reinstalled to the same or better condition than when it was removed.

3.7 Removal
A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work.
B. Remove all such temporary facilities and controls as soon as safe progress of the work will permit.

END OF SECTION
SPEC 00011
SITE SECURITY

1. GENERAL

1.1 Summary

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.

The CONTRACTOR shall furnish a uniformed watchman and shall provide that person(s) with heated/air-conditioned accommodations separate from the DEPARTMENT and ENGINEER. The ENGINEER will have the right of approval and rejection of the CONTRACTOR's security personnel.

The CONTRACTOR shall provide a guard tour patrol system to ensure security personnel are patrolling the site. The CONTRACTOR shall ensure that security is present at all times CONTRACTOR personnel are not onsite.

1.2 Submittals

1. Submit security firm experience and personnel resumes in accordance with Section VIII, Articles 5.23-5.29.

2. Submit proposed guard tour patrol system specifications prior to installation at site.

3. Submit proposed guard tour patrol system checkpoint locations prior to installation at site.

4. Submit the site entrance/exit log and the watchman logs as part of the project record documents.

5. Interim submittals: Submit patrol reports generated by guard tour patrol system and watchman log monthly.

2. PRODUCTS

2.1 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.
2.2 Watchman Log

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.

3. EXECUTION

1. Conduct security checks at three (3) hour intervals 24 hours per day, 7 days per week. During working hours, the CONTRACTOR’s personnel may conduct security checks. During non-working hours, the hired watchman shall conduct security checks.

2. Guard tour patrol system checkpoints shall be installed along the length of Willetts Creek. At a minimum, checkpoints shall be in the following locations:
   a. Northern access gate at shopping plaza
   b. Middle School footbridge
   c. High School footbridge
   d. Barberry road access gate
   e. Two additional in Middle School work area
   f. Two additional in High School work area

3. Report problems noted to CONTRACTOR's authorized representative and expeditiously correct problems noted. Provide written report of problems and corrective actions to ENGINEER within 24 hours of occurrence.

4. 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.

5. A log of all security incidents shall be maintained and furnished to the ENGINEER upon request.

6. 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.
7. 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.

8. The CONTRACTOR shall maintain a current list of authorized persons and shall submit copies of the updated list to the ENGINEER.

9. Security personnel shall record their presence while patrolling the site using a guard tour patrol system. The reports shall be delivered to the ENGINEER once a month or upon request.

10. Maintain security of the site such that site access is only granted for project personnel or approved visitors.

11. Maintain the security of materials, supplies, equipment, and facilities at the site from theft or vandalism.

END OF SECTION
1.01 SUMMARY

This section includes:

1. The criteria for installing new monitoring wells; and
2. The criteria for decommissioning existing monitoring wells.

1.02 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1. American Petroleum Institute, AP-13 A, American Petroleum Institute Specification 13 A

1.03 SUBMITTALS

Records

Submit the following in accordance with Section VIII, Articles 5.23 through 5.29:

1. New well construction diagrams.
2. New well boring logs.
3. Extend well construction diagrams.

1.04 DELIVERY, STORAGE AND HANDLING

Casing and screens shall arrive on-site clean and in factory cartons.

PART 2 PRODUCTS

2.01 MATERIALS

1. Risers (inner casings)
   a. 2-inch internal diameter (ID), schedule 40, threaded, flush-joint PVC pipe.
   b. The top of the PVC casing shall be equipped with a compression J-plug.

2. Screen Sections:

   Manufactured slotted well screens with slot size of .010 inch (10 slot), 5 feet in length and equipped with threaded bottom plugs.

3. Sand Pack

   Consisting of graded silica sand with an average grain size and grain size distribution such that only minimal amounts of the sand may pass through slots in the screen.

4. Finer Grained Sand Pack

   100% passing the No. 30 sieve and less than 2% passing the No. 200 sieve.

5. Protective pipe casing

   4-inch I.D. (minimum) steel casing.

6. Bentonite

   Powdered, premium grade sodium montmorillonite conforming to applicable standards set forth in AP-13 A with a minimum barrel yield of 90 barrels/ton.

7. Cement

   Portland cement in accordance with ASTM C 150, Type II.
2.02 EQUIPMENT

Locks

1. New plastic coated, weather resistant locks with O-ring seals around shackle and 3-inch-long shackle.

2. Locks shall be American Lock Company Weatherbuilt Plus Series 72 WCC, or equal.

2.03 MIXES

Cement/Bentonite Grout

Water, cement and bentonite mixed as follows:

- 5 to 7 gallons of water.
- 94 pounds of cement
- 1 to 4 pounds of bentonite.

PART 3 EXECUTION

3.01 PREPARATION

Protection

1. Protect existing monitoring wells to remain.

2. If integrity of wells to remain is compromised (casing becomes bent or loose or grout cracks) as a result of Contractor’s operations, the wells shall be replaced in kind at no additional cost to the Department.

3. Equipment and Material Preparation and Cleanup

4. All drilling and sampling equipment that may come in contact with subsurface materials shall be steamed cleaned prior to use.

5. The drilling and sampling equipment shall be steam cleaned before leaving the site.

6. Drilling fluids, including development waters, shall be containerized and disposed off-site.

7. Drill cuttings shall be disposed off-site.
3.02 INSTALLATION

1. General
   a. The work shall be carried out in accordance with GW-MW-10/96, NWWA-EPA and 6 NYCRR Part 360.
   b. Provide new locks for all monitoring wells shown on the drawings.
   c. All locks shall be keyed alike.
   d. Provide four sets of keys.

2. Monitoring Wells
   a. New monitoring wells shall be installed in 4.25-inch I.D. hollow stem auger (ASA) drilled holes.
   b. Attached figures show the typical construction detail for new monitoring wells.
   c. The sand pack shall be introduced gradually inside the 4-inch diameter augers and shall fill the annular space between the screen and borehole adjacent to the screen. Sand pack shall be brought to 2 ft above top of screen.
   d. Prevent collapse of the native formation materials against the well casing or screen.
   e. Frequent and precise measurements shall be provided to ensure the proper placement of all materials.
   f. A 2-ft bentonite seal shall be installed on top of the sand pack.
   g. The grout shall be mixed with a mud pump to a consistency acceptable to the Engineer. No organic polymer additives are permitted.
   h. The grout material shall be introduced via a tremie pipe lowered to just above the bentonite layer. As the grout material is pumped into the borehole, the tremie pipe shall be removed, and the augers withdrawn.
   i. Remove augers upon completion of grouting.
   i. The monitoring well shall have a vented and locking cap.
3. Bedrock Monitoring Wells

Attached figure shows the typical construction detail for new bedrock monitoring wells.

4. Placement

Install new monitoring wells after placement of backfill and prior to placement of topsoil at locations shown on the plans.

3.03 NEW MONITORING WELL DEVELOPMENT

1. Allow the wells to set a minimum of 48 hours prior to development.

2. Develop until a turbidity of 50 nephelometric turbidity units (NTUs) is reached and the pH and conductivity of the groundwater removed stabilize, or until 2 hours of development time have elapsed, whichever occurs first.

3. A minimum of five well volumes shall be removed.

3.04 MONITORING WELL DECOMMISSIONING

1. General
   a. Decommission wells as indicated on the Drawings in accordance with GW-MW-10/96.
   b. Prevent cross contamination between upper and lower confining layers during decommissioning.
   c. Disposal of all removed components.
   d. All excavated soils shall be handled like drill cutting per 3.01 of this part.

2. Sequence of Operation
   a. Break up, remove and dispose of the surface concrete seal.
   b. Excavate the ground surrounding the protective casing of each well scheduled for decommissioning.
   c. Remove and dispose of the protective casing.
   d. Remove riser and screen by over boring down the outside of the
riser pipe with a hollow stemmed auger, then pull the riser and screen. Avoid over boring bottom of hole.

e. Use a rock bit if the riser and screen cannot be pulled after over boring.

f. Remove all remaining material from the original annular space and dispose.

g. Place the cement/bentonite grout by tremie into the borehole using a 1-inch I.D. grout tube as auger is removed.

h. Allow 24 hours for the grout to cure prior to commencing work in the immediate area.

**3.05 MONITORING WELL EXTENSION**

1. **Sequence of Operation**

   a. Remove existing protective casing cap or cover as necessary to extend the well.

   b. If existing inner casing is PVC, install new PVC inner casing with slip on coupling with hose clamps. If existing inner casing is stainless steel, install new stainless steel inner casing by welding to existing casing.

   c. Extend inner casing to 2 inches below the top of the protective well casing.

   d. Extend the steel protective casing by welding to existing protective casing. Steel protective casing shall be welded on plumb and level.

   f. Fill annulus between casing sections with cement/bentonite grout.

   g. Install 1 foot by 1-foot concrete drainage pad.

2. **Field Quality Control**

   Ensure inner casing is straight between old and new sections by demonstrating that 4-foot-long bailer will pass freely through the full length of the well.
3.06 LOCK REPLACEMENT

1. Remove existing locks and replace with new locks on all monitoring wells to remain.

2. Locks shall be keyed to match those provided on new monitoring wells.

3. Provide four copies of well keys to the Engineer.

3.07 PIEZOMETER INSTALLATION

1. New piezometers shall be installed using a wireline casing advancer or other appropriate method to advance casing. The method chosen to drill should minimize disturbance of the fill.

2. Install new piezometers at locations shown on the plans as directed by the Engineer.

3. Drill into native soils. Fill hole to bottom of fill with cement.

4. Steam-clean casings and screens prior to installation.

5. Set top of screen.

6. The sand pack shall be introduced gradually and shall fill the annular formation materials against the well casing or screen. Frequent and precise measurements shall be provided to ensure the proper placement of all materials.

7. Provide a 2-foot-thick (minimum) bentonite pellet seal above the sand pack.

8. Provide cement/bentonite grout above the bentonite seal to 2 feet of proposed final ground surface. No organic polymer additives are permitted. The grout shall be mixed with a mud pump to a consistency acceptable to the Engineer. The grout material shall be introduced via a tremie pipe lowered to just above the top of the bentonite layer. As the grout material is pumped into the borehole, the tremie pipe shall be removed, and the augers withdrawn. Remove augers upon completion of grouting.

9. Provide an outer water-tight protective steel casing cemented in place around the PVC riser pipe. The top of the steel casing shall extend approximately 3 feet above the finished grade and 3 inches above the top of the PVC well casing. Five feet of steel casing shall be below ground. The monitoring well shall have a vented and locking cap. No cement
collar shall be provided. Provide additional soil to divert surface runoff from the well.

END OF SECTION
PART 1 GENERAL

1.01 SUMMARY

This section includes requirements for sampling, analysis and reporting. Requirements for project sampling for chemical analysis are specified in the Supplementary Specifications.

1.02 SPECIAL PROJECT PROCEDURES

The Department retains the option to modify sampling procedures and frequency.

1.03 SUBMITTALS

1. Sampling Plans

Submit the following in accordance with Section III, Bidding Information and Requirements:

a. Sampling Plan;

b. Quality Assurance Project Plan (QAPP)

2. Sampling Results

Submit the following in accordance with Section VIII, Articles 5.23-5.29, “Shop Drawings and Samples”:

a. Analytical results

b. The Contractor shall deliver to the Engineer preliminary and final reports in portable document format (pdf). All data generated under this Contract shall be submitted as an EQuIS™ Electronic Data Deliverable (EDD) or otherwise directed by the Department.

c. Submit a hard copy of the analytical results from the laboratory, including QA/QC summaries, within the specified turnaround time starting at the validated time of sample receipt (VTSR).

d. Submit the ASP Category B reporting and deliverable package in CLP
format within 30 days of VTSR as required in the Supplementary Specifications.

PART 2 PRODUCTS

2.01 SAMPLING PLAN

The Sampling Plan shall include the following:

1. A chart and/or map indicating the approximate number of samples to be collected and the matrices of each, including anticipated QA/QC samples.
3. Description of sampling equipment and maintenance procedures for the equipment.
4. Procedures for decontamination of sampling equipment.
5. Sample handling, labeling and regulatory compliance procedures for shipping.
6. Training requirements for environmental sampling for new employees and refresher training requirements for current employees.

2.02 QUALITY ASSURANCE PROJECT PLAN (QAPP)

The QAPP shall conform to relevant protocols outlined in NYSDEC’s Technical and Administrative Guidance (TAGM) memos. The contents of the QAPP shall be consistent with EPA guidance as outlined in EPA AQ/G-5: Guidance for Quality Assurance Project Plans, December 2002, EPA/240/R-02/009 (National Service Center for Environmental Publications). The QAPP shall be project specific and include the following:

1. Organizational chart, including a designated QA Officer.
2. Data quality objectives for the site.
3. 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.
4. Specific limits of concern for each analyte for each matrix to be sampled.
5. The matrix specific method detection limit that must be obtained for each of the analytes and matrices listed.
6. The independent 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.


8. Criteria for field sampling audits.

9. Record maintenance and archive methods.

10. Review and checking procedures for the sampling plan and the analytical 
results reporting.

11. Copy of the QAO’s resume and training certificates.

2.03 ANALYTICAL RESULTS

1. Results for all samples (characterization, verification, disposal, etc.) shall 
be submitted within 24 hours upon receipt.

2. Category B presentation of the reporting and deliverables package as per 
Volume I of the NYSDEC ASP is required.

3. All analytical results for soils shall be reported on a dry weight basis.

PART 3 EXECUTION

3.01 PLAN PREPARATION

1. When preparing the QAPP, designate the analytical protocols by method 
number contained in the NYSDEC ASP.

2. The designated QA Officer shall meet the following criteria:

   a. Is an employee of the firm generating the sampling plan and 
      QAPP.

   b. Shall have no other position on the project that involves 
      productivity or profitability as job performance criteria.

   c. Shall not be the Contractor’s Health and Safety Officer.

   d. Shall have a bachelor’s degree in chemistry or natural science, 
      with 20 credit hours in chemistry.
e. Shall be proficient in analytical methodology, data interpretation and validation, the development of sampling plans, QC procedures and auditing procedures.

f. Shall have a 40-hour OSHA safety training and be current in refresher training.

g. The QAO shall be independent of the analytical laboratory.

3. The QAO shall assist the project manager in the preparation of the sampling plan.

4. The QAPP and all revisions to it must be signed by the QAO prior to submission.

5. The method detection limit of the QAPP shall be one-fifth of the site-specific limit of concern (cleanup goal).

3.02 SAMPLING

1. Collect samples as specified in the Supplementary Specifications. The Contractor shall provide a minimum 24-hour notice to the Engineer in writing prior to sampling. Sampling and analytical methods and procedures for sampling shall be in accordance with the approved sampling plan and QAPP.

2. Collect samples from the depths and locations identified in the specifications.

3. Samples shall have VTSR at the laboratory within 24 hours of collection. Results shall be available within the specified turnaround time of VTSR and data packages within 30 days.

3.03 QUALITY CONTROL

1. Samples

   a. Samples will be considered environmental samples, not waste samples, and require strict adherence to QA/QC requirements for environmental samples.

   b. Laboratory QA/QC samples include analysis of one matrix spike/matrix spike duplicate (MS/MSD) set per 20 samples, per batch, or per samples collected within seven days, whichever is more frequent. One matrix spike blank analysis for every
MS/MSD set is also required to substantiate any matrix interferences.

c. Field duplicates and field rinsate blank QC samples are required. Field duplicate samples shall be collected and analyzed at a rate of one per every 10 field samples. Field rinsate blank samples are not required if dedicated sampling equipment is used.

2. Results

a. Laboratory results that are not within acceptable QA/QC ranges as stated in the Contractor’s approved QAPP shall require resampling and reanalysis of the affected samples at no additional cost to the Department. This shall include resampling and reanalysis, further excavation, backfilling and topsoiling, seeding and mulching.

b. Resampling and reanalysis as stated in this paragraph shall not increase the contract time for completion of the work.

c. No deviations from analytical protocols approved in the QAPP shall be made prior to notification of and acceptance from the Engineer.

d. QAD shall audit the laboratory during this project.

END OF SECTION
PART I GENERAL

This section includes the requirements for the CONTRACTOR’S Work Plan.

1.1 REFERENCES

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

- SPDES GP-02-01 SPDES General Permit for Stormwater Discharge from Construction Activities
- NYSDEC April 1992 Reducing the Impacts of Stormwater Runoff from New Development

SOIL AND WATER CONSERVATION SOCIETY - EMPIRE STATE CHAPTER


CODES, RULES, AND REGULATIONS OF THE STATE OF NEW YORK

- 6 NYCRR Part 700 Definitions, Samples and Tests
- 6 NYCRR Part 360 Solid Waste Management Facilities

LAWS OF THE STATE OF NEW YORK

- ECL Article 15 Water Resources
- New York State Standards and Specifications for Erosion and Sediment Control

1.2 PERMITTING

A. The ENGINEER will obtain the following Project permits. The conditions for all ENGINEER obtained permits are included in Section IX Supplementary Conditions.

- Authorization from the USACE will be required to perform the removal of contaminated sediment from Willetts Creek and Lake Capri under the Nationwide Permit 38.
- USACE 404 Permit –
- Section 401 Water Quality Certification
- SPDES equivalent

B. At a minimum, the CONTRACTOR will obtain the following permits. This section does not
describe all permits required for performance of the work. Any permits not identified in this section, or elsewhere in the contract documents, are the responsibility of the CONTRACTOR.

- NYSDOT Highway Work Permit for Non-Utility Work (PERM 33). The CONTRACTOR shall submit an application for a Highway Work Permit to the NYSDOT Region 10 office within 10 days of contract award. Requirements of the permit include:
  - Fill out the PERM 33 application package and prepare all supplemental materials, including any required insurance and bonding
  - Work zone traffic control plans for sidewalk, shoulder closure and partial lane closure or lane shift.
  - Plans for stabilized construction access
  - Erosion controls
  - Restoration details (curb, sidewalk, imprinted brick paver strip)
- Suffolk County Water Authority Hydrant Permit
- Any other permits required to complete the work.

1.3 SUBMITTALS

A. Submit the Work Plan in accordance with the timing stated in Section III, Article 5. Submit in accordance with Section VIII, Articles 5.23 to 5.29.

PART 2 PRODUCTS

2.1 WORK PLAN

The Work Plan shall, at a minimum, include:

A. Procedures for adequate and safe excavation of soils/sediments and materials including a contingency plan detailing procedures and methods to be employed to prevent, contain, and recover spills during the work.

B. Survey methods.

C. Procedures for water management, including creek by-pass, management of stormwater run-on, and dewatering.

D. Description of equipment to be used on site with appropriate safety devices needed to undertake the remediation of the site (i.e., water treatment plant)

E. Provisions for site security and plans for controlling ingress and egress at the site.

F. Identification of the permitted treatment, storage, and disposal facilities (TSDF) proposed to receive liquid or solid wastes to be transported off-site, along with their respective permits.

G. Identification of permits required to conduct the work.

H. Worksite layout showing, at a minimum, equipment and material staging areas, trailers, decontamination station, staging procedures, and temporary facilities (i.e. water, electric, and sanitary).

I. Detailed construction drawing(s) of the proposed decontamination station.
J. Procedures for excavating, handling, storing, and placing soils.
K. Procedures for handling liquid wastes and groundwater.
L. Provisions for control of fugitive air emissions and dust control.
M. Other requirements necessary to provide security, staging, sampling, testing, removal, and disposal of wastes.
N. Procedures for completing any other major aspect of the work per supplementary specifications.

2.1.1 Erosion and Sediment Control (ES&C) Plan

An ES&C Plan that meets the intent of a Stormwater Pollution Prevention Plan (SWPPP) per the State Pollutant Discharge Elimination System General Permit-02-01 must be included with the Work Plan.

A. Stormwater Management and Erosion Control

1. General

**CONTRACTOR** is responsible for utilizing a system of vegetation and structural measures which can be used to control the increased volume and rate of surface runoff during the project. Stormwater management on this project is to include measures to mitigate pollutants carried by surface runoff.

Stormwater management objectives for this project include:

a. Manage stormwater “run-on” into the project site.

b. Minimize the erosion potential from the construction project.

c. Enhance the quality of stormwater runoff to prevent water quality degradation in receiving waterbodies; and

d. Reduce stream bank erosion to maintain stream channels for their biological functions as well as for drainage.

Mitigation of stormwater impacts shall:

a. Provide for erosion and sediment control during all stages of development from the land clearing stage to the final stage;

b. Provide for the attenuation of peak storm volume and discharge rate to prevent flooding.

c. Provide for reduce post development runoff volumes;

d. Provide for safe conveyance of stormwater on the project site;

e. Provide for the protection of stream corridors; and
f. Provide for the protection of water quality by treating the “first flush.” Stormwater management systems such as (a) infiltration, (b) retention, and (c) extended detention shall be used to capture and treat the “first flush”. Supplemental stormwater management practices include water quality inlets, open vegetated swales, vegetated buffer zones and filter strips to provide water quality treatment by filtration, attenuation, buffering, sedimentation, biological removal and practical retention.

Three basic approaches for controlling erosion and sedimentation shall be employed: (a) soil stabilization - initially control sheet and rill erosion to prevent gully and channel erosion, (b) runoff control - then control gully, channel and stream erosion to prevent transport of sediment and (c) sediment control - then control sediment transport to protect off-site areas.

Erosion and sediment control measures should be constructed prior to beginning any land disturbances. All runoff from disturbed areas should be directed to the sediment control devices. These devices shall not be removed until the disturbed land areas are stabilized.

The CONTRACTOR’s bid price includes all costs necessary to provide for stormwater management and erosion and sedimentation control during construction. The CONTRACTOR is solely responsible for sizing and providing any and all stormwater management and erosion control measures necessary to meet Federal, State and local requirements and guidelines. The CONTRACTOR is responsible at CONTRACTOR’S own cost for any corrective measures required by CONTRACTOR’S failure to comply with these specifications or any Federal, State or local requirements and guidelines.

2. The ES&C Plan shall follow guidelines for structure and content of a SWPPP contained in SPDES GP-02-01.

The ES&C Plan shall include:

a. Information regarding site background, description of work, analysis of site limitations for stormwater facilities, and potential impact to natural resources;

b. All calculations and assumptions used for the sizing and siting of proposed temporary erosion and sedimentation control facilities.

c. Information regarding maintenance needs and safety considerations of stormwater management and erosion and sediment control facilities;

d. Implementation schedule for staging of stormwater management facilities and conveyance systems;

e. Description of the coordination of staging of erosion and sedimentation control facilities and construction activities; and

f. Description of winterization provisions.

2.1.1.1 Erosion and Sediment Control Guidelines
A. Existing vegetation on the project site shall be retained and protected to minimize soil loss on the project site and to minimize erosion control costs.

B. Sediment control practices and measures, where necessary, shall be designed to protect the natural character of rivers, streams, lakes, coastal waters or other waterbodies on-site and minimize erosion and sedimentation off-site from the start of land disturbance activities to establishment of permanent stabilization.

1. The off-site impacts of erosion and sedimentation related to land clearing, grading and construction activities shall not be any greater during and following land disturbance activities than under pre-development conditions.

2. Pursuant to 6 NYCRR Part 700:
   a. Toxic and other deleterious substances shall not be discharged in amounts that will adversely affect the color, or odor thereof, or impair the waters of the state or their classified usages.
   b. Suspended, colloidal and settleable solids shall not be discharged in amounts that cause substantial visible contrast to natural conditions or causes deposition or impairs the waters for their classified usages.

Stream reaches on site and downstream of construction areas shall not have substantial visible contrast relative to color, odor, turbidity and sediment deposition from the reaches upstream of the construction area. Impacts such as these which results from construction or developmental activities are a violation of 6 NYCRR Part 700 water quality standards and may be subject to enforcement actions.

C. Erosion and sediment control measures shall be constructed in accordance with an erosion and sediment control plan. The plan shall:

1. Describe the temporary structural and vegetative measures that will be used to control erosion and sedimentation for each stage of the project from land clearing to the finished stage.

2. Provide a figure showing the location of erosion and sediment control measures.

3. Provide dimensional details of proposed erosion and sediment control facilities as well as calculations used in the siting and sizing of sediment basins.

4. Identify temporary erosion and sediment control facilities which will be converted to permanent stormwater management facilities.

5. Provide an implementation schedule for staging temporary and permanent erosion and sediment control facilities.

6. Provide a maintenance schedule for soil erosion and sediment control facilities and describe maintenance activities to be performed.

D. Erosion and sediment control measures shall be constructed prior to beginning any other land disturbances. The devices shall not be removed until the disturbed land areas are stabilized.
E. Guidance.

1. Erosion Restrictions: Previous earthwork shall be stabilized in accordance with SWCS before additional area is exposed. Site factors including topograph, soil erosion potential, proximity to wetlands and water courses may require limiting the amount of raw earth that can be exposed at any one time to less than 5 acres.

2. Grading: Perimeter grading shall blend with adjoining properties.

3. Vegetative Protection: Where protection of trees or other vegetation is required, the location of the site to be protected shall be shown on the erosion control plan. The method of protecting vegetation during construction shall conform to the design criteria in SWCS.

4. Drainage control.
   a. Surface runoff that is relatively clean and sediment free shall be diverted or otherwise prevented from flowing through areas of construction activity on the project site.
   b. A fill associated with an approved temporary sediment control structure or permanent stormwater management structure shall not be created which causes water to pond off-site on adjacent property, without first having obtained ownership or permanent easement for such use from the owner of the off-site or adjacent property.
   c. Natural drainage channels shall not be altered or relocated without the proper approvals. Pursuant to ECL, Article 15, a protected stream and the bed and banks thereof shall not be altered or relocated without the approval of the DEPARTMENT.
   d. Runoff from any land disturbing activity shall not be discharged for have the potential to be discharged off site or into storm drains or into watercourses unless such discharge is directed through a properly designed, installed and maintained structure such as a sediment trap, to retain sediment on site. Accumulated sediment shall be removed when 60% of the storage capacity of the sediment retention structure is filled with sediment.
   e. For finished grading, adequate gradients shall be provided so as to prevent water from standing on the surface of lawns for more than 24 hours after the end of a rainfall, except in a swale flow area which may drain as long as 48 hours after the end of rainfall.
   f. Permanent swales or other points of concentrated water flow shall be stabilized with sod, riprap, paving, or covered with an approved erosion-control matting as provided for in the design criteria in SWCS.
   g. Surface flows over cut, and fill slopes shall be controlled as provided for in the design criteria for vegetating waterways in SWCS.
5. Timing.

a. Except as noted below, all sites shall be seeded and stabilized with erosion control materials such as straw mulch, jute mesh, or excelsior within 15 days of final grading. If construction has been suspended, or sections completed, areas shall be seeded immediately and stabilized with erosion control materials. Maintenance shall be performed as necessary to ensure continued stabilization.

i. For active construction areas such as borrow or stockpile areas, roadway improvements, and areas within 50 feet of a building under construction, a perimeter sediment control system consisting of silt fencing or hay bales shall be installed and maintained to contain soil.

ii. On cut side of roads, ditches shall be stabilized immediately with rock riprap or other non-erodible liners, or where appropriate, vegetative measures such as sod. When seeding is approved, an anchor mulch shall be used, and soil shall be limed and fertilized in accordance with SWCS.

iii. Permanent seeding shall optimally be undertaken in the spring from March 21 through May 20, and in later summer and early fall from August 25 to October 15. During the peak summer months and in the fall after October 15 when seeding is found to be impracticable, an appropriate mulch shall be applied. Permanent seeding shall be undertaken during summer if plans provide for adequate watering of the seedbed.

iv. All slopes steeper than 3:1 (h:v), as well as basin or trap embankments and perimeter dikes shall, upon completion, be immediately stabilized with sod, erosion control blanket, or other approved stabilization measures. Areas outside of the perimeter sediment control system shall not be disturbed. Maintain as necessary to ensure continued stabilization.

b. Temporary sediment trapping devices shall be removed within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.


a. The bed and banks of all on- and off-site streams that may be impacted by land clearing, grading, and construction activities shall be protected to prevent stream, river, lake or coastal sedimentation, streambank erosion, stream enlargement and degradation or loss of fisheries habitat. Measures for protecting the bed and banks of a stream include: riprap, log cribbing, and vegetative measures.
b. Where temporary work roads or haul roads cross stream channels, adequate waterway openings shall be constructed using spans, culverts, washed rock backfill or other acceptable, clean methods that will ensure that road construction and use do not result in turbidity and sediment downstream. All stream crossing activities and appurtenances shall be in compliance with a permit issued pursuant to ECL, Article 15, and shall be carried out in conformance with guidelines in DEC-SCM.

7. Maintenance.

a. An erosion control plan for the project site shall identify maintenance requirements for erosion and sediment control practices utilized, and it shall provide a maintenance schedule. All erosion and sediment control measures shall be inspected periodically and maintained in conformance with the schedule so as to ensure they remain in effective operating condition until such times as they are removed.

b. All points of construction ingress and egress shall be protected to prevent the deposition of materials onto traversed public thoroughfare, either by installing and maintaining a stabilized construction entrance, or by washing all vehicle wheels in a safe disposal area. All materials deposited onto public thoroughfares shall be removed immediately. Proper precautions shall be taken to ensure that materials deposited onto public thoroughfares are removed so that they do not enter catch basins, storm sewers, or combined sewers.

c. Accumulated sediment shall be removed when 60 percent of the storage capacity of the retention structure is filled with sediment.

PART 3 EXECUTION

A. The CONTRACTOR shall adhere strictly to the provisions of the Work Plan as approved and shall control and manage surface water in every area where his/her activities take place. The actual methods shall be chosen by the CONTRACTOR; however, the ENGINEER must approve any method before construction begins. The approval of the Work Plan does not relieve the CONTRACTOR of the responsibility for completing the work in a manner that does not negatively impact the surrounding environment.

B. Surface water from areas of the excavation which have not been disturbed shall be prevented from entering areas where construction or work is in progress or contaminated areas.

C. Surface water from known areas of contamination shall be collected prior to leaving those areas and transported or pumped through watertight pipes to a temporary storage tank for later treatment through the water treatment system. Disposal shall be in accordance with all Federal and State regulations at CONTRACTOR’s cost.

D. In the event surface runoff is the cause of existing clean areas, or subsequently cleaned areas, becoming contaminated, the affected areas shall be cleaned in accordance with instructions given by the ENGINEER. The CONTRACTOR shall be responsible for
all costs associated with mitigating the affects of contaminated runoff migrating to clean areas or off site during the duration of the contract.

E. Groundwater which is visibly flowing from the excavation shall be collected at each exit point and piped or transported into a temporary storage facility for on-site treatment in accordance with Federal and State regulations.

F. The attached “CONTRACTOR/SUBCONTRACTOR SPDES PERMIT CERTIFICATION” will be completed properly.

END OF SECTION
1. **GENERAL**

1.1 **SCOPE OF WORK**

A. This section includes procedures for off-site disposal or recycling of wastes and procedures to transport all items specified for off-site treatment and disposal or recycling.

B. The **CONTRACTOR** shall properly transport and dispose of all items, including solid and liquid hazardous and nonhazardous wastes removed from the site, to appropriate disposal facilities, if necessary. This includes existing wastes as well as the wastes generated by the **CONTRACTOR**. The **CONTRACTOR** shall be responsible and will be held accountable for assuring that all sampling, analysis, transportation, and disposal requirements of the treatment, storage and disposal facilities, solid waste management facilities, publicly owned treatment works, reclamation or salvage facilities, federal, state, and local governments are complied with and properly documented.

C. The **CONTRACTOR** shall video the local roads and subsurface infrastructure (i.e., waterlines, storm and sanitary sewers) beneath local roads proposed for use as haul roads to transport waste for offsite disposal prior to initiation of the work and after completion of the work. The video shall be recorded to document the existing condition of all local roads and infrastructure prior to being exposed to project traffic. Infrastructure condition documentation will include the following:

1. Review of available utility maps, utility mark outs, and other available utility location information provided by utility owners.

2. Photographic and/or video documentation of features and appurtenances within the rights-of-way along the proposed truck routes, from the inside (residential) edges of sidewalks on both sides of the road. This will include, but not be limited to, sidewalks, roads, curbs, grass medians, lamp posts, hydrants, pavement, manhole covers, storm grates, and utility poles.

3. Video documentation of subsurface sewer pipe infrastructure (gravity-fed sewer mains, manholes, and catch basins) conditions, where accessible. Invert depths below grade will be noted where possible.

4. Infrastructure condition documentation will be reviewed to identify visible deficiencies, movement, deformation, cracking, etc. The need for protection or avoidance of specific locations during the course of remedial construction will be discussed with the Department of Public Work’s (DPW) Roads, Grounds, and Sewer Supervisor (Supervisor). Protection for sensitive areas such as a shallow water or sewer line crossing the road may be provided using road plates or other suitable
methods approved by the DPW Supervisor. Following the completion of each phase of remedial construction, post-construction conditions, using the same procedures described above, will be documented along truck routes used during the work. The photographic and video documentation will be reviewed to identify condition changes that may have resulted from remedial construction activities.

D. Excavated soils shall be amended by the CONTRACTOR with Portland cement or an approved equal, as needed, to meet the moisture content and structural stability requirements of the disposal facility.

1.2 SUBMITTALS

A. **Transportation Plan:** The CONTRACTOR shall submit a Transportation Plan to the ENGINEER prior to the start of work for review. This plan shall conform to access points shown in the Contract Drawings. At a minimum, this plan shall include:

- Type and number of vehicles used;
- Travel routes and times; and
- Copies of transportation permits.
- List any special restrictions along haul route (e.g. MTA bridges, etc.)
- Onsite scales truck weighing proposal
- Proposed traffic control

B. **Disposal Facilities:** The CONTRACTOR shall submit to the ENGINEER information regarding proposed facilities for disposal and/or recycling of each type of waste. All proposed facilities must be permitted and in substantial compliance with state and federal requirements. The CONTRACTOR shall, at a minimum, identify one backup disposal facility for each waste stream. Information submitted shall include, but not be limited to:

- Name;
- Owner;
- Type of facility/permit information;
- Contact person, phone number;
- Location;
- Hours of operation; and
- Copies of permits.

C. **Offsite Infrastructure Protection Plan:** The CONTRACTOR shall submit an Infrastructure Protection Plan to the ENGINEER prior to the start of work for review. Municipal infrastructure protection measures incorporated into this plan shall include, but not be limited to:

1. Methods to perform pre- and post-construction documentation of infrastructure conditions;
2. Selection of haul routes that limit truck traffic on local roads and avoiding local roads where there is an anticipated increase in the risk of damage, to the extent practicable;
D. **Waste Profiles with Pre-characterization analytical results:** The waste profile must be submitted to and approved by the ENGINEER before commencing prior to transportation and disposal.

E. **Waste Disposal Manifests:** The CONTRACTOR shall submit waste disposal manifests to the ENGINEER prior to payment.

### 1.3 PERMITS AND REGULATIONS

The CONTRACTOR shall comply with all federal, state, municipal, and local regulations regarding transportation and disposal of hazardous and nonhazardous material. These include, but are not limited to:

- Trucks used for transportation of hazardous material for disposal off site shall have a valid New York State 6 NYCRR Part 364 Waste Transporter Permit and U.S. Environmental Protection Agency (EPA) transporter identification numbers;
- Vehicle operator possession of a commercial driver's license with hazardous materials endorsement (if applicable);
- Registration of vehicle as a hazardous waste carrier (if applicable);
- Utilization of shipping papers and/or hazardous waste manifest (40 CFR 262.20);
- Proper marking and placarding of vehicles;
- Placement of emergency response procedures and emergency telephone numbers in vehicle, and operator familiarity with emergency response procedures (see Minimum Health and Safety Requirements, attached); and
- Compliance with load height and weight regulations.
- Compliance with requirements associated with EPA Hazardous Waste Generator I.D. number

### 1.4 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

   a. 40 CFR 262 1993 Standards Applicable to Generators of Hazardous Waste
   b. 49 CFR 172 Tables, Hazardous Material Communication Requirements, and Emergency Response Information Requirements
2. State of New York Codes, Rules, and Regulations (NYCRR)
   a. 6 NYCRR Part 364 Waste Transportation Permits
   b. 6 NYCRR Part 371 Identification and Listing of Hazardous Wastes
   c. 6 NYCRR Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities
   d. 6 NYCRR Part 375 Environmental Remediation Programs

1.5 DISPOSAL FACILITIES

A. Hazardous and Non-Hazardous Waste

1. Facilities must have valid federal/state permits appropriate for the waste being disposed.
   a. Permits must be valid during the entire project period.

2. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.

3. The disposal facility must comply with policies adopted by the DEPARTMENT, or with applicable regulations.

B. Recycling/Salvage Facilities

1. Facilities must have valid federal/state permits appropriate for the waste(s) being recycled or salvaged.
   a. Permits must be valid during the entire project period.

3. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.

3. The facility must comply with policies adopted by the DEPARTMENT and with applicable regulations.
1.6 MEASUREMENT

A. Each transport vehicle shall be weighed via onsite scales to determine the amount of material being removed from the site. Transport vehicles shall not depart site prior to being weighed.

B. A printed ticket with the time, date, vehicle number, and tare weight and a separate ticket with the same information except with total vehicle weight and net weight of material being transported for disposal shall be obtained from the disposal facility. A copy of both tickets shall be given directly to the ENGINEER as they are produced.

1.7 SPECIAL PROJECT PROCEDURES

A. CONTRACTOR shall be responsible for all special use taxes for in-state and out-of-state waste disposal or recycling, including but not limited to host municipality fees and special district user or local taxes.

2. PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. All equipment supplied shall be in good working condition. Equipment and machinery delivered to the site, including haul trucks, that have visible oil or hydraulic fluid leaks, will not be allowed on site until satisfactorily repaired. The CONTRACTOR is responsible for the cleanup of any oil or hydraulic fluid spills at the CONTRACTOR'S expense.

B. The CONTRACTOR shall not allow soil to be tracked off site at any time during the Project. Visible soil tracks on streets will not be allowed. The CONTRACTOR shall take sufficient precautions to prevent loose soils from adhering to tire treads, wheel wells, etc. Any loose soil spread shall be cleaned up.

C. Trucks used for transportation of material for off-site disposal shall be water tight and permitted pursuant to 6 NYCRR Part 364. All trucks shall be covered prior to leaving the site. Inspect transportation vehicles before and after loading to ensure compliance with all local, State, and Federal regulations for the safe transport of wastes from the Site to the receiving facility (including road and bridge weight limitations along route).

D. The CONTRACTOR shall provide the necessary labor and materials to insure all trucks, containers, etc., are lined with plastic prior to filling. All vehicles transporting contaminated material shall be fully-lined with minimum 6-mil polyethylene sheeting, an equivalent material, or otherwise watertight, and shall be equipped with functioning tailgate locks and non-mesh (solid), waterproof tarpaulins.
E. The CONTRACTOR shall provide waste containers specific to the individual waste as described in Supplemental Specifications.

2.2 TRAFFIC CONTROL DEVICES

A. All equipment items, if used during the construction of Project, shall conform to NYSDOT Section 619-2 and Manual on Uniform Traffic Control Devices (MUTCD) requirements:
   1. Flashing barricade lights
   2. Construction and maintenance signs
   3. Channelizing devices
   4. Arrow boards
   5. Barricades
   6. Traffic Cones

2.3 MISCELLANEOUS EQUIPMENT

A. Other items, which include orange safety vests, flags or signs for flagmen, and communication devices, shall be standard and adequate for their intended function. They shall be in accordance with the NYSDOT-MUTCD where applicable or as required by NYSDOT Work Permit.

3. EXECUTION

3.1 DISPOSAL REQUIREMENTS

A. Materials deemed nonhazardous will be disposed of by the CONTRACTOR in the most economical manner that meets applicable regulations acceptable to the DEPARTMENT and satisfies the project deadline.

B. The CONTRACTOR shall be responsible for confirming that the waste meets the approved disposal facility's acceptance criteria, including but not limited to the absence of free liquids. Soil may be amended with Portland cement or other approved material as necessary to meet disposal facility requirements. Use of amending materials shall be minimized to limit the addition of weight to the excavated soils, in accordance with Supplementary Specifications.

C. The CONTRACTOR shall be responsible for all costs involved in the handling of all wastes deemed unacceptable by the approved disposal facility.

3.2 ACCEPTABLE FACILITIES

A. Resource Conservation and Recovery Act (RCRA) Wastes
   1. The facility must have a current and valid state permit, if applicable.
   2. The facility must have a RCRA Permit or RCRA Interim Status for RCRA wastes.
   3. The facility must not have any significant RCRA violations or other environmental conditions that could affect its satisfactory operation.
   4. Significant violations include Class 1 RCRA violations as defined in EPA's RCRA Enforcement Response Policy dated October 1, 1988,
including but not limited to groundwater, closure, post closure, and financial violations.

5. Environmental conditions include those conditions affecting the satisfactory operation of the facility and violations of state and/or federal laws other than RCRA.

6. Under limited circumstances, an EPA Administrator may allow disposal of hazardous substances at a RCRA facility having significant RCRA violations or other environmental conditions affecting satisfactory operation, provided that the facility owner or operator has entered into a consent order or decree to correct the problems, and disposal only occurs within the facility at a new or existing unit that is in compliance with RCRA requirements.

7. Landfill disposal must be in a unit meeting applicable RCRA minimum technical requirements.

8. Current RCRA minimum technical requirements for land disposal include the use of a double liner system.

9. Under limited circumstances (low waste toxicity, mobility, and persistence), the EPA may approve the use of a single-lined land disposal unit for RCRA wastes where use of such a unit adequately protects public health and the environment.

10. As approved by the DEPARTMENT after review and audit of the facility.

B. Nonhazardous Wastes

1. The facility must have a current and valid state permit, if applicable.

2. The facility must be permitted and in good legal standing with applicable agency regulatory requirements.

3. As approved by the DEPARTMENT after review and audit of the facility.

C. Recycling/Salvage

1. The facility must have a current and valid state permit, if applicable.

2. The facility must be permitted in good legal standing with applicable agency regulatory requirements.

3. As approved by the DEPARTMENT after review and audit of the facility.

3.3 PREPARATION AND SECUREMENT OF TRANSPORT VEHICLES/CONTAINERS

A. Comply with applicable federal, state, and local regulations concerning packaging and shipping of materials.

B. Secure materials in transport vehicles/containers in accordance with regulations governing transportation of these materials.

C. Vehicles hauling contaminated soils shall be lined, watertight, and covered to prevent soils from spilling out of the vehicle or potentially fugitive particulate matter from becoming airborne.
3.4 VEHICLE LOADING AND DECONTAMINATION

A. Provide all equipment, personnel, and facilities necessary to load waste materials in accordance with the regulatory requirements listed herein, and in accordance with the regulations of those states through which the CONTRACTOR plans to transport materials.

B. Vehicle operators shall be trained in conformance with federal and state regulations for waste haulers (hazardous, special, and nonhazardous).

C. All vehicles coming into contact with waste materials shall be decontaminated to the satisfaction of the ENGINEER prior to leaving the site. Decontamination shall be considered complete when:
   1. No soil or other material is adhering to the vehicle body, tires or undercarriage;
   2. The vehicle is not leaking or dripping liquids; and
   3. The contents of a loaded vehicle are completely enclosed.

D. Vehicles leaking materials or dripping liquids in any amount will not be permitted to leave the site until provisions are made to eliminate the leaking material. The CONTRACTOR shall amend or dry soils and sediment as necessary to ensure vehicles do not leak.

E. All waste materials, debris, and contaminated materials shall be completely covered with a solid tarpaulin or otherwise completely enclosed to protect material from precipitation and prevent loss of material or dust during transportation.
   1. Mesh covers, or mesh tarpaulins will not be allowed. Cover shall be appropriately secured before the vehicle leaves the decontamination station.

F. Decontaminate transport vehicles and containers that have been loaded with nonhazardous materials for off-site disposal/treatment at an on-site equipment decontamination pad after loading and prior to leaving the site. Remove material on the tires and axles of trucks and material on the vehicle resulting from the loading operation.

G. Transport vehicles shall be decontaminated at the Decontamination Station (see Contract Drawings) upon leaving the Exclusion Zone at the site and again at the disposal facility as required.

H. Decontaminate all equipment that has come in contact with the contaminated soil/waste materials prior to the equipment leaving the contamination zone. Remove material from tracks, axles, buckets, tires, and equipment bodies as appropriate.

I. Wash water generated from the decontamination of transport vehicles shall be captured and stored prior to off-site disposal at an approved facility.

3.5 TRANSPORTATION

A. Materials shall be transported only at the times and by the routes indicated in the CONTRACTOR’s Traffic Protection Plan, unless written permission is received from DEPARTMENT to do otherwise. Drivers deviating from the approved route or otherwise not complying with Traffic Protection Plan requirements will not be allowed to return to the project site.

B. CONTRACTOR shall be responsible for all actions to remediate spills in transit.
C. All nonhazardous excavated soils/waste will be transported off-site for disposal at an appropriate facility. The waste should be sampled and segregated in the field prior to transport, as needed.

D. Transport and dispose of off-site any CONTRACTOR-generated Construction & Demolition (C&D) waste and refuse, as required.

E. Hazardous waste shall be contained in an approved roll-off container and stored in a segregated location from all nonhazardous excavated waste. The waste shall be sampled, as needed, to determine the appropriate transport and disposal procedures required if material meets hazardous waste criteria.

F. Prior to shipment of hazardous wastes off the project area, CONTRACTOR shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated Treatment, Storage, and Disposal Facility (TSDF) or Solid Waste Municipal Facility (SWMF) or other receiving facility.

G. CONTRACTOR shall be responsible for obtaining permits and authorizations necessary to use the selected shipping routes. Comply with restrictions imposed by local governmental agencies regarding use of the routes.

H. CONTRACTOR shall minimize truck idling and truck traffic to the greatest extent practicable.

I. The CONTRACTOR shall observe the Local and State (NYSDOT) Route weight limits and speed limits.

J. Do not allow soil to be tracked off-site at any time during the project. The CONTRACTOR shall inspect the streets and roads near the project site each day for soil tracks and spills. Visible soil tracks on streets will not be allowed. Take sufficient precautions to prevent loose soils from adhering to tire treads, wheel wells, and undercarriages of vehicles leaving the site. CONTRACTOR shall be responsible for complete removal of visible soil tracks from streets caused by vehicles entering and leaving the site to the satisfaction of the ENGINEER.

3.6 WASTE PROFILE

A. The CONTRACTOR shall obtain a waste profile approval from the designated (ENGINEER-approved) disposal facility prior to disposing of waste materials.

B. The CONTRACTOR shall collect the necessary number of characterization samples, based on the frequency required by the (ENGINEER-approved) disposal facility. The CONTRACTOR shall analyze pre-characterization samples for all test methods required by the selected disposal facility. If TCLP concentrations are exceeded, the material shall be handled and transported in accordance with applicable regulations for hazardous waste. The CONTRACTOR shall submit waste profiles and sampling results to ENGINEER upon receipt.
C. Hazardous waste and nonhazardous waste shall be segregated and stored separately.

3.7 Sampling
A. The CONTRACTOR shall be responsible for all cost associated with sampling of wastes to be disposed of as may be required by the disposal facility.

3.8 REPORTING
A. Manifests
   1. After the waste has been permanently disposed, the Hazardous Waste Manifests shall be completed in accordance with 6 NYCRR Part 372 and submitted by the CONTRACTOR to the ENGINEER with a copy to be forwarded to the DEPARTMENT.
   2. The CONTRACTOR shall be responsible for providing the generator with the information needed to complete exception reports.
B. Certificates of Disposal
   1. Provide Certificates of Disposal for all waste streams shipped off-site.
   2. The Certificates of Disposal shall be submitted to the ENGINEER within 30 calendar days of the shipment of wastes off-site.
C. Bill of Lading
   1. Items and materials that have been recycled or salvaged shall only require a signed bill of lading or receipt of materials and quantity received.
D. For waste materials not considered hazardous waste, provide certificates of disposal from a properly permitted disposal facility, as accepted by the DEPARTMENT.
E. Weight tickets must be obtained from the disposal facility and submitted to the ENGINEER after disposal.

Since there is no responsible party to act as the generator at this inactive hazardous waste disposal site, the DEPARTMENT has obtained the EPA-required generator identification number and the ENGINEER, or its representative will sign all manifests for proper shipping as an agent for the DEPARTMENT. However, the CONTRACTOR shall be responsible and will be held accountable for assuring that all sampling, analysis, transportation, and disposal requirements of the TSDF, SWMF, POTW, federal, state, and local governments are complied with and properly documented. The EPA-required Generator Identification Number for the Dzus Fasteners Co., Inc. site is as follows: NYD002043701.

END OF SECTION
SPEC 00016

QUALITY CONTROL

PART I    GENERAL

1.01 SECTION INCLUDES

A. Quality assurance and control of installation.
B. References and Standards.
C. Tolerances.
D. Field samples.
E. Inspection and testing services.
F. Testing by Contractor.
G. Manufacturers' field services and reports.

1.02 SUBMITTALS

A. Manufacturers' instructions and certificates.

B. Daily CONTRACTOR Quality Control (CQC) Report (submitted monthly)
   1. The Daily CQC Report will include, but not be limited to, the following information related to dredging activities:
      a. Documentation and details of the daily quality control checks of all dredging equipment and positioning system sensors.
      b. Hydraulically transferred dredged material table of percent solids by weight averaged over 15-minute increments of pumping, providing a continuous record of slurry management.
      c. Delays encountered and relevant details of the delay, such as the cause, resolution, and measures implemented to avoid similar delays in the future and to make up lost time if necessary.
      d. Documentation of dredge control system calibration.
      e. Dredge positioning system screen shot depicting active work areas and estimated removal volumes.
      f. Summary of confirmatory sampling and turbidity monitoring.
      g. Effective dredge hours.
      h. Interim progress surveys should be provided, with supporting x,y,z files, to support review during bi-weekly progress meetings.
      i. Sediments/Soils transported off-site

1.03 QUALITY ASSURANCE/CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
B. Comply fully with manufacturers' instructions, including each step-in sequence.
C. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
D. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
E. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
F. Perform work by persons qualified to produce workmanship of specified quality.
G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.04 REFERENCES AND STANDARDS
   A. Conform to reference standard by date of issue current on date for receiving bids, except where a specific date is established by code.
   B. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
   C. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

1.05 TOLERANCES
   A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
   B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
   C. Adjust products to appropriate dimensions; position before securing products in place.

1.06 FIELD SAMPLES
   A. Furnish field samples at the site as required by individual Specification Sections for review.
   B. Acceptable samples represent a quality level for the Work.
   C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Engineer.

1.07 TESTING BY LABORATORY SERVICES
   A. Contractor shall employ and pay for the services of an independent testing firm, acceptable to Department and Engineer, to perform tests.
   B. Independent testing firm shall:
      1. Perform tests and other services specified in the individual Specification Sections and as required by Engineer and Department.
      2. Prepare and submit reports to the Engineer, in duplicate, indicating
observations and results of tests and indicating compliance or non-compliance with Contract Documents.

C. Engineer will forward copy of report(s) to Contractor.

D. Contractor shall:
   1. Cooperate with independent firm; furnish samples of materials; furnish design mix, equipment, tools, storage and assistance as requested.
   2. Notify Engineer and independent firm 48 hours prior to expected time for operations requiring services.
   3. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's own use.

E. Retesting required because of non-conformance to specified requirements shall be performed, on instructions by the Engineer, by the same independent firm which performed the initial tests and inspections.

F. Payment for retesting will be the Contractor's cost with no change in the contract price.

PART 2 PRODUCTS Not used.

PART 3 EXECUTION Not used.

END OF SECTION
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PART 1  GENERAL

1.01 SUMMARY

This section includes the requirements for clearing and grubbing. The Contractor shall stake out the limits of the clearing and grubbing. Clearing and grubbing shall not proceed without the Owner’s approval of the limits staked.

1.02 SUBMITTALS

Submit the following in accordance with Section VIII, Articles 5.23-5.29, “Shop Drawings and Samples.”

- Tree Clearing Plan (that identifies areas/trees to be cleared, methods to be employed, proposed equipment, and tree material disposal)
- Tree pruning compound: submit samples in cans with manufacturer’s label.

1.03 PROJECT REQUIREMENTS

A. No burn off is permitted.

B. Cleared and grubbed material will be disposed of on site, unless otherwise specified.


PART 2  PRODUCTS

2.01 MATERIALS

Tree pruning compound shall consist of the following materials/properties:

- Waterproof,
- Antiseptic,
- Elastic and free of kerosene creosote and other substances harmful to plants.
PART 3 EXECUTION

3.01 PREPARATION

The Contractor shall use special care to protect public and private property. The Contractor shall take special care so as not to damage any utility lines in the process of cutting and removing the trees.

Before any tree is cut down, the tree shall be completely "topped" in an accepted manner approved by the ENGINEER to protect all utilities, public and private property. The Contractor shall be responsible for removing branches, foliage, etc., from the construction site as soon as the tree has been cut. If any property is damaged during the removal of a tree, the Contractor shall repair/replace the damaged portions at his/her own expense as directed by the ENGINEER.

Protection:

- Keep roads and walks free of dirt and debris at all times.
- Protection of land resources, utility lines and poles, and existing facilities shall be in accordance with SPEC 00010, “Temporary Facilities and Controls” and GC’s Art. 5.16, 5.17 and 5.18.
- Protect existing utility lines and poles that are indicated to remain from damage.
- Notify the Engineer immediately of damage to or an encounter with an unknown existing utility line.
- Repair damage to existing utility lines at no additional cost to the Department.
- Notify the Engineer prior to interruption of utility services and be responsible for minimizing the time period of such interruption.
- Protect those features, trees and vegetation to remain which have been designated by the Engineer. Trees, wetlands and other vegetation directed by the Engineer to remain shall be protected from damage by all construction operations by erecting suitable barriers, guards, and enclosures, or by other approved means. If damaged or destroyed, repair or replace in kind at Contractor’s expense.
- Maintain protection until all work in the vicinity of the work being protected has been completed.
- Do not operate heavy equipment or stockpile materials within the branch spread of existing trees.
Immediately repair any damage to existing tree crowns, trunks, or root systems. Roots exposed and/or damaged during the work shall immediately be cut off cleanly inside the exposed or damaged area. Treat cut surfaces with an acceptable tree wound paint and spread topsoil over the exposed root area.

When work is completed, all dead and downed trees shall be removed. Live trees shall be trimmed of all dead and diseased limbs and branches. All cuts shall be cleanly made at their juncture with the trunk or preceding branch without injury to the trunk or remaining branches. Cuts over 1-in in diameter shall be treated with an acceptable tree wound paint.

Restrict construction activities to those areas within the limits of construction designated on the Drawings, within public rights-of-way, and within easements provided by the Owner. Adjacent properties and improvements thereon, public or private, which become damaged by construction operations shall be promptly restored to their original condition, to the full satisfaction of the property owner.

Removals will include topping and other operations necessary to safely remove the trees.

No trees or trunks shall be felled onto pavement.

Adjacent sidewalks, lawns, streets, and gutters shall be cleaned.

3.02 CLEARING

Clear debris, rubbish, light structures and living or dead vegetation growth where indicated or specified. Cut and remove timber, trees, stumps, brush, shrubs, roots, grass, weeds, rubbish, and any other objectionable material resting on or protruding through the surface of the ground.

Top and limb trees before felling, unless otherwise approved by the Engineer.

Cut stumps off flush with ground surface or below.

Preserve trees where practical and as identified by the Engineer.

Conduct the clearing in a manner that prevents, to the extent possible, soil or soil like material from being collected with the cleared material.

Clearing operations shall be conducted in a manner to prevent falling trees
from damaging trees designated to remain or other existing features.

3.03 PRUNING

- Trim only those trees and other vegetation adjacent to cleared work areas and necessary to conduct the required work.
- Trim and prune branches 1 ½ inches or more in diameter.
- Neatly cut limbs and branches close to the bole of the tree or main branches.
- Paint cuts more than 1 1/4 inches in diameter with tree pruning compound.

3.04 GRUBBING

- Grubbing shall only be performed in areas designated by the Engineer.
- Contaminated areas shall not be grubbed. Stumps, roots and other subsurface vegetation in contaminated areas shall be excavated and handled in the same manner as the contaminated soils or sediments.
- All grubbing holes and depressions excavated below the original ground surface shall be refilled with suitable fill and compacted to a density conforming to the surrounding ground surface.

3.05 DISPOSAL OF CLEARED AND GRUBBED MATERIALS

A. Consolidate rubbish/debris encountered during clearing and grubbing and dispose off-site, as directed by the Engineer.

B. Stumps, tree trunks and limbs too large for chipping shall be appropriately disposed off-site by the Contractor.

C. Remove all topsoil within the cut and fill sections of the construction limits to a maximum of 12 inches, or as directed by the Engineer. All surplus topsoil shall become the property of the Owner and shall not be removed from the site. Surplus topsoil shall be stockpiled separately from common fill. Topsoil may be used in landscaping, loaming and seeding operations.

END OF SECTION
SPEC 00020

FENCES

PART 1 GENERAL

1.01 SUMMARY

This section includes the requirements for installation of fence, as necessary, at locations identified in Table 00020-1. Most of Willets Creek and the Contract Limit-of-Work is bordered by various residential and school fencing. The fencing will have to be removed and replaced with new fence during the course of the work.

In addition to replacing existing fence, the Contractor shall install approximately 250 linear feet of 6 ft tall chain link fence at the northern end of the Middle School athletic field as a barrier between the Middle School property and the plaza as part of site restoration.

1.02 REFERENCES

New York State Department of Transportation Standard Specifications, Constructions and Materials, January 2, 1995 (or most recent edition).

New York State Department of Transportation Standard Sheets 607-11 and 607-12 (included at the end of this section).

1.03 PERFORMANCE REQUIREMENTS

In addition to the requirements specified elsewhere in this contract, fence installation shall comply with NYSDOT Specifications Section 607.

1.04 SUBMITTALS

Fence manufacturer and material specifications.

Fence location plan and details.

Shop drawings of typical fence sections showing application to project.

1.05 PROJECT CONDITIONS

Ensure adequate depth of cover for proper installation of fence posts.

Verify proper location of fence prior to installation. Identify and employ NYSDOT
standards where applicable.

PART 2 PRODUCTS

2.01 MATERIALS

Chain-Link Fence
NYSDOT chain link fence, Type I with top tension wire (NYSDOT Item 607.3102)

Wooden Fence
All lumber shall be 0.40 CCA pressure treated No. 2 Southern Yellow Pine or No. 3 Douglas Fir.

Hardware shall be corrosion resistant, zinc plated or galvanized steel.

Rock Fence
Rock shall be NYSDOT large stone fill or similar natural material from on-site borrow.

Rocks shall have a nominal height of 12 inches and a minimum weight of 200 lbs.

PART 3 EXECUTION

3.01 CHAIN LINK FENCE

Fence shall be installed in conformance with NYSDOT specification, Section 607.

3.02 WOODEN FENCE

Install wood members plumb, level, true, straight and free of distortion.

Install fence as shown on figure in locations indicated on the drawings.

3.03 ROCK FENCE

Place individual rocks as shown on the drawings or as directed by the ENGINEER.

Rock shall be placed in full contact with ground and shall be free of wobble.
TABLE 00020-1

**Willetts Creek Fence Inventory**

<table>
<thead>
<tr>
<th>Fence Type</th>
<th>Upstream Station</th>
<th>Downstream Station</th>
<th>Fence Length (ft)</th>
<th>Bank Designation</th>
<th>Private Owner</th>
<th>School</th>
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<td>6 ft Chain-link</td>
<td>3+00</td>
<td>11+00</td>
<td>720</td>
<td>East</td>
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<tr>
<td>4 ft Plastic</td>
<td>5+50</td>
<td>9+90</td>
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SPEC 00021

SUBMITTALS

1. General

1.1 Description

The CONTRACTOR shall prepare and submit technical plans and drawings as listed below and as scheduled for DEPARTMENT’s review.

1.2 5-Day Submittal Package

A. 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 (Refer to SPEC 00003)
   a. Health and Safety.
   b. Decontamination of Equipment and Personnel.
   c. Contingency Measures.
   d. Community Air Monitoring.
   e. Odor Control Plan.

2. Work Plan (Refer to SPEC 00014)
   a. Quality Control.
   b. Sequencing of Work.
   c. Soil Erosion and Sedimentation Control Measures.
   d. Monitoring Well Decommissioning and Installation Plan.
   e. Transportation Plan.
   f. Site Security.
   g. Miscellaneous Requirements.

3. Sampling and Analysis Plan (Refer to SPEC 00013)
   a. Sampling Procedures.
   b. Analytical Methods.
   c. Quality Assurance Project Plan.

1.3 Required for Award and Notice to Proceed

A. 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:

2. Final Work Plan.
3. Final Sampling and Analysis Plan.
4. Shop Drawings, including the following:
   a. Electrical Supply and Lighting.
   b. Water Supply and Use Requirements.
   c. Temporary Site Facilities.
   d. Other shop drawings required by the specifications or as requested by the ENGINEER.

1.4 Submittals following Notice to Proceed

A. 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. Progress Schedule Submittal.
2. List of selected TSDFs.
3. Waste manifest forms and bills of lading.
4. Weigh Station tickets.
5. Meteorological monitoring results.
7. Identification of backfill suppliers.
8. Samples and grain size analyses of backfill materials.
9. Topsoil gradation, certification, and testing results.
10. Seed mix certification and analysis.
11. Daily air monitoring logs and results.
12. Laboratory results of documentation monitoring.
13. Dust control and roadway maintenance plan.
14. Survey data (SPEC 00004)
15. Subcontractor Information (SPEC 00005)
16. Field Offices (SPEC 00006)
17. As-Built and Record Documents (SPEC 00008)
18. Traffic Control Plan (SPEC 00009)
19. Silt fence and erosion control matting (SPEC 00010)
20. Well logs
21. Analytical Results
22. Transportation Plan and Disposal Records (SPEC 00015)
23. All other submittals as required by the Specifications applicable to the Work being performed or as requested by the ENGINEER.
A comprehensive submittal registry will be created and submitted to the DEPARTMENT for review and approval.

END OF SECTION
PART 1: GENERAL

1.01 SCOPE OF WORK

A. The Contractor shall furnish all labor, materials, equipment and incidentals required to construct access and service roads as shown on the Drawings.

B. The Contractor shall construct and maintain access roads under this Contract until project final completion and shall promptly refill and grade areas which have settled or are otherwise unsatisfactory for traffic. Contractor shall take record photographs of access roads to be used by Contractor's construction equipment and activities prior to the start of construction.

1.02 RELATED WORK NOT INCLUDED

A. Not Used

1.03 REFERENCE SPECIFICATIONS

A. Except as otherwise specified herein, the Standard Specifications for Roads and Structures as issued by the State of New York, Department of Transportation (NYDOT), shall apply to material requirements for access road construction.


C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.04 SUBMITTALS

A. Material testing laboratory results.

B. Materials source – submit name of imported materials suppliers.

C. Manufacturer's certificate – certify Products meet or exceed specified requirements.

D. Certification in accordance with NYSDEC DER-10 5.4 (e).

E. If the Contractor is proposing to construct an access road using granular material that is not listed under Part 2 below, Contractor shall include specifications on proposed material and road construction in their Work Plan. The Contractor can propose alternatives to constructing access road out of granular material.

PART 2: PRODUCTS

2.01 GEOTEXTILE
A. Nonwoven Fabric - The product shall be a nonwoven needle punched fabric consisting of polyester or polypropylene filaments formed into a stable network which retains its structure during handling, placement and long-term service. Geotextiles shall be capable of withstanding exposure to direct sunlight for 30 days with no measurable deterioration.

B. The fabric shall be nonbiodegradable, nonreactive within a pH range of three to eleven, resistant to ultraviolet light exposure, and resistant to insects and rodents. Test results from any sampled roll in the lot, when tested in accordance with ASTM D4759, shall meet or exceed the values listed in Table 1.

C. The material shall be Mirafi 180N manufactured by TC Mirafi of Pendergrass, GA, Geotex 861 manufactured by Synthetic Industries of Chickamauga, GA, or an approved equal.

### TABLE 1
MINIMUM AVERAGE ROLL VALUES FOR GEOTEXTILE FABRICS

<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>MINIMUM AVERAGE ROLL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric Weight</td>
<td>ASTM D3776</td>
<td>oz./yd</td>
<td>8</td>
</tr>
<tr>
<td>Thickness</td>
<td>ASTM D1777</td>
<td>mils</td>
<td>90</td>
</tr>
<tr>
<td>Grab Strength</td>
<td>ASTM D4632</td>
<td>lbs</td>
<td>220</td>
</tr>
<tr>
<td>Grab Elongation</td>
<td>ASTM D4632</td>
<td>%</td>
<td>50</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>ASTM D4833</td>
<td>lbs</td>
<td>135</td>
</tr>
<tr>
<td>Mullen Burst Strength</td>
<td>ASTM D3786</td>
<td>psi</td>
<td>350</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D4491</td>
<td>SEC</td>
<td>1.5</td>
</tr>
<tr>
<td>Coef. of Permeability</td>
<td>ASTM D4491</td>
<td>cm/sec</td>
<td>0.38</td>
</tr>
<tr>
<td>Apparent Opening Size</td>
<td>ASTM D4751</td>
<td>mm</td>
<td>80</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>ASTM D4491</td>
<td>gpm/ft</td>
<td>110</td>
</tr>
<tr>
<td>(AOS)</td>
<td>US Sieve No. 100</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>UV Resistance</td>
<td>ASTM D4355</td>
<td>%</td>
<td>70%</td>
</tr>
<tr>
<td>Trapezoid Tear Strength</td>
<td>ASTM D4355</td>
<td>lbs</td>
<td>130</td>
</tr>
</tbody>
</table>

1. Value is percent of minimum grab tensile after conditioning.

2.02 STONE AGGREGATE

See Section 31 05 16 Aggregates for Earthwork.

PART 3: EXECUTION

3.01 GENERAL

A. Materials for the access road shall be delivered, placed and compacted in accordance with the contract specifications and drawings.

B. The Contractor shall perform all general unclassified excavation, rough or overall grading, borrow and fill, to the subgrades of the road, road shoulders and slopes to match the existing grades.
C. Finished excavation and grading shall be uniformly smooth, well compacted, and free from irregular surface changes. The degree of finish shall be that obtainable from either blade-grader or scraper operations.

3.02 INSTALLATION

A. The crushed stone shall be placed and compacted where shown on the contract documents.

B. Stone material shall be certified in compliance with DER-10 section 5.4(e).

C. Prior to access road deconstruction, Contractor shall characterize road materials to determine proper disposition. The access road shall be deconstructed, and area restored as part of site restoration.

END OF SECTION
SPEC 00025

SCHEDULE OF VALUES, BID BREAKDOWN AND AFFIDAVIT FOR PAYMENT OF STORED MATERIALS

PART I GENERAL

1.01 SUMMARY

Section Includes:

Procedures for preparation and submittal of Schedule of Values and Bid Breakdown.

1.02 RELATED SECTIONS

A. Agreement: Contract Sum/Prices, amounts of Progress Payments and Retainages.
B. General Conditions: Progress Payments and Final Payment.
C. Application for Payment
D. Submittals
E. Change Order Procedures
F. Project Schedules.
G. Contract Close-out
H. Measurement for Payment Section

1.03 SUBMITTALS

A. Submit initial Schedule of Values within TEN calendar days after date of the Notice of Award.
B. Submit initial bid breakdown within FOURTEEN calendar days of Notice of Intent to Award.
C. Submit an updated progress schedule with each Application for Payment.
D. Payment Period: Submit at intervals stipulated in the Contract.

1.04 SUBSTANTIATING DATA

A. When Engineer requires substantiating information, submit data justifying dollar amounts in question.
B. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.
1.05 BID BREAKDOWN

A. The bid breakdown shall be used as a basis for determining progress payments on a lump sum contract or any designated lump sum bid item. The bid breakdown shall be cost loaded construction activities equal, in total, to the lump sum bid and shall be in such form and sufficient detail to correctly represent a reasonable apportionment of the lump sum. Prior to submitting an invoice for payment, the CONTRACTOR shall have submitted a detailed bid breakdown and obtained approval from the ENGINEER.

B. Each lump sum bid item on the schedule of Work and Prices, as set forth in the Bid must be broken down separately. The breakdown of each lump sum bid item must cover the cost of construction required by the Contract Drawings and Contract Documents for that item. The sum of the values for the construction activities, within a bid item, must equal the total bid amount for that item. The breakdown shall include subcontract amounts which shall not deviate from the amounts submitted in the Bid Proposal. The CONTRACTOR shall provide certification from the Subcontractors certifying the subcontract amounts.

C. The bid breakdown will include all information required in the Measurement for Payment Section.

D. A bid breakdown for unit price items will be submitted to the Engineer as requested or required by these Contract documents.

E. The bid breakdown will include labor, equipment and material costs (regardless if subcontracted or not) with markups as appropriate.

1.06 SCHEDULE OF VALUES

A. Submit typed schedule on form approved by Engineer. The schedule of values shall represent a start-to-finish list of work items on a project (broken down into their component parts and with corresponding values) that, in total, represent the entire project from beginning to end and the entire contract price. The schedule of values shall allow for the Owner to determine the cash flow needs for the project monthly at the minimum.

B. Format: List all major work activities indicated on the approved project schedule. Where appropriate, separate phases and other easily recognized divisions of work. Identify site mobilization, close-out, punch-list, demobilization, bonds and insurance as appropriate. Separate labor and materials for each item.

C. Include Allowances specified in these documents. List separate line items as appropriate and include the dollar amount equal to each portion of the contract.

D. Include separately from each line item, a directly proportional amount of Contractor’s overhead and profit.

E. Revise schedule to list approved Change Orders, with each Application for Payment.

F. Identify “Separately Funded Work” and amounts separately.

G. For each unit of work where payment requests will be made on account of materials or equipment purchased/fabricated/delivered but not yet installed, show “separate line items” for
H. Show line items of indirect costs, and margins of actual costs, only to extent such items will be individually listed in payment requests. In general, establish each item in schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin.

I. Except as otherwise required, major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor’s option.

J. Each activity in the Schedule of Values shall delineate one construction activity. For example, the placement of concrete between construction joints, the construction of an electrical duct bank or pipeline between points A & B. The costing for each activity should include all costs for the labor and materials or equipment required to complete the activity. For example, concrete construction activities should include all costs for the forming, placing of reinforcement, placing concrete and curing. The cost for pipeline construction activities should include materials, equipment and installation including pipeline supports or thrust blocks. The excavation and backfill for a pipeline or structure may be separate activities. The Contract Price breakdown shall include the itemized costs for the plant establishment and any maintenance services to be performed before the final project acceptance is made. No non-construction activity shall be cost loaded.

K. The CONTRACTOR shall use cost loaded construction activities in conformance with the Construction Schedule as a Schedule of Values. Each construction activity shall be tied to its bid item and total the cost loaded amount. The total of the Cost Loaded amounts for each bid item shall equal the amount bid for that item. The total of the Schedule of Values shall equal the current Contract value at all times. At any time during the progress of the Work of the Contract the ENGINEER reserves the right to review the cost loading of the Schedules of Values and direct necessary revisions. When requested by the ENGINEER, the CONTRACTOR shall provide all information necessary to substantiate the cost loading.

1.07 AFFIDAVIT FOR PAYMENT OF STORED MATERIALS

A. Instructions for completing the affidavit for payment of stored materials

When to use:
The prime contractor must submit the Affidavit for Payment of Stored Materials with the Contractor’s Application for Payment to request payment for any stored material(s). When using the Affidavit for Payment of Stored Materials, it will be necessary to separate Material and Labor Cost(s) in lieu of indicating Total Cost on the Contractor’s Application for Payment, Schedule 5 – Job Progress. FAILURE TO PROPERLY COMPLETE THIS AFFIDAVIT MAY RESULT IN THE REJECTION OF THE APPLICATION FOR PAYMENT.
How to complete:

For the heading information:
1. Enter the Contract No., Project No. and Payment Requisition No.
2. Enter the Project Name and Location.
3. Enter your company name in the space indicated.
4. Enter the date in the space provided.

For the SUMMARY OF STORED MATERIALS:
1. Enter the Contract Specification Section Number OR Item No. from the approved Detailed Estimate in Column 1.
2. Enter the quantity of the materials from the approved Detailed Estimate in Column 2.
3. Enter the description of the materials stored in sufficient detail to identify them in column 3.
4. Enter the value in column 4.
5. Enter the location where the item is stored in column 5.

END OF SECTION
In accordance with the provisions of the Contract General Conditions, request is made for payment of materials on hand for the following materials:

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>QUANTITY</th>
<th>DESCRIPTION OF MATERIAL STORED</th>
<th>VALUE</th>
<th>STORED AT</th>
</tr>
</thead>
</table>

Affidavit: The materials listed above have been purchased exclusively for use on the above-referenced project. The material is separated from the other like materials and is physically identified as DEC property for use only on the subject contract. DEC may enter upon the premises for the purposes set forth in the Contract General Conditions of the contract for inspection, checking or auditing, or for any other purpose as DEC considers necessary. It is expressly understood and agreed that this information and affidavit is furnished to the DEC for the purpose of obtaining payment for the above materials before they are delivered to, or incorporated into, the project described above, and that the storage thereof at the location shown is subject to, and under the control of, the Contractor. The Contractor certifies that the materials for which payment is requisitioned and which are described herein have been stored and secured for eventual incorporation into the Work. The Contractor acknowledges that the Contractor has full and continuing responsibility to insure and protect such materials and maintain them in proper condition to fulfill the contract requirements when installed.

(Verified) Inspector

Contractor
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1. GENERAL

1.1 SCOPE OF WORK

A. The CONTRACTOR shall furnish all labor, tools, materials, equipment, appurtenances, and incidentals to provide certified truck scales ready for use, for the purpose of determining the weight of any material being taken off site for disposal.

The Dzus site is bisected by a residential circle and divides the site into two (2) non-contiguous parcels. The CONTRACTOR shall provide two truck scales, one at each parcel.

B. The work shall include, but is not necessarily limited to the following:

1. Protection of work to remain.

2. Delivery and set-up of scale, including weight indicator and ticket printer.

3. Certification of scale by County Bureau of Weights and Measures.

4. Employing a trained weighmaster familiar with the scale provided.

5. Repair and maintenance of the scale for the duration of the work specified under this Project.

6. Providing proper foundations and ramps for the scale in accordance with the manufacturer's recommendations and County Bureau of Weights and Measures.

7. Removal of scale, foundations, and ramps once the ENGINEER determines that the exclusion zone has been remediated.

1.2 SUBMITTALS

A. The CONTRACTOR shall submit shop drawings for the scale, weight indicator, ticket printer, foundations and approaches, and proposed locations (shown on CONTRACTOR's Work Plan).
1.3 RELATED SECTIONS

A. Related sections include:

1. Section 00010, Temporary Facilities.
2. Section 00006, Field Offices and Sheds.
3. Section 00015, Transportation and Disposal.

2. PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Truck Scale

1. The scale provided shall be capable of accurately measuring the weights proposed by the CONTRACTOR.
2. The foundation required for the scale shall not be extensive.
3. Level approaches at both ends of the scale shall be 10 feet long at a minimum.
4. The truck scale shall be compatible with digital electronic instrumentation.
5. The truck scale shall be aboveground truck scale model number 14-8460-1 as manufactured by Fairbanks Scales of St. Johnsbury, Vermont or equal.

B. Weight Indicator

1. The weight indicator shall be of the same manufacturer as the truck scale and shall be fully compatible with the scale and ticket printer.
2. The weight indicator shall be digital and shall have a simple "re-zeroing" operation or push button.
3. The weight indicator shall have a digital display.
4. The weight indicator shall be Digital Weight Indicator, model number 90-166 as manufactured by Fairbanks Scales of St. Johnsbury, Vermont or equal.
C. Ticket Printer

1. The ticket printer shall be of the same manufacturer as the truck scale and shall be fully compatible with the scale and weight indicator.

2. The ticket printer shall be Ticket Printer model 50-3925, as manufactured by Fairbanks Scale of St. Johnsbury, Vermont, or equal.

3. EXECUTION

A. The CONTRACTOR shall deliver, install, certify, and have the truck scale and appurtenances in proper working order prior to removing materials for disposal from the site.

B. The weight indicator and ticket printer shall be protected from weather and vandalism by being placed either in a suitable scale house or an office trailer.

C. No weights will be accepted or paid for unless the ENGINEER witnesses the weighing and receives the associated weight ticket.

D. The scale shall be located in an uncontaminated area. The CONTRACTOR shall propose the location in the Contractors Work Plans; however, the ENGINEER must approve of any location other than that shown on the Plans.

END OF SECTION
SECTION 00030

GREEN REMEDIATION PRACTICES

PART 1 - GENERAL

1.01 SUMMARY

A. Work includes, to the extent practicable, special environmental "Green" remediation practices related to reducing waste generation; energy usage; emissions including greenhouse gases (GHGs), nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter and hazardous air pollutants (HAPs); water usage; and land and ecosystem disturbance.

B. The CONTRACTOR shall implement green remediation practices in the performance of the requirements of the Work to maximize to the extent practicable, sustainability, reduce energy and water usage, promote carbon neutrality, promote industrial materials reuse and recycling, and protect and preserve land resources.


D. The CONTRACTOR shall implement, to the extent practicable, practices and procedures to meet the environmental performance goals of the DEPARTMENT consistent with NYSDEC Program Policy DER-31/Green Remediation. In general, such practices and procedures shall include, but are not limited to:

1. Reducing direct and indirect Green House Gas (GHG) and other emissions;
2. Increasing energy efficiency and minimizing use of non-renewable energy;
3. Conserving and efficiently managing natural resources such as soil, water and habitat;
4. Reducing waste, increasing recycling and increasing reuse of materials;
5. Maximizing the reuse of land and the recycling of on-site materials; and
6. Applying green remediation concepts, such as foregoing energy consuming operations.
E. Specifically, **CONTRACTOR** shall consider inclusion of the following provisions:

1. Beneficially reuse materials that would otherwise be considered a waste (e.g., crushed clean concrete as base or fill).

2. Use of renewable energy and/or the purchase of renewable energy credits (RECs) or a combination of the two techniques to offset electricity demand at the site.

3. Reduce vehicle idling. All vehicles, both on and off road (including construction equipment) shall be shut off when not in use for more than 5 minutes, consistent with 6 NYCRR Part 217 Motor Vehicle Emissions, Subpart 217-3 Idling Prohibition For Heavy Duty Vehicles.

4. Cover soil, as approved by the **DEPARTMENT**, rather than spraying with water.

5. Establish minimally invasive and well-designed traffic patterns for on-site activities to reduce impacts to land and ecosystems.

F. **CONTRACTOR** shall be aware of the **DEPARTMENT'S** policy to utilize, as approved by the **DEPARTMENT**, recycled content materials, locally manufactured materials and low-emitting materials.

G. **CONTRACTOR** shall ensure, to the extent practicable, that the requirements related to the goals of the **DEPARTMENT** and as defined in the Contract Documents, are implemented to the fullest extent.

1.02 **DEFINITIONS:**

A. Green Remediation Definitions

1. Renewable energy sources include solar, wind, geothermal, biomass and biogas.

2. Locally manufactured shall mean manufactured within 150 miles of the work.

3. Recovered materials shall be waste materials and by-products that have been recovered from solid waste, but does not include materials and by-products generated from, and commonly reused within, an original manufacturing process.
1.03 ENVIRONMENTAL GOALS

A. The CONTRACTOR, to the extent practicable, shall:

1. Minimize the amount of waste generated from the site and maximize the use of recycling/reuse facilities for disposal of the waste to the extent practicable and as approved by the DEPARTMENT.

2. Maximize use energy derived from a renewable source.

3. Minimize on and off-site fuel combustion.

4. Minimize use of water.

5. Minimize disturbance to land and ecosystems.

1.04 SUBMITTALS

A. Form “A” - Summary of Green Remediation Metrics:

1. Consistent with NYSDEC Program Policy DER-31/Green Remediation requirements specified in Section 1.1B and Green Remediation Metrics requirements specified in Section 1.2.C of the applicable specifications, the CONTRACTOR shall complete Form A - Summary of Green Remediation Metrics, in its entirety and sign the certification as to its accuracy.

2. The CONTRACTOR shall submit properly completed Form A to the DEPARTMENT along with the CONTRACTOR'S Application for Payment.

1.05 QUALITY ASSURANCE

A. Environmental Project Management and Coordination:

1. CONTRACTOR shall designate an employee who shall be responsible for implementation of green remediation elements, coordinate work of subcontractors and suppliers; instruct workers relating to environmental issues; ensure that green remediation metrics are collected, recorded on Form A - Summary of Green Remediation Metrics and submitted with the CONTRACTOR’S Application for Payment, and oversee Project environmental goals.
PART 2 – PRODUCTS

A. **CONTRACTOR** shall use environmentally preferable products, where appropriate and as approved by the **DEPARTMENT**, including, but not limited to:

1. Compact Fluorescent Lights (CFL) or LED
2. Environmentally friendly electronics (e.g., ENERGY STAR)
3. Items composed of recovered materials

PART 3- EXECUTION

A. The **CONTRACTOR** shall, to the extent practicable:

1. Set up on- site recycling program for **CONTRACTOR** generated wastes.
2. Minimize equipment engine idling.
3. Utilize properly sized equipment.
4. Minimize emissions during site work (i.e., replace or retrofit older engines or use newer efficient models).
5. Practice engine maintenance in accordance with manufacturers’ standards and properly train operators to run equipment efficiently.
6. Sequence work to minimize double-handling of materials.
7. Provide locally made materials that are composed of recovered materials to the maximum amount practicable.
8. Provide materials that generate least amount of pollution during mining, manufacturing, transport, installation, use and disposal.
9. Maintain office trailer heating and cooling systems at efficient set points.
10. Avoid materials that contain ozone-depleting chemicals (e.g., CFCs or HCFCs) and that emit potentially harmful volatile organic compounds (VOCs).
11. Employ construction practices that minimize the generation of excessive dust and combustion by-products.
12. Minimize use of scarce, irreplaceable and endangered resources.
13. Contain and reuse water on-site, to the extent practicable, as approved by the DEPARTMENT.


END OF SECTION
Form A
Summary of Green Remediation Metrics

Site Name: ______________________ Site Code: __________ Operable Unit: ______
Address: ______________________________ City: ____________________________
State: ____________ Zip: __________ County: ______________

Reporting Period
Contract Period From: ___________ To: ___________
Reporting Period From: ____________ To: _____________ Is this a Final Report? Yes ☐ No ☐

Contact Information
Preparer’s Name: ___________________________ Phone No.: ______________________
Preparer’s Affiliation: ________________________ Company Code: ____________________

Waste Generation: Quantify the management of waste generated on-site.

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period (Tons)</th>
<th>Total to Date (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total waste generated on-site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Remedy generated waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Contractor generated waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of that total amount, provide quantity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Transported off-site to landfills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Transported off-site to other disposal facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Transported off-site for recycling/reuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Reused on-site</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period (KWh)</th>
<th>Total to Date (KWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total electricity usage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of that total amount, provide quantity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Derived from renewable source (i.e. solar, wind)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period (Miles)</th>
<th>Total to Date (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-site mobile fuel combustion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period (Hours)</th>
<th>Total to Date (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site diesel excavation/construction equipment usage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other on-site processes potentially generating emissions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th></th>
<th>Current Reporting Period (Gallons)</th>
<th>Total to Date (Gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total quantity of water used on-site</td>
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<td>Of that total amount, provide the quantity obtained from:</td>
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<tr>
<td>• Public potable water supply usage</td>
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<tr>
<td>• Surface water usage</td>
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<tr>
<td>• On-site groundwater usage</td>
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<td>• Reclaimed water usage</td>
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<tr>
<td>• Collected or diverted storm water usage</td>
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</table>

*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.

<table>
<thead>
<tr>
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<th>Current Reporting Period (Acres)</th>
<th>Total to Date (Acres)</th>
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</thead>
<tbody>
<tr>
<td>Land Disturbed</td>
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<tr>
<td>Land Restored</td>
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</table>

*Provide a description of the amount of land and/or ecosystems remediated.*

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<thead>
<tr>
<th></th>
<th>Current Reporting Period (Acres)</th>
<th>Total to Date (Acres)</th>
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</thead>
<tbody>
<tr>
<td>Total area of land impacted by contamination</td>
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</table>

*Of the total acres provide the:* 

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<tbody>
<tr>
<td>Area of Land Remediated</td>
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</table>

**Other:** Provide a description in the space provided on page 3 of any other green remediation practices performed during the project.
<table>
<thead>
<tr>
<th>Description of green remediation programs reported above (Attach additional sheet if needed)</th>
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<tbody>
<tr>
<td>Waste Generation:</td>
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<tr>
<td>Energy Usage:</td>
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<tr>
<td>Emissions:</td>
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<tr>
<td>Water Usage:</td>
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<tr>
<td>Land and Ecosystem:</td>
</tr>
<tr>
<td>Other:</td>
</tr>
</tbody>
</table>

**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.

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<tr>
<th>Date</th>
<th>Contractor</th>
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SPEC 00200

EXCAVATION

1. GENERAL

1.1 SCOPE OF WORK

A. The CONTRACTOR shall furnish all labor, tools, materials, equipment, and incidentals to provide all work necessary to excavate the soils as shown on the Plans and specified herein. Sediment removal specifications can be found in SECTION 35 20 23—DREDGING. The soil excavation work to be done and paid for shall not be limited to the extent described herein but shall include all incidental work necessary for the completion of the work. For the purposes of this specification, soil is defined as material outside the limits of wetland.

B. Protection of all work to remain.

1.2 DESCRIPTION OF WORK

A. The extent of soil excavation and handling is as specified and shown on the Plans. Supplemental instructions may be furnished by the ENGINEER in the field.

B. The Work shall include, but not necessarily be limited to, the excavation and handling of contaminated soils at the site.

C. The Contractor shall protect all wells in and around the work area. Any wells within excavation limits shall be decommissioned and disposed of as contaminated debris in accordance with applicable rules and regulations. Wells which extend into bedrock shall be decommissioned in accordance with the specifications.

D. Any slope cutbacks, sheeting or shoring necessary to perform the Work shall be designed and sealed by a Professional Engineer retained by the Contractor. Contractor shall submit the design as part of the Excavation Work Plan for Engineer’s review, prior to start of Work.

E. If the bottom or side walls of any excavation need to be taken out beyond limits indicated in the Contract Documents, the Contractor must obtain prior approval from the Engineer. All soils excavated without prior approval of the Engineer shall be handled by the Contractor, at the Contractor’s expense.

F. Contractor shall be responsible for the protection of all property features, utilities and structures both on and off site.

G. Contractor shall be responsible for locating and verifying the locations of all underground utilities, and for protection of all utilities which may be encountered during the Work.
H. The quantity of contaminated soils indicated in the Contract Documents is an initial estimate and may not represent the actual excavated quantities. The initial estimated quantity is based upon the areas shown on the project drawings, plus an estimated percentage beyond (or above) this volume to account for failed confirmation samples.

I. Engineer may direct Contractor to leave in place at any time during the progress of the work, any soil, roots, etc. that are not indicated to be left in place.

J. Engineer may direct Contractor at any time to initiate backfilling or additional excavation operations.

K. All existing pipes, wires, property line markers and other structures, which the Engineer decides must be preserved in place without being temporarily or permanently relocated shall be carefully supported and protected from damage by the Contractor. Repair to pipes, wires or cables shall be performed by the Contractor.

L. In the event that existing clean areas, or subsequently cleaned areas become contaminated due to CONTRACTOR’s negligence, the affected areas shall be cleaned in accordance with instructions given by the Engineer at the Contractor’s expense.

M. Excavation of contaminated soils shall not begin until the Engineer has reviewed and approved the Contractor’s Excavation Work Plan and Transportation and Disposal Plan in accordance with SECTION 00015 – TRANSPORTATION AND DISPOSAL.

N. To the extent practical, the Contractor shall cover excavation stockpiles with polyethylene at the conclusion of excavation or at the end of the day, whichever is sooner, to protect from the weather. Polyethylene is to be anchored or weighted down as necessary to prevent loosening by wind. The Contractor shall maintain the integrity of and repair the polyethylene as needed. Stockpiling shall be conducted in accordance with SECTION 31 14 00 STOCKPILING.

1.3 RELATED SECTIONS

- Spec 00003 Health and Safety
- Spec 00004 Surveys
- Spec 00010 Temporary Facilities and Controls
- Spec 00013 Sampling
- Spec 01 45 25 - Testing
- Spec 00015 Off-Site Transportation and Disposal
- Spec 00021 Submittals
- Spec 00201 Backfill
- Spec 31 14 00 - Stockpiling
1.4 SUBMITTALS

A. Excavation Work Plan, including a discussion of:

1. Phasing of soil removal activities. Include layout of support areas, including fuel storage, containment, and re-fueling procedures for soil removal equipment.
2. Sequence of construction.

3. Equipment details, specifications, and capacities.
4. Excavation support designed and sealed by a New York State Professional Engineer, if necessary.
5. Operator qualifications and experience.
6. Methods of transporting excavated soils to the processing area.
7. Methods for monitoring equipment condition, including inspection frequencies for excavation equipment.
8. Methods and procedures for the protection of slopes, structures, utilities, and equipment during excavation.
9. Anticipated crew sizes, man hours, types of equipment, and equipment hours on a weekly basis.
11. Equipment cleaning, demobilization, and closeout procedures.
12. Emergency procedures in the event of a release to the creek.

B. Survey Data

1. Refer to SECTION 00004 SURVEYS for further details.

C. Shop Drawings

1. Included as part of Work Plan described above.

2. PRODUCTS

Not applicable.
3. EXECUTION

3.1 GENERAL

A. The CONTRACTOR shall confine his/her operations to within the limits of work identified on the Contract Drawings. The CONTRACTOR shall reduce the potential for cross-contamination of uncontaminated areas with contaminated soils by using appropriate decontamination protocols prior to moving between areas of contamination and minimizing double moving of materials.

B. The excavated soils may be “direct loaded” directly into the containers to be used during transportation, without any stockpiling of excavated materials. The CONTRACTOR may propose the use of temporary stockpiling as a means of dewatering saturated materials or to otherwise expedite the project schedule or lower the overall project cost.

C. The CONTRACTOR shall keep materials classified for different types of disposal segregated. Excavation and stockpiling operations for the different materials must not be mixed, unless otherwise approved by the ENGINEER.

D. The area to be remediated shall be excavated to the approximate areal extent shown on the Contract Drawings, specified herein, and as directed by the ENGINEER.

E. The CONTRACTOR shall be required to collect and analyze confirmation samples as discussed in the Supplemental Specifications to confirm the extent of contamination. The ENGINEER shall review the analytical results and determine if additional excavation of soils is required, and if additional confirmation sampling is required in specific areas. The CONTRACTOR’s means and methods shall in no way impede additional removal that may be required/directed by the ENGINEER. The CONTRACTOR shall not demobilize the excavation equipment until the sampling results are reviewed.

F. Groundwater or standing water in excavations must be removed, treated, and properly disposed prior to the collection of verification samples. The CONTRACTOR shall be responsible for implementing any run-on controls necessary to minimize run-on from entering excavations. Standing water from precipitation events in excavations must be removed and disposed of appropriately at the CONTRACTOR’S own expense.

G. The CONTRACTOR, to the extent possible in areas where the excavation will be deeper than two feet as shown on the plans or as directed by the ENGINEER, shall minimize the time between excavation and backfilling by not excavating until such time as the soil will be sent off site for disposal. The CONTRACTOR will be responsible for the cost of dewatering any groundwater from the excavations and treating that water. The CONTRACTOR shall minimize the area of open excavation and the collection of water within the excavation.

H. The CONTRACTOR shall employ dust and odor control methods during handling activities as necessary, in accordance with the Health and Safety Plan and the Air Monitoring Program. The CONTRACTOR shall use water or other means to control
dust and odors acceptable to the ENGINEER. No visible dust or significant odors are permitted beyond the limits of the exclusion zone as a result of excavation activities, as determined by the ENGINEER. A Community Air Monitoring Plan must be approved by the Department of Health prior to beginning excavation work.

I. Any excavations that are left unattended for any period of time shall be securely fenced with orange snow fence and posted with barricade tape to prevent unauthorized entry into the excavation. A maximum duration for any open excavations shall be determined prior to beginning excavation work. All temporary fencing is to be removed and properly disposed at the completion of the Contract.

J. The CONTRACTOR shall be responsible for all sampling and analyses as may be required by disposal facilities for disposal of soils and other material under this Contract. All sampling will be conducted with the ENGINEER present.

K. The CONTRACTOR shall not load soil and/or other material into the vehicles/containers when it is raining without prior approval from the ENGINEER. All soil and other material shall remain covered during rain.

L. Debris and material properly determined to be hazardous under federal and state regulations by the ENGINEER shall be disposed of as hazardous regardless of the CONTRACTOR's sampling results. Debris properly determined to be hazardous under federal and state regulations using the CONTRACTOR's sampling results shall be disposed of as hazardous regardless of the ENGINEER's sampling results.

M. The CONTRACTOR shall be responsible for ensuring that the waste meets the approved landfill's acceptance criteria (if applicable), including but not limited to the absence of free liquids and non-permitted material. The CONTRACTOR shall be responsible for all costs involved in the handling of any wastes deemed unacceptable by the approved landfill. Any Treatment Storage and Disposal Facilities (TSDFs) to be utilized shall be approved prior to beginning any excavation work.

N. The CONTRACTOR shall be responsible for providing adequate protection of existing structures to remain during execution of CONTRACTOR activities, especially excavation and backfilling.

O. CONTRACTOR shall be responsible for providing adequate protection against erosion during all field activities.

P. It is the responsibility of the Contractor to perform all excavation work in accordance with all applicable laws including, but not limited to, OSHA Excavation and Trenching Safety Regulations (29 CFR 1926.650).

Q. Vehicles used to haul waste materials both on and off-site shall be designed, equipped, operated and maintained to prevent leakage, spillage or airborne emissions during transport. All vehicles shall be decontaminated in the Contamination Reduction Zone prior to leaving the site, and a decontamination certificate, signed by the Contractor's
Health and Safety Officer or his designated representative, shall be provided to the Department representative stating the following:

1. No soil or other material is adhering to the vehicle body, tires or undercarriage.

2. The vehicle is not leaking or dripping liquids.

3. The contents of the vehicle are covered or completely enclosed so as to prevent potentially fugitive particulate matter from becoming airborne.

R. To accelerate schedule work can be performed simultaneously from stations 2+80 to 21+00 (Middle School Area) and stations 21+00 to Lake Capri (High School Area). This approach presents the potential for re-contamination of remediated portions of the High School Area, in the event sediment between stations 2+80 and 21+00 becomes mobilized during a significant precipitation event. The CONTRACTOR shall take necessary precautions (e.g. covering with dedicated geotextile) to protect remediated areas in High School area from re-contamination.

S. Excavate to contours, elevations and dimensions indicated. Cut trenches sufficiently wide to enable installation of utilities and allow inspections. Excavate soil disturbed or weakened by Contractor’s operations, soils softened or made unsuitable for subsequent construction due to exposure of weather.

T. Remove hard material and rock to elevations indicated in a manner that will leave foundation material in an un-shattered and solid condition.

END OF SECTION
SPEC 00201

BACKFILL

1. GENERAL

1.1 Scope of Work

A. The CONTRACTOR shall confine all backfilling operations within the limits of work as specified by the ENGINEER, including limits of easement lines and right-of-way, and shall not enter any area outside these limits without prior written consent of the ENGINEER.

B. The CONTRACTOR shall furnish all labor, tools, materials, equipment and incidentals necessary to backfill and compact excavation areas as shown and specified.

C. The CONTRACTOR shall be responsible for placing suitable fill and following proper compaction methods to properly fill the specified excavation areas.

D. The CONTRACTOR shall be responsible for dewatering of the excavation areas as necessary to provide an unsaturated bottom for placement of backfill as directed by the ENGINEER.

1.2 Related Sections

The excavation, backfill, topsoil and other earthwork of this project are interrelated.

1.3 Submittals

The CONTRACTOR shall submit:

A. The name and location of each proposed source of backfill.

B. Certification from suppliers that all fill materials to be supplied for use on this Project meet the requirements of this Specification section, and that the materials are certified clean in compliance with NYS DER-10 section 5.4(e). Certification must be received and approved by the ENGINEER prior to delivery of fill materials to the Site. For on-site soil used as backfill, one analytical sample shall be collected and analyzed as above prior to use as fill.

C. Samples of all fill.
D. A typical grain-size analysis, including hydrometer analysis of all proposed fill materials.

E. The liquid limit of the fill materials.

F. The moisture density curve for the fill material.

G. Compaction testing results.

H. NYSDOT approved source or NYSDEC mining permits.

I. A description of the equipment and methods proposed to be used for compaction.

J. Copies of all compaction test reports. The test reports shall include the test methods used, results, a narrative of tests conducted, locations, elevations material tested, equipment used, the name of the technician conducting the tests and a signed certification from the laboratory.

K. Certification that soil supplements meet the requirements of the New York State Agriculture and Marketing Law.

L. Name of qualified independent compaction testing laboratory.

1.4 References

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the base designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C136 Sieve analysis of fine and coarse aggregates
ASTM D422 Particle Size analysis of soils
ASTM D1140 Amount of material in soils finer than No. 200 sieve
ASTM D1557 Laboratory compaction characteristics of soil using modified effort
ASTM D2487 Classification of soils for engineering purposes
ASTM D2850 Standard test method of unconsolidated, undrained compressive strength of cohesive soils in triaxial compression
ASTM D2922 Density of soil and soil aggregate in place by nuclear methods
ASTM D3017 Water content of soil and rock in place by nuclear methods

USDA - SOIL CONSERVATION SERVICE - NEW YORK (SCS)

SCS 1991 1991 Guidelines for urban erosion and sediment control
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF REMEDIATION

Technical Guidance for Site Investigation and Remediation (DER-10)

2. PRODUCTS

2.1 See Section 31 05 16 Aggregates for Earthwork.

3. EXECUTION

3.1 General

A. The ENGINEER must approve all areas for backfill based on results of verification sampling prior to the start of backfilling.

B. Material shall be placed in uniform lifts not greater than six (6) inches in thickness, unless greater thicknesses are allowed by the ENGINEER upon demonstration by the CONTRACTOR that the materials and compaction efforts are adequate to obtain the required compaction. The fill shall be built up in horizontal layers as evenly as possible. The CONTRACTOR will backfill to the pre-excavation elevations unless otherwise shown on the Drawings or directed by the Engineer.

C. Each lift shall be compacted as specified below in Subsection 3.2. Each lift shall be compacted using suitable mechanical compactors as necessary. At the approval of the Engineer, the fill shall be compacted at a moisture content within 2 percent of optimum at the time of placement. Improperly compacted fill materials shall be replaced at the Contractor’s expense. Compaction or consolidation achieved by traveling trucks, machines or other equipment is not acceptable.

D. Following any winter shutdown period, before site restoration in the spring the CONTRACTOR shall perform the final grading, and, if the fill has settled more than three inches or eroded below the desired grade, shall place additional backfill to bring the affected areas back to grade.

E. Where required, the CONTRACTOR shall, at his own expense, add sufficient water during the compaction effort to assure proper density. If, due to the rain or other causes, the material exceeds the optimum moisture content acceptable range for satisfactory compaction, it shall be allowed to dry, assisted by dicing or harrowing, if necessary, before compaction or filling effort is resumed.

F. Erosion protection shall be provided to all areas not having topsoil and
seed thereon and seeded areas where an adequate grass cover has not been established.

G. Common Fill Material Testing: Test material in accordance with ASTM C 136 for conformance to gradation limits; ASTM D 1140 for material finer than the No. 200 sieve; ASTM D 1557 for moisture density relations, as applicable. Provide testing for each 1,000 cubic yards of material to be used with a minimum of one sample per borrow source for each material.

H. Identify required lines, levels, contours and datum required to perform the work. Reestablish lines, levels and grades if disturbed during all site work. Do not place fill materials when atmospheric temperature is below 35 degrees F or when rainfall or other weather conditions detrimentally affect the quality of the placement or compaction of the fill materials. No backfilling will be allowed in standing water in the excavation areas.

I. Control and replacement of any loss of fill due to erosion shall be the responsibility of Contractor.

J. Fill material may be stockpiled on site in an uncontaminated area as approved by the Engineer. The fill shall be adequately covered to prevent runoff, in a manner satisfactory to the Engineer. Any backfill that comes in contact with potentially contaminated material, as determined by Engineer, shall be properly disposed of by Contractor at no additional expense to Department.

K. Costs involving the containment, analyses and disposal of water that collects within the excavations are the responsibility of the Contractor beyond the required turnaround time for confirmatory soil sampling.

3.2 Compaction

3.2.1 Structural Fill (e.g. Middle School foot bridge)

A. Preparation

1. Proof-roll all subgrade surfaces to accept fill or backfill material

2. Each layer of fill or backfill shall be compacted to the specified density the same day it is placed. The moisture content of backfill or fill material shall be adjusted, if necessary, to achieve the required degree of compaction.

3. Compact each lift to meet 95% Modified Proctor (ASTM D1557).

4. Match compaction equipment and methods to the material and
location being compacted in order to obtain the specified compaction, with consideration of the following guidelines:

a. Vibratory compaction is preferred for dry, granular materials.

b. Hand compaction equipment such as impact rammers, plate or small drum vibrators, or pneumatic buttonhead compactors should be used in confined areas.

c. Hydraulic compaction by pounding or jetting will not be permitted except in unusual conditions, and then only upon written approval by the ENGINEER and after a demonstration of effectiveness.

d. Backhoe mounted hydraulic or vibratory tampers are preferred for compaction of backfill in trenches over 4 feet in depth. The upper 4 feet shall be compacted as detailed above or with hand-guided or self-propelled vibratory compactors or static rollers.

B. Field Quality Control

1. Material Testing

a. The ENGINEER reserves the right to order testing of materials at any time during the work.

b. Testing will be done by a qualified, independent testing laboratory. The CONTRACTOR shall pay for all compaction testing performed by the testing laboratory.

c. The CONTRACTOR shall aid the ENGINEER in obtaining representative material samples to be used in testing.

d. The CONTRACTOR shall anticipate these tests and incorporate the time and effort into his procedures.

2. Compaction Testing

a. The ENGINEER reserves the right to direct the qualified independent testing laboratory to conduct in-place density tests of compacted lifts.

b. Testing may be conducted for every 200 cubic yards of fill
or backfill.

c. The CONTRACTOR shall dig test holes and provide access to all backfill areas at no additional compensation when requested by the ENGINEER if an area has been covered without approval or is suspected of not meeting the specifications.

d. For each test which does not meet the specifications, the CONTRACTOR shall pay for the cost of the test and shall replace all material included in that lift or sector with acceptable material and compact to specification, at no additional compensation.

e. The CONTRACTOR shall anticipate these tests and incorporate the time and effort into his procedures.

f. Nuclear moisture density testing by “probe” methods will be acceptable for compacted layers not exceeding 8 inches of thickness. Only certified personnel will conduct nuclear testing.

C. Alternate Methods of Compaction - The CONTRACTOR may employ alternative methods of compaction if the desired degree of compaction can be successfully demonstrated to the ENGINEER’S satisfaction.

D. Protection

1. Prior to terminating work for the day, the final layer of compacted fill shall be rolled with a smooth-drum roller if necessary to eliminate ridges of soil and depressions left by tractors or equipment used for compaction or installing the material.

2. As backfill progresses, the surface shall be graded so as to drain during incidence of rain such that no ponding of water shall occur on the surface of the fill.

3. Unsatisfactory materials, including excessive snow, shall be removed prior to fill placement.

3.2.2 Non-Structural Fill

A. Common fill material shall be placed over subgrade to pre-remediation grades with allowance for the placement of topsoil. Fill shall be compacted with 3 passes of a CAT 308 or approved equal.
3.3 **Measurement**

Measurement for payment for backfill of excavated areas shall be based on in place volumes as determined by surveys performed by a N.Y.S. licensed surveyor, unless otherwise specified. If surveyed volumes are not required, then **CONTRACTOR** shall provide the following:

A. Upon entering and leaving the site, the transport vehicle shall be weighed on a certified scale under the **ENGINEER**’s supervision to determine the amount of material being brought to the site. A printed ticket with the time, date, and net weight of material being transported shall be obtained. A copy of this ticket shall be given directly to the **ENGINEER** as it is produced.

B. Measured gross weight of the vehicle or calculated net weight of material outside the certified capacity of the scale will not be accepted by the **ENGINEER** and the **CONTRACTOR** shall not be reimbursed for the associated costs of material disposal above the certified capacity of scale. The **CONTRACTOR** shall off-load materials above the certified capacity of scale on site at no additional cost to the **DEPARTMENT**.

C. The **CONTRACTOR** shall select use an off-site scale. The scale shall have capacity and dimensions such that all vehicles to be used for transporting backfill and crushed stone can be weighed on the scale entirely and shall be certified by the Bureau of Weights and Measures. The scale shall be located within 5 miles of the site.

**END OF SECTION**
PART 1 GENERAL

1.01 SUMMARY

The section includes criteria for use of on-site topsoil and criteria for acquisition, storage and use of off-site topsoil.

Furnish all labor, materials, equipment and incidentals required, provide erosion control and place topsoil, finish grade, apply lime and fertilizer, hydraulically apply seed and mulch and maintain all seeded areas as shown on the Drawings and as specified herein, including all areas disturbed. However, if the quantity or quality of topsoil on site is insufficient to complete the project, the Contractor is responsible for providing topsoil in accordance with the Contract Documents as approved by the Engineer.

1.02 SUBMITTALS

Submit the following in accordance with Section VIII, Articles 5.23 - 5.29, “Shop Drawings and Samples.”

1. Off-site topsoil test results.

   a. At least thirty days prior to anticipated start of topsoiling operations a one-pint sample of topsoil material shall be delivered to the Engineer for testing and approval. At the same time, the Contractor shall submit a sample of the same material for testing. Based on tests performed by the Contractor, the topsoil shall be identified as acceptable, acceptable with certain fertilizer and limestone applications, or unacceptable. If the topsoil is found acceptable, the fertilizer and lime requirements will be as specified or as recommended by the Engineer. If the topsoil is found unacceptable, the Contractor shall identify another source of topsoil and bear all expenses associated with testing additional samples. All topsoil incorporated into the site work shall match the sample provided to the Engineer for testing. Topsoil stockpiled under other Sections of this Division may be used subject to the testing and approval outlined above. The Contractor shall be responsible for screening stockpiled topsoil and providing additional topsoil as required at his own expense.

1.03 QUALITY ASSURANCE

A. Off-site topsoil used on this project shall be tested and approved by the Engineer before placement.

B. In the presence of the Engineer take a 5 lb. sample from each 1000 cubic yards of off-site
topsoil to be used on the project.

C. Complete testing needs to verify suitability as required in Part 2.

PART 2 PRODUCTS

2.01 MATERIALS

A. On-site topsoil

Provide topsoil from existing stock piles stripped from the project site and approved by the Engineer.

B. Off-site topsoil

1. Topsoil from areas from which no topsoil has been taken previously and from areas that are producing or have produced fair to good yield farm crops without unusual fertilization for a minimum period of 10 years or from arable or cultivable areas supplied with good normal drainage.

2. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil materials and entirely free of vegetative debris, dense material, hardpan, sod or any other objectionable foreign material.

3. Containing not less than 2 percent nor more than 20 percent organic material in that portion of a sample passing a 1/4-inch sieve when determined by wet combustion method on a sample dried at 105 degrees C.

4. Containing a pH value within the range of 4.5 to 7 on that portion of a sample which passes a 1/4-inch sieve.

5. Free of atrazine and other herbicides.

6. Containing the following gradations: 100% passing 1-inch sieve, 97-100% passing 1/4-inch sieve, and 20-65 % (of the 1/4-inch sieve) passing the No. 200 sieve.

C. Limestone

Provide ground limestone in the producer’s standard bags containing not less than 90 per cent of calcium and magnesium carbonates equivalent to not less than 45% of the mixed oxides of calcium and magnesium and conforming to the following gradation: 50-100% passing No. 100 sieve and 100% passing No. 20 sieve.
A. **Fertilizer**

Fertilizer shall be commercial mixed free flowing granules or pelleted fertilizer, 10-10-10 (N-P2O5-K2O) grade for lawn and naturalized areas. Fertilizer shall be delivered to the site in original unopened containers each showing the manufacturer's guaranteed analysis conforming to applicable state fertilizer laws. At least 40 percent of the nitrogen in the fertilizer used shall be in slowly available (organic) form.

A. **Sand**

Clean, free of toxic materials; 95% by weight shall pass a 10-mesh sieve and 10% by weight shall pass a 16-mesh sieve.

A. **Calcined Clay**

Granular particles produced from montmorillonite clay calcined to minimum temperature of 1200 degrees F to the following gradation: minimum 90% passing 8 mesh screen, 99 % retained on 60 mesh screen and maximum 2 % passing 100 mesh screen. Bulk density: maximum 40 pounds per cubic foot.

A. **Wood Cellulose Fiber**

Wood cellulose fiber shall not contain any growth or germination inhibiting factors and shall be dyed an appropriate color to facilitate visual metering during application. Composition on air-dry weight basis: 9 to 15 percent moisture, pH ranges from 4.5 to 6.0. It shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material become uniformly suspended to form a homogeneous slurry. When sprayed on the ground, the material shall allow absorption and percolation of moisture. Each package of the wood fiber shall be marked by the manufacturer to show the air-dry weight content.

**PART 3 EXECUTION**

**3.01 PREPARATION**

Amend off-site topsoil as needed to meet pH and percent organic matter prior to placement.

Verify subsurface has no standing water and is not muddy prior to placement.

**3.02 SPREADING TOPSOIL**

Perform topsoil spreading operations only during dry weather.
To insure proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 3 inches before spreading topsoil.

Spread topsoil directly upon prepared subgrade to a minimum depth measuring 6 inches after natural settlement in areas to be seeded.

Smooth out unsightly variations, bumps, ridges and depressions that will hold water.

Remove stones, litter or other objectionable material.

Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Engineer.

3.03 SPREADING LIMESTONE

Spread ground limestone evenly over the top soiled surface.

If necessary, incorporate limestone within the top 2 inches of soil prior to finish raking.

If necessary, apply limestone at the following rate per 1000 sq. ft. of topsoil area, corresponding to the hydrogen ion concentration (pH) shown by the soil chemical analysis:

<table>
<thead>
<tr>
<th>pH</th>
<th>Rate (lb)</th>
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<tbody>
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<td>4.5 to 5.0</td>
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</tr>
<tr>
<td>5.0 to 5.5</td>
<td>100</td>
</tr>
<tr>
<td>5.5 to 6.0</td>
<td>50</td>
</tr>
<tr>
<td>6.0 to 6.8</td>
<td>25</td>
</tr>
<tr>
<td>Over 6.8</td>
<td>0</td>
</tr>
</tbody>
</table>

3.04 FINISHED GRADING

Preparation for seeding

A. Seed areas shall be filled as needed or have surplus soil removed to attain the finished grade.

B. Drainage patterns shall be maintained as indicated on drawings.

C. Seeding areas compacted by construction equipment shall be completely pulverized by tillage.

D. Soil used for repair of erosion or grade deficiencies shall conform to requirements specified.

E. Finished grade shall be 1 inch below adjoining grade of any surfaced area.
F. New surfaces shall be blended to existing areas and promote positive drainage.

G. Excelsior matting blanket shall be installed in all seeded drainage swales and ditches and all grassed slopes 4:1 or steeper as shown on the Drawings or as directed by the Engineer in accordance with the Manufacturers instruction. Erosion control blanket shall be Curlex I, by American Excelier Company, Arlington, TX or approved equal.

H. When newly graded subgrade areas cannot be top soiled and seeded because of season or weather conditions and will remain exposed for more than 14 days, protect those areas against erosion and washouts by applying limestone at the rate of one ton per acre, fertilizer (10-10-10) at the rate of 600 pounds per acre, perennial ryegrass seed at the rate of 40 pounds per acre, and straw mulch at the rate of 2 tons per acre with a tackifier or by other measures as approved by the Engineer. Prior to application of topsoil, any such materials applied for erosion control shall be thoroughly incorporated into the subgrade by discing. Fertilizer shall be applied prior to spreading of topsoil.

I. On slopes in addition to straw mulch and tackifier, provide against washouts by an approved method. Any washout that occurs shall be regraded and reseeded at the Contractor's expense until a good turf is established.

END OF SECTION
SPEC 00203

SEED AND MULCH

PART 1 GENERAL

1.01 SUMMARY

The section includes criteria for establishing vegetation at the site.

1.02 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.


1.03 SUBMITTALS

Submit the following in accordance with Section VIII, Articles 5.23 - 5.29, “Shop Drawings and Samples.”

1. Delivery schedule of all materials.

2. Written record of maintenance work performed within 10 days of conclusion of maintenance period.

3. Written calendar time period for the turf establishment period. When there is more than one turf establishment period, describe the boundaries of the turfed area covered for each period.

4. Prior to delivery of materials, certifications that materials meet requirements specified.

5. Seed reports - mixture, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, date tested and state certification.

6. Fertilizer - chemical analysis, composition percent.

7. Mulch - chemical analysis, composition percent.

8. Hydromulch
9. Product data, manufacturer’s specifications and recommended application rates shall be submitted and approved prior to scheduling delivery.

1.04 DELIVERY, INSPECTION, STORAGE AND HANDLING

A. Delivery schedule shall be prepared for all materials and submitted at least 10 days prior to first scheduled delivery.

B. Materials will be inspected upon arrival by Engineer for conformance to specifications.

C. Materials will be stored in areas approved by Engineer.

D. Seed, lime and fertilizer will be stored in cool, dry locations away from contaminants.

E. Chemical treatment materials will not be stored with other landscape materials.

F. Except for bulk deliveries, materials will not be dropped or dumped from vehicles.

1.05 GUARANTEE

A. Vegetative growth shall be guaranteed for one year from the date of final completion.

B. At the end of the guarantee period, any deed, unhealthy or badly impaired areas shall be replaced.

C. All replacements shall be in kind and at no additional cost to the Department.

1.06 SCHEDULING

Sow grass seed between March 15th and May 15th or between August 15th and October 1st, unless otherwise approved by Engineer.

PART 2 PRODUCTS

2.01 SEED

1. State-approved seed of the latest season’s crop shall be provided in original sealed packages bearing the producer’s guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material.

2. Labels shall be in conformance with AMS-01 and applicable state seed laws.
Seed Mixtures

a. The seed mixture to be used along the banks of Willetts Creek shall be:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Weight %</th>
<th>Purity %</th>
<th>Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timothy</td>
<td>30</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Clover</td>
<td>20</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Perennial Ryegrass</td>
<td>40</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Annual Ryegrass</td>
<td>10</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

b. The seed mixture to be used on school properties west of the west bank of Willetts Creek and in residential back yards up to the bank of Willetts Creek shall be Long Island Cauliflower Association Athletic Mix or approved equal:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Weight %</th>
<th>Purity %</th>
<th>Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cayenne Tall Fescue</td>
<td>25</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Sidewinder Tall Fescue</td>
<td>25</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Shortstop Tall Fescue</td>
<td>25</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Jet Perennial Ryegrass</td>
<td>15</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Shiraz Kentucky Bluegrass</td>
<td>10</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

3. Weed seed shall not exceed 1 percent by weight of the total mixture.

4. Wet, moldy or otherwise damaged seed shall be rejected.

2.02 MULCH

Dry application, straw:

1. Stalks of oat, wheat, rye or other approved crops which are free of noxious weed seeds.

2. Weight shall be based on a 15 percent moisture content.

Hydro Application:

1. Colored wood cellulose fiber product specifically designed for use as a hydro-mechanical applied mulch.

2. Acceptable product is Conwed Hydro Mulch, Conwed Fibers or equal.

2.03 FERTILIZER

Provide in accordance with Spec 00202.

PART 3 EXECUTION

3.01 SEEDING CONDITIONS

A. Seed operations shall be performed only during periods when beneficial results
can be obtained.

B. When drought, excessive moisture or other unsatisfactory conditions prevail, the work shall be stopped when directed by the Engineer.

C. When special conditions warrant a variance to the seeding operations, proposed times shall be submitted to and approved by the Engineer.

### 3.02 SITE PREPARATION

**A. Fertilization**

Distribute fertilizer evenly over the surface of the soil in areas to be seeded as shown on the Plans or as directed by the ENGINEER. Fertilize with 600 pounds of 10-10-10 (N-P2O5-K2O) per acre (14 pounds per 1,000 square feet). Any application method that will ensure an even distribution will be acceptable. When hydraulic application is used the minimum rate of water shall be 500 gallons per acre or as directed by the ENGINEER.

**B. Tillage**

1. Soil on slopes gentler than 3 on 1 (horizontal to vertical) shall be tilled to a minimum depth of 4 inches.

2. On slopes between 3 on 1 and 1 on 1, the soil shall be tilled to a minimum depth of 2 inches by scarifying with heavy york rakes or other method.

3. Rototillers shall be used where soil conditions and length of slope permit.

4. On slopes 1 on 1 and steeper, no tillage is required.

### 3.03 SEEDING

1. Do not seed when the wind velocity exceeds 5 miles per hour.

2. Application rate: seed mixture, ½ lb per 1000 sq. ft.; annual ryegrass, ½ lb per 1000 sq. ft.

3. Dry application - sow seed evenly by hand or seed spreader on dry or moderately dry soil.

4. Hydrosedding:

   Apply seeding materials with an approved hydroseder.

00203-4
Fill tank with water and agitate while adding seeding materials.

Use sufficient fertilizer, mulch and seed to obtain the specified application rate.

Add seed to the tank after the fertilizer and mulch has been added.

Maintain constant agitation to keep contents in homogeneous suspension. Prolonged delays in application or agitation that may be injurious to the seed will be the basis of rejection of the material remaining in the tank.

Distribute uniformly a slurry mixture of water, seed, fertilizer and mulch at a minimum rate of 57 gallons per 1000 sq. ft. (2500 gallons per acre).

The Department may order the amount of water increased if distribution of seeding materials is not uniform.

3.04 MULCHING

A. Dry application:

Within 3 days after seeding, cover the seeded areas with a uniform blanket of straw mulch at the rate of 100 pounds per 1,000 sq. ft. of seeded area.

B. Hydro application:

Apply approved mulch in accordance with manufacturer’s written instructions and recommended rates of application.

3.05 RESTORATION AND CLEANUP

1. Existing seeded areas, pavements and facilities that have been damaged from the seeding and mulching operations shall be restored to original condition at Contractor’s expense.

2. Excess and waste material shall be removed from the planting operation and shall be disposed of off-site.

3. Adjacent paved areas shall be cleaned.

4. Debris removed from the soil surface during the finished grading operations shall be disposed on-site as directed by the Engineer.

3.06 PROTECTION OF TURFED AREAS

Immediately after seeding, the area shall be protected against traffic or other use by
erecting barricades and providing signage as required.

3.07 SATISFACTORY STAND OF VEGETATIVE COVER

A satisfactory stand of vegetative cover from the seeding operation is defined as a minimum of 10 grass plants per square foot. The total bare spots shall not exceed 2 percent of the total seeded area within 3 months of seeding.

3.08 MAINTENANCE

Maintenance of the seeded areas shall include eradicating weeds, eradicating diseases and insects, protecting embankments and ditches from erosion, maintaining erosion control materials and mulch until growth is satisfactorily established, protecting turfed areas from traffic and mowing to maintain turf stand, watering and post fertilization.

Mow entire seeded area once to a height of 6 inches after final completion during the guarantee period when the stand of grass is between 12 and 24 inches in height.

Watering shall be at intervals to obtain moist soil condition to a minimum depth of 1 inch. Frequency of watering and quantity of water shall be adjusted in accordance with the growth of the vegetation. Run-off, puddling and wilting shall be prevented.

Nitrogen carrier fertilizer shall be applied at the rate of no more than 0.5 pounds per 1000 square feet after the first month and again prior to the final acceptance. The application shall be timed prior to the advent of winter dormancy and shall avoid excessively high nitrogen levels. Notify Engineer at least one week prior to application.

The Contractor shall re-establish as specified herein, eroded, damaged or barren areas. Mulch shall be repaired or replaced as required.

END OF SECTION
SPEC 00204

EXCAVATION SUPPORT SYSTEMS

1. GENERAL

1.1 Scope of Work

A. The CONTRACTOR shall furnish all labor, tools, materials, equipment, and incidentals necessary for the proper completion of the temporary support of the excavation processes as specified herein.

B. All temporary excavation support systems, including the use of mobile shields, shall conform to the provisions of Public Law 91-596 (Williams Steiger Act), the Occupational Safety and Health Act (as amended), 29 CFR Part 1926 - Safety and Health Regulation for Construction and the New York Department of Labor Industrial Code Rule No. 23. Conform to New York State Industrial Code rule 53 entitled “Construction, Excavation and Demolition at or near Underground Facilities” as issued by the State of New York, Department of Labor, Board of Standards and Appeals.

C. Temporary support (bracing, sheeting, shoring, etc.) shall be placed as not to put any stress that may cause damage to portions of completed work.

D. Any slope cutbacks, sheeting or shoring necessary to perform the Work shall be designed and sealed by a Professional Engineer retained by the Contractor. Contractor shall submit the design for Engineer’s approval.

E. Design sheeting and bracing systems against failure from the maximum loads that will occur during construction, including surcharge loads and additional loading due to construction equipment.

F. Design sheeting and bracing systems to enable safe construction of structures, utilities and appurtenances, and prevent excessive ground loss, displacement of adjacent foundations, and displacement of the bottom of the excavation.

G. The Contractor shall provide sheeting for the excavations and construction of structures as indicted on the drawings or as required by the Engineer in accordance with the specifications.

H. Where excavations are made with sides which require supporting, the sheeting and bracing shall be of sufficient strength to sustain them against inward movement, loss of ground or damage to adjacent structures. Sheeting shall be of wood or steel as approved by the Engineer.
I. Wood sheeting shall be of such quality and size that it will not split in driving. Sheeting and bracing shall be Southern Pine, a structural grade, of 1800 psi stress class and furnished in accordance with the standard rules for grading, dressing and inspection of joists, planks, beams and stringers of the Southern Pine Association. Douglas Fir or other timber of equivalent grade may be substituted. Materials may be either new or used in good condition, and free of large or loose knots. Where close or tight sheeting is required, wood sheeting shall be tongued and grooved.

J. Steel sheeting shall be manufactured from steel conforming to ASTM Des. A328, latest edition, and bracing shall conform to the standard specifications for bridges and buildings, ASTM Designation A-36, latest edition. Materials may be either new or used in good condition. The sizes and types required may be indicated on the Drawings, or if not so shown, steel sheeting shall have a minimum thickness of 3/8-inch in web and flange, unless approved otherwise by the Engineer, and shall be as detailed by the Contractor, subject to the approval of the Engineer. All necessary welding of supporting members shall be done in accordance with requirements of the American Welding Society Code.

K. Detailed drawings and design computations shall be prepared and signed by a Professional Engineer registered in New York State. Detailed drawings and design computations shall be submitted to the Engineer and meet with his approval prior to the use of any sheeting and bracing on the work.

L. Unless the scope of the project changes, there shall be no additional compensation for any sheeting done, and the cost of designing, furnishing and driving the sheeting shall be deemed included in the bid price for this Contract.

M. Unless otherwise shown on the Contract Drawings or ordered, all materials used for temporary construction shall be removed when the work is completed. Such removal shall be made in a manner not injurious to new or existing structures and pipe lines and their appearance.

1.2 Description of Work

A. The work involved with the excavation support shall include, but is not necessarily limited to, the following:

1. Protect excavations by shoring, bracing, sheet piling, underpinning, or other methods approved by the ENGINEER, to prevent cave-in, lateral movement of adjacent earth, or loose soil from falling into the excavation.

2. Notify ENGINEER of unexpected subsurface conditions and discontinue work in affected area until notification to resume work.
3. Grade excavation perimeter to prevent surface water runoff into the excavation.

B. Contractor shall carefully remove all sheeting and bracing at the completion of Work, so as not to endanger the installed work, and shall immediately backfill any voids caused by the removal of the sheeting.

C. If any damage occurs to existing structures because of the sheeting and bracing, the Contractor shall be responsible for repairing the damages to existing structures.

1.3 Submittals

A. Identification of any sheeting and bracing which is intended to be used by the CONTRACTOR.

B. Sheeting and bracing design calculations (sealed by a Professional Engineer).

C. Technical information regarding sheeting and bracing materials to be used.

D. A detailed support system installation and removal plan which includes a description and schedule of all operations related to installation and removal, equipment and materials, quality control measures, method and procedures for removal or abandonment in place, and other information required by the Contract Documents.

2. PRODUCTS

A. Wood sheeting, shoring, and bracing shall be Southern Pine or equivalent of 1,800 psi stress class (i.e., Douglas Fir), as approved by the ENGINEER.

B. Steel sheeting shall conform to ASTM-328 (latest revision), and bracing shall conform to ASTM A-36 (latest edition).

C. Trench Boxes - fabricated steel or aluminum.

3. INSTALLATION

Sheeting shall not be driven while concrete is being placed, or within 24 hours after placement, nor during pile load testing.

Damaged or improperly driven sheeting shall be removed and replaced with new, properly placed sheeting at the Contractor’s expense.
Sheeting to be left in place shall be new and unused material. Where shown on drawings, specified or approved sheeting shall be cut off as specified, or at a minimum 2 ½ feet below proposed final grade. Provide to the Engineer a drawing of cut off sheeting locations which shows site plan with dimensioned locations of sheeting, type of material remaining, and depths or elevations to top and bottom of remaining sheet.

No excavation shall be performed below a line drawn down and away at a slope of two horizontal and one vertical from the nearest footing or grade beam of the existing building or as shown on the drawings without providing sheeting, shoring and bracing to provide lateral support for soils beneath the foundations of the building and to prevent damage to the building.

A. Temporary excavation support shall be installed in accordance with code requirements.

1.    All sheeting shall be right and continuous.

2.    The sheeting shall extend at least 2 feet above the surface.

3.    As soon as the temporary support is placed, if there is a space between the wall and the support, it should be appropriately filled and compacted, as approved by the ENGINEER.

B. Removal of Support

1.    In general, the support shall be removed as the excavation is backfilled in such a manner to avoid cave-ins or disturbance to adjacent area.

2.    Permission by the ENGINEER shall be obtained before the support is removed.

END OF SECTION
SPEC 00207

PLANTING

PART 1 GENERAL

This work consists of furnishing and planting trees and shrubs in locations as directed by the Engineer, which work shall include all planting operations and establishment necessary to complete the work as specified. Trees and shrubs shall be as specified or shown on the drawings. The Contractor shall furnish the vendor with a copy of the specifications for the material. Any rock or underground obstructions shall be removed to the depth necessary to permit planting according to the specifications, unless other locations for the planting are approved.

The Contractor shall notify the Engineer at least two full working days before delivering any plant materials, unless otherwise approved. The Engineer shall be furnished a legible copy of the invoice for every shipment showing quantities, sizes and kinds of materials included. Plants which fail to meet the specifications, as determined by the Engineer, will be rejected. All rejected plants shall be promptly removed from the project.

All plants shall be properly protected from drying out. Such protection shall include the time when the plants are in transit, being handled or in temporary storage on the job. Bare-root plants which are not planted immediately upon receipt shall be heeled-in in trenches with the bundles opened and the plants spaced separately, and all roots covered. Balled plants shall have their earth balls protected by earth or wet cloth or straw or may be "heeled-in" as ordered by the Engineer.

Locations for plants and outlines of areas to be planted shall be marked out on the ground by the Contractor to the satisfaction of the Engineer before any plant pits or plant beds are dug.

Unless otherwise specified on the plans the minimum diameter of plant pits shall bear the following relation to the spread of roots (or diameter of balls) of the plants to be planted in them.

Pit diameter twice the root spread for plants up to and including a two-foot root spread; pit diameter equal to root spread plus two feet for root spreads of two to four feet; pit diameter one and one-half times the root spread for spread of roots over four feet. The depth of all pits shall be adequate to permit a minimum of six inches of soil backfill under all roots or balls. Pits for vines shall be a minimum of 18 inches in diameter unless otherwise specified. Where undesirable material is encountered in digging, the pit location shall be moved to a new location as approved or the pit shall be enlarged as approved and backfilled with acceptable materials. When planting in wooded areas, the Contractor shall grub out an area twice the size of the plant pit unless otherwise approved. In planting bed areas existing vegetation shall be removed as directed. Where an impervious stratum of soil is encountered during the excavation of plant pits or beds,
all such soil to a depth as approved shall be removed and backfilled with topsoil.

After the plants are planted, fertilizers shall be applied to the soil within the plant's saucers or over the plant beds. Excess soil shall be disposed of.

All plants shall be set plumb at such a level that after settlement they bear the same relation to the level of the surrounding ground as they bore to the ground from which they were dug unless otherwise directed by the Engineer. Backfill material for all plants shall be thoroughly settled by firming or tamping. Backfill soil shall be carefully placed into plant pits in layers not to exceed 4 inches in depth and firmly tamped before additional backfill is placed. Thorough watering shall accompany backfilling unless otherwise approved. A saucer capable of holding the depth of water specified shall be formed about each plant pit as directed.

Balled and Container Grown Plants are to be planted with backfill carefully tamped under and around the base of each ball to fill voids. Platforms shall be removed. Plants shall be removed from containers unless otherwise directed. All cloth, ropes, etc. shall be removed from the tops of balls but not pulled out from under the balls.

Roots of bare-root (BR) plants shall be properly spread out in a natural position and backfill soil shall be carefully worked in among them. All broken and frayed roots shall be cleanly cut off.

Unless otherwise specified, the trunks of all deciduous trees over 1 ½ inches in diameter shall be wrapped immediately after planting unless otherwise approved. Wrapping shall extend from the ground line to the height of the second branches or to the height directed. Wrapping shall be a single layer of burlap bandage or paper would spirally, starting from the base and overlapping one and one-half inches. The wrapping shall be securely tied in place with twine at about fifteen-inch intervals.

All trees shall be firmly staked, guyed or anchored at the time of planting as shown on the Drawings unless otherwise approved. Stakes shall not injure plant balls. Wires used for tying the trunk to stakes or for guying shall be secured to the tree by passing through an approved hose to prevent chafing and injury to the trees. Guy wires fastened to stakes shall be tightened by driving the stakes, leaving the wires to be twisted for tightening during establishment.

Plants pruned before their arrival will be rejected unless such pruning is specified or approved. Pruning in accordance with accepted horticultural practice as directed by the Engineer, shall be done at the time of planting unless the time of pruning is otherwise approved by the Engineer.

Where mulching is specified, it shall completely cover the area of the plant pit or planting bed to the depth as specified. Mulch shall be placed immediately after planting unless otherwise approved.

Areas disturbed by the planting operations shall be left in an orderly condition.
Excess soil and rubbish shall be disposed of. Grassed areas disturbed by planting operations shall be restored to a satisfactory condition which may include filling to grade, fertilizing, seeding and mulching.

Care of planting shall begin immediately after each plant is planted and shall continue until the final acceptance of the contract. Care of planting shall consist of keeping the plants in a healthy growing condition by watering, weeding, cultivating, pruning, spraying with insecticides, tightening of guys, remulching, applying approved anti-desiccants as directed and by any other necessary operations.

Unless otherwise approved, all plants, except seedlings and rooted cuttings, shall be sprayed with an anti-desiccant which shall be emulsions or other materials which will provide a protective film over plant surfaces, permeable enough to permit transpiration. The anti-desiccant shall be applied according to the manufacturer's directions to thoroughly cover all above ground parts. The time of application shall be as follows, unless otherwise approved:

**Evergreen:** Apply within ten (10) days following planting.

**Deciduous:**
- **Spring planting** - Apply when leaves have reached at least seventy-five percent (75%) of mature size.
- **Fall planting** - Apply in October or November when the temperature is 40°F or above.

All plants shall be watered at the times and at the rates specified or as ordered by the Engineer except that each watering shall provide not less than five gallons of water per square yard (1” layer of water) of plant pit and bed areas.

All dead, unhealthy or badly impaired plants, as determined by the Engineer, shall be promptly removed from the project. In the event of the threat of serious damage from insects, diseases or rodents, the plants shall be treated by preventive or remedial measures approved for good horticultural practice.

In the event "heeled-in" plant material must be held over until a later planting season, such "heeled-in" material shall be lifted, replanted and maintained in a satisfactory condition in nursery rows. Such emergency storage and maintenance shall be at the entire risk and cost of the Contractor. The land for such storage shall be provided for by the Contractor unless otherwise approved.

At the conclusion of the essential portion of the planting work, all plants in an unhealthy or badly impaired condition, as determined by the Engineer, shall be removed and replaced with new, healthy plant material as specified. All planting to be completed or replaced shall be planted not later than the next succeeding planting season as specified on the plans.
The common and scientific names of plants shall be in conformity with the approved names by S.P.N. (Standard Print Names) or its successor as the American Association of Nurserymen's recognized authority on botanical nomenclature.

Plants, including root spread and ball size, shall be in accordance with the current edition of "American Standard for Nursery Stock," a code of standards sponsored by the American Association of Nurserymen. All plants shall have a normal habit of growth and be typically characteristic of their respective kinds. When a minimum and maximum size is specified, an average size is required. Plants shall not be pruned before delivery and no plants shall be cut back from larger sizes to meet the sizes specified. Plants shall be free from injury, insect damage, infestation and disease. Plants shall be nursery grown unless otherwise specified and bear evidence of proper nursery care, including adequate transplanting and root pruning. Plants specified from collected sources shall be clean, sound stock, free from decayed stumps and from fire injury.

The container shall be sufficiently rigid to hold the ball shape and protect the root ball during handling and shipping. Container grown plants shall have been grown in the container long enough for the new fibrous roots to have developed so that the root ball is firm and will retain its shape and hold together when removed from the container. The plants shall be in a healthy growing condition with tops which are of good quality and shall have been adequately hardened off before shipment.

1.01 SUBMITTALS

A. List of plants: before plant material is shipped, submit a complete itemized list of all plants including the source of supply.

B. Product data: invoice indicating sizes and variety of plant material, certificate of inspection required by State and Federal agencies, and labels for each plant or bundle of plants indicating name and size.

C. Worker’s Qualifications Data: names and addresses of 5 similar projects that each person has worked on in the last two years.

D. Notification of planting activities 2 days prior to planting

E. Shipping invoices

PART 2 PRODUCTS

BUSHES

Shrubs shall have good fibrous root systems. The quality of balled and burlapped and balled and platformed shrubs shall be as specified for B&B and B&P trees herein.

Contractor is to replace shrubs of a type identical to that removed during clearing.
and grubbing operations with a height between 18 and 24 inches.

Nursery grown stock unless otherwise indicated.

Free of disease, insect eggs, bark abrasions and disfiguring knots. Buds intact and reasonably closed at time of planting.

The Contractor shall guarantee the placement and establishment of all shrubs for a period of one year.

TREES

Nursery grown trees shall have no cuts of limbs which are not healing and no cuts over 3/4 inch which have not completely calloused over, no cut back crowns or leaders and no abrasions of the bark. Trees must have good fibrous root systems characteristic of the kind. Deciduous trees shall have normal spread of crowns unless otherwise specified.

Bare root (B.R.) trees shall not require earth adhering to the roots except as required for puddling as specified. Any trees specified bare root will be accepted balled and burlapped at the unit price bid for bare root trees.

Balled and burlapped (B&B) trees shall be properly dug and protected to preserve the natural earth in contact with the roots. NO manufactured balls will be accepted. The balls shall be of the required size, firmly wrapped and tied with approved materials. No balled plants will be acceptable if the ball is cracked or broken.

Balled and platformed trees (B&P) shall be balled as specified or balled and burlapped trees. Platforms shall be square or octagonal shaped in a size slightly larger than the diameter of the bottom of the soil mass, inserted under each ball and securely lashed to the ball by means of ties from the platform corners to the rope collar on top of the ball.

The tops of trees shall be well formed structural, but they are not required to have more than reasonably straight trunks, nor better than average well balanced crowns, nor be of specimen quality.

Contractor is to replace trees of a type identical to that removed during clearing and grubbing operations with a trunk diameter between two and three inches.

The Contractor shall guarantee the placement and establishment of all trees for a period of one year.

MISCELLANEOUS MATERIALS

Stakes, deadmen and guy stakes: sound, durable white or red cedar, or other approved wood, free of insect or fungus infestation.
Guy wire or cable: no. 12 galvanized iron wire or cable.

Tree wrapping: 4-inch wide strips of jute burlap or waterproof paper 30-30-30 Krinklecraft by Eaton Brothers Corp, or equal.

Protective hose: 2 ply garden hose cut to required lengths.

Tree wound paint: antiseptic, waterproof, adhesive, elastic tree wound paint containing no kerosene, coal tar, creosote, or other material harmful to cambium or living tissue.

Anti-desiccants: Wilt-Pruf by Wilt-Pruf Products, Inc. or equal.

Landscape fabric: Typar Pro 3301 by Reemay, Inc. or equal.

PART 3 EXECUTION

Soil amendments, for every 4 cubic yards of topsoil, 7 ½ cubic foot bale or 15 bushels (loose measure) peat moss, 5 lb fertilizer (10-6-4) and 80 lb of bone meal. In the presence of engineer, place the soil amendments over the topsoil piles and turn over the combined elements a minimum of 3 times until thoroughly mixed.

Wrap deciduous trees within 4 days after planting from the ground line to the height of the second branches. Wrap a single layer wound spirally starting from the base and overlapping 1-1/2 inches. Secure wrapping in place by use of approved staples or other approved methods and materials.

Set tree stakes into solid ground below bottom of plant before backfilling. Put stakes at the outer edge of the roots or ball in line with the prevailing wind at a 10-degree angle from the tree trunk.

Apply anti-desiccant spray to broadleaved ericaceous plants planted in the fall season as directed.

Install landscape fabric over the planting area limits indicated. Cut fabric as required to avoid shrubs.

Surface finish: form saucer as indicated on drawings or as directed. Grade soil to form a basin on lower side of slope plantings, which will catch and retain water. Top dress basins with fertilizer spread evenly at the rate of 1-1/2 pounds per square yard of plant pit surface. Break saucers and basins before ground freezes.

Prune immediately after planting using sharp tools approved by Engineer. Remove approximately 1/3 of the wood of deciduous plants, maintaining the natural habitat of the plant. Cut no leaders. Paint pruning cuts 3 inches in diameter or over with tree wound paint.

Guy deciduous trees 4 inches and over in caliber, trees over 6 feet high with 3 or more stems, and evergreens 6 feet or higher, with 3 guys immediately after planting. Attach guys to stakes and trees as indicated. Connect multi stem trees with protected connecting wires maintaining each stems relationship to one another.
Spread mulch over finished surface of each plant, plant bed and hedge trench in the following amounts: 3" wood chips, 3" peat moss and 2" shredded wood. Water plants thoroughly after mulching.

Maintain plantings immediately following planting operations and continue throughout the guarantee period. Establishment of plantings shall consist of keeping plants in healthy, growing conditions by watering, weeding, cultivating, pruning, spraying, tightening of guys, remulching and by any other operations of establishment. Control insects, diseases or rodents.

Remove stakes, guy wires and tree wrappings at the end of the one-year guarantee period unless otherwise directed. Remove and replace dead, unhealthy or impaired plants according to original specification, as directed. Replace plantings during the next planting season if inspection or end of guarantee period is not within planting season.

END OF SECTION
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SPEC 00303
NONWOVEN FILTER FABRIC

PART 1: GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required to install filter fabric complete as shown on the Drawings and as specified herein.

1.02 RELATED WORK

A. Access Roads is included in SPEC 00023.

1.03 SUBMITTALS

A. Within 30 calendar days following the Effective Date of the Agreement, submit the following information:

1. Manufacturer's information.

2. List of material properties and samples of filter fabric with attached certified test results.

3. Installation schedule.

4. Copy of quality control certificates in conformance with Paragraph 2.02.

5. Proposed warranty and guarantee.

1.04 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)


2. ASTM D3776 - Standard Test Method for Mass Per Unit Area (Weight) of Woven Fabric.


B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 DELIVERY, STORAGE AND HANDLING

A. The filter fabric shall be shipped, stored and handled in accordance with manufacturer's recommendations and as specified herein.

B. The fabric shall be stored with a cover so that it is protected from exposure to sunlight and shall be elevated from the ground (a minimum of 3-in) to protect the fabric from stones and other sharp objects.

1.06 MATERIAL WARRANTY

A. The manufacturer shall warrant the material, against manufacturing defects and material degradation for a period of twenty years from the date of installation. The manufacturer shall replace any material which fails within the warranty period. The manufacturer shall furnish a written warranty covering the requirements of this Paragraph.

1.07 GUARANTEE

A. The Contractor shall guarantee the filter fabric against defects in installation and workmanship for the period of two years commencing with the date of Final Acceptance. The guarantee shall include the services of qualified service technicians and all materials required for the repairs at no expense to the Owner.

PART 2: PRODUCTS

2.01 GENERAL

A. Unless otherwise shown on the Drawings, the Contractor shall furnish geotextiles whose minimum average roll values met or exceed the criteria listed in Table 1 at the end of the Section.

2.02 MATERIALS

A. Nonwoven Fabric

1. The product shall be a nonwoven needle punched fabric consisting of polyester or polypropylene filaments formed into a stable network which retains its structure during handling, placement and long-term service. Geotextiles shall be capable of withstanding exposure to direct sunlight for 30 days with no measurable deterioration.

2. The fabric shall be nonbiodegradable, nonreactive within a pH range of three to eleven, resistant to ultraviolet light exposure, and resistant to insects and rodents. Test results from any sampled roll in the lot, when tested in accordance with ASTM D4759, shall meet or exceed the values listed in Table 1.
3. The material shall be Mirafi 180N manufactured by TC Mirafi of Pendergrass, GA, Geotex 861 manufactured by Synthetic Industries of Chickamauga, GA, or an approved equal.

2.03 QUALITY CONTROL DOCUMENTATION

A. Prior to installation, the Contractor shall provide to the Owner the following information certified by the manufacturer for the delivered fabric.

1. Each roll delivered to the Project site shall have the following identification information:

   # Manufacturer's name
   # Product identification
   # Thickness
   # Roll number
   # Roll dimensions

2. Quality control certificates, signed by the manufacturer's quality assurance manager. Each certificate shall have roll identification number, sampling procedures, frequency and test results. At a minimum the following test results shall be provided every 50,000 square feet of manufactured fabric in accordance with test requirements specified in Paragraph 2.02.

   # Thickness
   # Trapezoid Tear
   # Puncture Resistance
   # Mullen Burst Strength
   # Grab Tensile

2.04 CONFORMANCE TESTING

A. Conformance testing shall be performed by an independent Quality Assurance Laboratory (QAL) approved by the Owner and retained by the Contractor. The Quality Assurance Technician (QAT) shall obtain samples from the delivered material, mark the machine direction and identification number. One sample shall be taken per 100,000 square feet, or one sample per lot, whichever results in the greater number of conformance tests. This sampling frequency may be increased as deemed necessary by the CQA Manager. The samples shall be taken across the entire roll width and shall not include the first 3-ft.

The following conformance tests shall be conducted at the laboratory.

1. Mass per unit area
2. Mullen burst strength
3. Puncture resistance
4. Grab tensile
5. Permittivity
6. Apparent opening size

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B. These conformance tests shall be performed in accordance with test requirements Paragraph 2.02.

C. All conformance test results shall be reviewed by the CQA Manager and accepted or rejected, prior to the deployment of the fabric. All test results shall meet, or exceed, the property values listed in Paragraph 2.02. The course of action implemented for failing tests shall be approved by the CQA Manager.

D. The manufacturer may obtain samples from rolls manufactured immediately before and after the failing roll and request testing by the QAL at the manufacturer's expense. If these rolls pass, then only the failing roll will be rejected. If they fail, then the entire lot will be rejected.

PART 3: EXECUTION

3.01 PREPARATION

A. General
   1. Preparation of the subgrade shall depend on the specific application.

   2. The subgrade shall be inspected by the Engineer prior to installation of the filter fabric.

3.02 INSTALLATION

A. Fabric Placement

   1. The subgrade shall be maintained in a smooth, uniform and compacted condition during installation of the filter fabric beneath the riprap. Overlap between adjacent panels of fabric shall be a minimum of 12-inches.

3.03 FIELD QUALITY CONTROL

A. The filter fabric installation and related work shall be inspected by the Engineer. All work in the system therein being inspected shall be complete, clean and ready for use. All work shall meet the requirements of cleanliness and workmanship, as determined by the Engineer.

B. Discrepancies shall be noted and repaired at no additional expense. Final acceptance of the system shall be contingent upon the approval of the Engineer.

TABLE 1
MINIMUM AVERAGE ROLL VALUES FOR GEOTEXTILE FABRICS

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**TABLE 1**

**MINIMUM AVERAGE ROLL VALUES FOR GEOTEXTILE FABRICS**

<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>MINIMUM AVERAGE ROLL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric Weight</td>
<td>ASTM D3776</td>
<td>oz./yd¹</td>
<td>8</td>
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<tr>
<td>Thickness</td>
<td>ASTM D1777</td>
<td>mils</td>
<td>90</td>
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<tr>
<td>Grab Strength</td>
<td>ASTM D4632</td>
<td>lbs</td>
<td>220</td>
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<tr>
<td>Grab Elongation</td>
<td>ASTM D4632</td>
<td>%</td>
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<tr>
<td>Puncture Resistance</td>
<td>ASTM D4833</td>
<td>lbs</td>
<td>135</td>
</tr>
<tr>
<td>Mullen Burst Strength</td>
<td>ASTM D3786</td>
<td>psi</td>
<td>350</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D4491</td>
<td>SEC¹</td>
<td>1.5</td>
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<tr>
<td>Coef. of Permeability</td>
<td>ASTM D4491</td>
<td>cm/sec</td>
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<tr>
<td>Apparent Opening Size</td>
<td>ASTM D4751</td>
<td>mm</td>
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<tr>
<td>Flow Rate</td>
<td>ASTM D4491</td>
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<td>(AOS)</td>
<td>US Sieve No. 100</td>
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<tr>
<td>UV Resistance</td>
<td>ASTM D4355</td>
<td>%</td>
<td>70%¹</td>
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<tr>
<td>Trapezoid Tear Strength</td>
<td>ASTM D4355</td>
<td>lbs</td>
<td>130</td>
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</table>

¹. Value is percent of minimum grab tensile after conditioning.

END OF SECTION
SPEC 00304

EROSION CONTROL BLANKETS

PART 1: GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals necessary to install erosion control blankets as shown on the Drawings and specified herein.

B. Furnishing and placing erosion control blankets shall consist of preparing and ground surface, installing and stapling the erosion control blankets in the designated areas as shown on the Drawings.

1.02 RELATED WORK

A. Topsoil is included in SPEC 00202.

B. Seed and Mulch is included in SPEC 00203.

1.03 SUBMITTALS

A. Prior to shipment, the manufacturer of the proposed erosion control blanket shall submit certification of minimum property values of the proposed erosion control blanket and the tests used to determine those properties.

1.04 REFERENCE STANDARDS

A. All erosion and control blankets delivered to the job site shall be stored off the ground, in a secure area and protected with a covering that protects the rolls from contamination by dirt, dust or water, and from extreme heat caused by direct sunlight.

B. Store, handle and transport erosion control blankets in strict conformance with the Manufacturer’s instruction.

C. Transportation of erosion control matting is the responsibility of the Contractor. The Contractor shall be liable for all damages to the materials incurred prior to and during transportation to the site.

D. Handling, storage, and care of erosion control blanket prior to and following installation at the site, is the responsibility of the Contractor. The Contractor shall be liable for all damages to the materials incurred prior to final acceptance.

E. Erosion control blankets shall be supplied in rolls wrapped in relatively impermeable and opaque protective covers.
PART 2: PRODUCTS

2.01 GENERAL

A. Erosion control blanket shall be Curlex I, by American Excelier Company, Arlington, TX or approved equal.

B. Erosion control blanket shall have the following properties:

Physical Properties:

Fiber: Great Lakes Aspen Excelsior with no weed seeds Curled, interlocking fibers with barbed edges
Fiber Size: 80% of fibers a minimum of 6” (15.24 cm) long, 0.038 ± 0.010” wide by 0.018 (+ 0.08 mm) thick
Water Absorption: 250% ± 25%
Weight: 0.73 lb/sy (0.40 kg/m²) ± 10%
Net: Polypropylene (green or white – UV degrader additive)
Net Opening Size: ¾” wide by 1-5/8” long (19 mm wide by 41 mm long)
Net Configuration: Top side only

PART 3: EXECUTION

3.01 INSTALLATION

A. Excelsior matting blankets shall be installed in all seeded drainage swales and ditches, and all grassed slopes 4-1 or steeper as shown on the Drawings and as directed by the Engineer in accordance with manufacturer’s instructions. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area. The blankets shall be applied in the direction of water flow and stapled. Side overlaps shall be 4-in minimum. The staples shall be made of wire, 0.091-in in diameter or greater, U shaped with legs 10-in in length and a 1 12-in crown. The staples shall be driven vertically into the ground, spaced approximately two liner feet apart, on each side, and one row in the center alternately spaced between each size. Upper and lower ends of the matting shall be buried to a depth of 4-in in a trench. Erosion stops shall be created every 25 feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be 4-in below the ground surface. Staple on both sides of fold. Where the matting must be cut, or more than one roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of 4-in. Overlap lower end of upstream roll 4-in past edge of downstream roll and staple.

1. To ensure full contact with soil surface, roll matting with a roller weighing 100 pounds per foot of width perpendicular to flow direction after seeding, placing matting and stapling. Thoroughly inspect channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

END OF SECTION
SECTION XI

Supplemental Specifications
SECTION XI
Supplemental Specifications

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01 33 01 Project Submittals and Procedures
01 45 25 Testing
01 74 24 Site Restoration
01 76 00 Protecting Existing Infrastructure and Installed Construction
02 21 19 Hydrographic Surveys
02 56 13 Waste Containment Geomembrane
02 72 00 Water Treatment
02 73 00 Solids Processing
13 31 33 Tensioned Fabric Structures
13 50 00 Special Instrumentation
31 05 16 Aggregates for Earthwork
31 14 00 Stockpiling
31 25 00 Erosion and Sedimentation Controls
32 12 16 Asphalt Paving
32 90 00 Wetland Planting
33 42 00 Culverts
35 00 00 Waterway and Marine Construction
35 20 23 Dredging
35 20 26 Hydraulic Pipeline
35 60 00 Temporary Water Diversion and Flood Contingency Plan
35 80 00 Turbidity Barriers
SECTION 01 10 11 – WORKING ON SCHOOL PROPERTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Submittals
B. Regulatory Requirements
C. Project/Site Conditions

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 33 01 PROJECT SUBMITTALS AND PROCEDURES.

B. Submit provisions for site security and plans for controlling ingress and egress in the Contractor's Work Plan, in accordance with Section 00014 WORK PLAN.

C. Submit the following week’s work activities and schedule.

D. Submit noise monitoring results.

1.3 REGULATORY REQUIREMENTS

A. New York State Board of Education Part 155 Regulations
   1. Rights for the use of the work and storage areas have been obtained, and the general limits of the areas are shown on the Drawings. Usage of these areas is pursuant to operating under the New York State Board of Education Part 155 Education Facilities Regulations.

1.4 COORDINATION REQUIREMENTS

A. The Contractor shall schedule weekly meetings (to include a pre-construction meeting prior to construction) with the school administration to present the following week’s work activities and schedule as it pertains to the school’s operations and schedule and to discuss any concerns the schools may have.

1.5 PROJECT/SITE CONDITIONS

A. Location and Verification
   1. It shall be the Contractor's responsibility to accurately locate the limits of all lands utilized under the contract. The approved work areas for which rights have been obtained shall be temporarily fenced off using minimum 8 ft high chain link fence with privacy screen in the areas as shown on the Drawings and per Section 00010 TEMPORARY FACILITIES AND CONTROLSS.
PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

A. Site Access Limitations
   1. The Contractor shall honor all requests by the West Islip School District to halt work that is disrupting both pedestrian and vehicle traffic related to school arrival and dismissal as well as afterhours events. It is up to the Contractor to obtain the school district schedules and plan work accordingly. The Contractor shall account for schedule delays anticipated to be caused by site access limitations by the schools.
   2. Although Contractor shall comply with all requests by the WISD for access, the time periods where it will be required are:
      a. prior to the start of school (Middle School 07:00-08:00, High School 06:00 to 07:00)
      b. following dismissal (Middle School 14:00-15:00, High School 13:00-15:00)
   3. The Contractor shall open the pedestrian gate after school dismissal at any time a pedestrian would like to cross.
   4. Barberry Road Point of Egress – The Contractor shall not schedule deliveries to or loading out of vehicles from the West Islip High School processing area between the hours of 06:00 and 07:30, and 13:30 and 15:00.

B. Safety and Security
   1. Site security is required 24/7 per Section 00011 – SITE SECURITY.
   2. Fences around construction activities, supplies, and debris shall be maintained.
   3. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
   4. Workers shall be required to wear photo identification badges at all times for identification and security purposes. In addition to current photo, badge shall include at a minimum the following information:

      Dzus Fasteners Remediation Contract No. D011107
      <COMPANY NAME>
      <PERSONNEL'S FULL NAME>
      VALID FROM <DATE OF NTP> THROUGH <DATE OF FINAL COMPLETION>

   5. All construction materials shall be stored in a safe and secure manner.
   6. No smoking is allowed on public school property.
   7. The contractor shall be responsible for the control of chemical fumes, gases, and other contaminants produced by welding, gasoline or diesel engines, roofing, paving, painting, etc. to ensure they do not enter occupied portions of the nearby school building or air intakes.

C. Noise Monitoring on School Property
   1. Construction operations shall not produce noise in excess of 60 dBA in occupied spaces.
   2. Measurements shall be made using a type 2 sound level meter.
3. Measurements shall be made directly outside of the occupied area nearest to the source of the noise; background noise levels in occupied areas to be monitored are to be identified prior to the start of construction.

4. New measurements shall be made upon beginning any new or modified construction operation, or as requested by the Engineer.

END OF SECTION
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PART 1  GENERAL

1.1  DESCRIPTION

1.1.1  The CONTRACTOR shall prepare and submit plans, shop drawings, and record drawings as identified within Table 01 33 01-1 of this section, as scheduled for the ENGINEER’s and DEPARTMENT’s review. The CONTRACTOR is not exempt from issuing submittals not listed on Table 01 33 01-1.

1.2  SUBMITTALS

1.2.1  Prepare a complete listing of all submittals required for the project noting the number of each submittal and the date each submittal is to be submitted. The CONTRACTOR shall identify submittals that are time critical to completion of the project. The listing shall be submitted within 7 days of Award of the Contract and shall be a prerequisite to the first partial payment.

1.3  SUBMITTAL PROCEDURES

1.3.1  Transmit each submittal with DEPARTMENT-accepted form. Submit electronically to the ENGINEER, DEPARTMENT, and any other party the ENGINEER or DEPARTMENT requires. Form shall include:

1.3.1.1  Submittal number using the specification section and sequential number (e.g., 02400-1, 02400-2). Resubmittals shall have the same submittal number with a sequential letter designation for each succeeding resubmittal (e.g., 03300-1-A, 03300-1-B).

1.3.1.2  Identification of the Project, Contractor, and supplier/manufacturer.

1.3.1.3  Pertinent Drawing sheet and detail number(s) and specification Section number, as appropriate.

1.3.1.4  CONTRACTOR’s stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the work and Contract Documents.

1.3.1.5  Identification of variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed work.
1.3.1.6 Provide space for ENGINEER’s review stamp.

1.3.2 Schedule submittals to expedite the project and deliver to the ENGINEER electronically. Coordinate submission of related items such that a complete review of the submittal can be performed. Incomplete submittals or submittals not fully coordinated will not be reviewed. The CONTRACTOR will be advised in writing of the reasons for the DEPARTMENT’s action.

1.3.3 Distribute electronic copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.3.4 The ENGINEER shall review each submittal in accordance with Section VIII (General Conditions) of this Contract. The ENGINEER shall complete the review of all submittals within 14 days and in accordance with the CONTRACTOR’s assigned priority to each submittal. Failure by the CONTRACTOR to make submittals on time or failure to allow sufficient time for review of any and all submittals will not relieve him of the responsibility to complete the project in the specified time.

1.3.5 After the ENGINEER completes his review, submittals will be marked with one of the following notations:

- Approved.
- Approved as Noted.
- Resubmit with Revisions.
- Disapproved.

1.3.6 If a submittal is acceptable, it will be marked "Approved" or "Approved as Noted". A copy of the submittal will be returned to the CONTRACTOR electronically, and also forwarded to the DEPARTMENT. The ENGINEER will also retain electronic copies of all approved submittals.

1.3.7 If a submittal is unacceptable, an electronic copy will be returned to the CONTRACTOR with one of the following notations:

- Resubmit with Revisions
- Disapproved.

1.3.8 Upon the return of a submittal marked "Resubmit with Revisions", the CONTRACTOR shall make the corrections indicated and repeat the initial approval procedure. The "Disapproved" notation is used to indicate material or equipment that is not acceptable. Upon the return of a submittal so marked, the CONTRACTOR shall repeat the initial approval procedure utilizing acceptable material or equipment.
1.4  5-DAY SUBMITTAL PACKAGE

1.4.1  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.

1.4.1.1  Draft Health and Safety Plan (Refer to SPEC 00003 – 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.

1.4.1.2  Draft Work Plan (Refer to SPEC 00014 – WORK PLAN)

   a.  Quality Control.
   b.  Sequencing of Work.
   c.  Soil Erosion and Sedimentation Control Measures.
   d.  Monitoring Well Decommissioning and Installation Plan
   e.  Transportation Plan
   f.  Site Security.
   g.  Miscellaneous Requirements.

1.4.1.3  Draft Sampling and Analysis Plan (Refer to SPEC 00013 - SAMPLING)

   a.  Sampling Procedures.
   b.  Analytical Methods.
   c.  Quality Assurance Project Plan

1.5  REQUIRED FOR AWARD AND NOTICE TO PROCEED

1.5.1  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:

1.5.1.1  Final Health and Safety Plan.
1.5.1.2  Final Work Plan.
1.5.1.3  Final Sampling and Analysis Plan.
1.5.1.4  Shop Drawings, including the following:

   a.  Electrical Supply and Lighting.
   b.  Water Supply and Use Requirements.
   c.  Temporary Site Facilities.
d. Other shop drawings required by the specifications or as requested by the ENGINEER.

1.6 CONSTRUCTION PROGRESS SCHEDULES AND REPORTS

1.6.1 All progress schedules and reports shall be prepared and submitted in accordance with SPEC 00001 – PROGRESS SCHEDULE and SPEC 00005 – PROJECT COORDINATION.

1.7 SURVEY SUBMITTALS

1.7.1 Drawings submittals described in SPEC 00004 – SURVEYS shall be submitted on an ongoing basis. Draft drawings shall be provided to the ENGINEER or DEPARTMENT upon request. Draft drawings shall be labeled using the section and sequential number and tagged with DRAFT (i.e. 00004-1-DRAFT). The completed surveys shall then be submitted without the DRAFT designation but would not be considered a resubmittal.

1.7.2 Survey records described in SPEC 00004 – SURVEYS shall be submitted following approval of each survey.

1.8 OTHER SUBMITTALS

Additional submittal requirements are identified in other sections of the Specifications and in Table 01 33 01-1, applicable to the Work being performed or as requested by the ENGINEER.

1.9 FINAL SUBMITTALS

1.9.1 Project record documents shall be submitted by the CONTRACTOR to the ENGINEER and DEPARTMENT prior to final completion of the contract.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION
<table>
<thead>
<tr>
<th>Section</th>
<th>Submittal</th>
<th>Submission Timing</th>
<th>Associated Work Task</th>
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<tr>
<td>Section III - BIDDING INFORMATION AND REQUIREMENTS</td>
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<tr>
<td>Article 3</td>
<td>Data of Bid filled out (Section V Article 1a)</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<tr>
<td>Article 5</td>
<td>Bid Bond or Certified Check (Section V Article 1b)</td>
<td>Within 30 days of Final completion/prior to payment</td>
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<td>Article 5</td>
<td>Non-Collusion Certificate (Section V Article 1b)</td>
<td>Within bid</td>
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<td>Article 5</td>
<td>MacBride Fair Employment Principles (signed) (Section V Article 1c)</td>
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<td>Article 5</td>
<td>Officer's Affirmation of Understanding of and Agreement pursuant to State Finance Law 139-g(3) and 139-g(4)(b) (signed) (Section V Article 1)</td>
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<td>Article 5</td>
<td>Officer's Disclosure of Prior Non-Responsibility Determinations (signed) (Section V Article 1i)</td>
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<tr>
<td>Article 5</td>
<td>Definition of materials to receive material along with caps of the facility</td>
<td>Prior to updating schedule</td>
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<td>Article 5</td>
<td>Plan of Operations (Work Plan) and Progress Schedule; Health and Safety Plan, Sampling Plan, and QA/QC Plan</td>
<td>Within 5 days of low bid notification</td>
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<tr>
<td>Article 5</td>
<td>Statement of Surety's intent (Section V Article 2b)</td>
<td>Within 5 days of low bid notification</td>
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<tr>
<td>Article 5</td>
<td>Description of projects completed by Bidder documenting its experience</td>
<td>Within 5 days of low bid notification</td>
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<tr>
<td>Article 5</td>
<td>Proof of availability of insurance or Certificate of insurance with endorsements</td>
<td>Within 5 days of low bid notification</td>
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<td>Article 5</td>
<td>Vendor Responsibility Questionnaire or affidavit of no change (in accordance with Section V Article 5b)</td>
<td>Within 5 days of low bid notification</td>
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<td>Policy Statement and M/WBE Work plan (in accordance with Section V Article 5c)</td>
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<td>Article 5</td>
<td>Any other information that demonstrates Bidder's ability to perform the work</td>
<td>Within 5 days of low bid notification</td>
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<td>Low bidders may be asked to submit additional information to demonstrate competency</td>
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<td>Article 5</td>
<td>Executed Agreement</td>
<td>Within 10 days after Notice of Award, prior to commencement of work</td>
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<td>Article 5</td>
<td>Performance Bond with Power of Attorney &amp; Surety Financial Statement (Section V Article 3d)</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>Article 5</td>
<td>Labor &amp; Materials Bond with Power of Attorney &amp; Surety Financial Statement (Section V Article 3e)</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>Article 5</td>
<td>Bid Breakdown of Items</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>Article 5</td>
<td>Criteria of Submission (Section V Article 3f)</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>Article 5</td>
<td>Consultant/Contractor Detailed M/WBE-EEO Utilization Plan (Section V Article 3e)</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>Article 5</td>
<td>Bid Breakdowns</td>
<td>Within 14 days of Notice of Intent to Award</td>
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<td>SECTION VIII - GENERAL CONDITIONS</td>
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<td>1.4.1</td>
<td>interim Progress Schedule</td>
<td>Within 10 days after Notice of Award, prior to commencement of work</td>
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<tr>
<td>1.4.2</td>
<td>Interim Schedule of Shop Drawing, Material, Soil Characteristic, Sample Collection, and Analytical Test Result Submissions</td>
<td>Within 10 days after Notice of Award, prior to commencement of work</td>
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<td>1.4.3</td>
<td>Interim Schedule of Values</td>
<td>Within 10 days after Notice of Award, prior to commencement of work</td>
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<tr>
<td>1.6</td>
<td>Proposed Progress Schedule (CPM/Schedule of Values/User Manual)</td>
<td>Within 20 days after starting work at site</td>
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<tr>
<td>3.2</td>
<td>Copies of all permits/approvals for use of premises not furnished by NYSDEC under Section 3.1</td>
<td>Before utilization of associated area</td>
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<tr>
<td>SECTION X - STANDARD SPECIFICATIONS</td>
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<tr>
<td>SPEC 00001 - Progress Schedule</td>
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<tr>
<td>5 b</td>
<td>Preliminary Schedule submittal set including preliminary CPM Diagram, Schedule of Values with supporting narrative, and user manual for scheduling software</td>
<td>Within 10 days of Notice of Award</td>
<td></td>
</tr>
<tr>
<td>5 c</td>
<td>Interim Schedule submittal set including interim CPM Diagram, Schedule of Shop Drawings, Schedule of Values and supporting narrative</td>
<td>To be approved prior to commencement of work</td>
<td></td>
</tr>
<tr>
<td>5 d</td>
<td>Detailed Schedule submittal set including detailed CPM Diagram, reports associated with Schedule of Values, schedule of Shop Drawings with supporting narrative, and activity reports to support CPM</td>
<td>To be approved prior to commencement of work</td>
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<tr>
<td>5 e</td>
<td>Status submittal sets including &quot;Mark-up&quot; versions of current Detailed CPM Diagram, Schedule of Values, Schedule of Shop Drawings, and supporting narrative</td>
<td>To be maintained onsite and submitted with Project Recent Documents</td>
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</tr>
<tr>
<td>5 f</td>
<td>Update submittal sets consisting of Revised Detailed CPM Diagram, Schedule of Values, Schedule of Shop Drawings, and supporting narrative</td>
<td>As needed</td>
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<tr>
<td>5 g</td>
<td>Detailed Contract Completion Schedule and associated computer reports</td>
<td>Within 30 days of final completion</td>
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<tr>
<td>5 h</td>
<td>As-Built CPM Diagram and a &quot;Schedule Reconciliation&quot; report</td>
<td>Within 30 days of final completion</td>
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<td>SPEC 00002 - Cast In Place Concrete</td>
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<td>1.04</td>
<td>Shop Drawings</td>
<td>To be approved prior to associated work, if applicable</td>
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<td>1.04</td>
<td>Product Data</td>
<td>To be approved prior to associated work, if applicable</td>
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<td>1.04</td>
<td>Samples of fill</td>
<td>To be approved prior to associated work, if applicable</td>
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<td>1.04</td>
<td>Quality Control Submittals</td>
<td>To be approved prior to associated work, if applicable</td>
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<td>SPEC 00003 - Health and Safety</td>
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<td>1.3</td>
<td>Health and Safety Plan</td>
<td>By Notice to Proceed</td>
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<td>SPEC 00004 - Surveys</td>
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<td>1.4</td>
<td>Survey Qualifications</td>
<td>To be approved prior to survey</td>
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<td>1.4.2</td>
<td>Survey Plan</td>
<td>With Work Plan (SPEC 00004)</td>
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<td>1.4.3 a</td>
<td>Initial topographic map</td>
<td>To be approved prior to commencing site work</td>
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<tr>
<td>1.4.3 b</td>
<td>Intermediate drawings</td>
<td>Monthly</td>
<td></td>
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<tr>
<td>1.4.3 c</td>
<td>As-built topographic maps</td>
<td>Within 30 days of Final completion/prior to payment</td>
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<td>1.4.4</td>
<td>AutoCAD electronic files of all surveys</td>
<td>Within 30 days of Final completion/prior to payment</td>
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<td>1.4.8</td>
<td>Field data</td>
<td>Within 30 days of Final completion/prior to payment</td>
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<td>1.4.8 c</td>
<td>Coordinate list</td>
<td>Within 30 days of Final completion/prior to payment</td>
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<td>1.4.9</td>
<td>Volume Quantity Calculations</td>
<td>Prior to payment of associated items</td>
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<tr>
<td>SPEC 00005 - Project Coordination</td>
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<td>1.2</td>
<td>Subcontractor List and updates</td>
<td>To be approved prior to subcontracts beginning site work</td>
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<td>1.2</td>
<td>Uniform Contracting Questionnaire</td>
<td>To be approved prior to subcontracts beginning site work</td>
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<td>1.2</td>
<td>Project Schedule Status Reports</td>
<td>Biweekly 48 hours prior to project meetings</td>
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<td>1.2</td>
<td>Project Schedule Updates</td>
<td>Prior to updating schedule</td>
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01.33.01 - Table 1
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<tr>
<th>Section</th>
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<th>Submission Timing/Associated Work Task</th>
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<tr>
<td>SPEC 00060 - Field Offices</td>
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<tr>
<td>1.1 1</td>
<td>Floor plan of field office for DEPT/ENG showing layout of rooms, furnishings, facilities and utilities</td>
<td>Prior to delivery within 14 days following NTP</td>
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<tr>
<td>1.1 2</td>
<td>Plan for maintenance of DEPT/ENG's office facilities</td>
<td>Prior to delivery within 14 days following NTP</td>
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<td>SPEC 00080 - Project Record Documents</td>
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<td>1.02 1</td>
<td>As-built documents</td>
<td>Prior to submission of each monthly pay estimate</td>
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<td>1.02 2</td>
<td>Supplemental record drawings</td>
<td>As needed</td>
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<td>1.02 3</td>
<td>Project Record Documents</td>
<td>Per 3.02 and 3.03</td>
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<td>3.03</td>
<td>Preliminary Submittal (Project Record Documents)</td>
<td>Within 7 days following substantial completion</td>
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<td>SPEC 00090 - Traffic Control</td>
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<td>Traffic Control Plan</td>
<td>To be approved prior to mobilization to the site</td>
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<td>SPEC 00010 - Temporary Facilities and Controls</td>
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<td>1.1 2</td>
<td>Electrical Permits (Application)</td>
<td>To be approved prior to installation</td>
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<td>1.1 3</td>
<td>Silt fence specifications</td>
<td>To be approved prior to delivery</td>
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<td>SPEC 0011 - Site Security</td>
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<td>Security firm experience</td>
<td>To be approved prior to mobilization to the site</td>
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<td>1.2 2</td>
<td>Guard tour patrol system specifications</td>
<td>To be approved prior to installation</td>
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<td>1.2 3</td>
<td>Site entrance/exit log and watchman logs</td>
<td>Upon substantial completion</td>
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<td>SPEC 0012 - Monitoring Wells</td>
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<td>1.03 2</td>
<td>New well boring log</td>
<td>Following installation</td>
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<td>SPEC 0013 - Sampling</td>
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<td>1.03 1</td>
<td>New well construction diagrams</td>
<td>To be approved prior to sample collection</td>
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<td>1.03 2</td>
<td>Quality Assurance Project Plan</td>
<td>To be approved prior to sample collection</td>
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<td>SPEC 0014 - Work Plan</td>
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<td>1.02 A</td>
<td>Work Plan</td>
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<td>SPEC 0015 - Offsite Transportation and Disposal</td>
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<td>1.2 2</td>
<td>Disposal Facilities</td>
<td>To be approved prior to T&amp;D</td>
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<td>SPEC 0016 - Quality Control</td>
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<td>1.02 A</td>
<td>Manufacturers’ instructions and certifications</td>
<td>To be approved prior to use</td>
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<td>SPEC 0020 - Fences</td>
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<td>1.04</td>
<td>Fence manufacturer and material specifications</td>
<td>To be approved prior to delivery</td>
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<td>SPEC 0023 - Access Roads</td>
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<td>1.3 2</td>
<td>Certification in accordance with NYSDEC DER-10 5.4 (f)</td>
<td>To be approved prior to delivery</td>
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<td>SPEC 0025 - Schedule of Values</td>
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<tr>
<td>1.03 A</td>
<td>Initial Schedule of Values</td>
<td>Within 10 days after Notice of Award</td>
</tr>
<tr>
<td>1.03 B</td>
<td>Initial bid breakdown</td>
<td>Within 14 days of Notice of Intent to Award</td>
</tr>
<tr>
<td>1.03 C</td>
<td>Updated Progress Schedule</td>
<td>With each Application for Payment</td>
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<tr>
<td>1.03 D</td>
<td>Payment Period</td>
<td>Submit at intervals stipulated in the Contract</td>
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<tr>
<td>Section</td>
<td>Submittal</td>
<td>Submission Timing/Associated Work Task</td>
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<td>1.01 A.</td>
<td>List of plants</td>
<td>To be approved prior to shipment</td>
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<td>1.01 B.</td>
<td>Product data</td>
<td>Upon delivery</td>
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<td>1.01 C.</td>
<td>Worker’s Qualifications Data</td>
<td>To be approved prior to planting</td>
</tr>
<tr>
<td>1.01 D.</td>
<td>Notification of planting activities</td>
<td>2 days prior to planting</td>
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<td>1.01 E.</td>
<td>Shipping invoices</td>
<td>Upon delivery</td>
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<td>1.03 A. 1.</td>
<td>Manufacturer's Information</td>
<td>Within 30 calendar days following Effective Date of the Agreement</td>
</tr>
<tr>
<td>1.03 A. 2.</td>
<td>List of material properties and samples with attached certified test results</td>
<td>Within 30 calendar days following Effective Date of the Agreement</td>
</tr>
<tr>
<td>1.03 A. 3.</td>
<td>Installation schedule</td>
<td>Within 30 calendar days following Effective Date of the Agreement</td>
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<td>1.03 A. 4.</td>
<td>Copy of quality control certificates</td>
<td>Within 30 calendar days following Effective Date of the Agreement</td>
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<td>1.03 A. 5.</td>
<td>Proposed warranty and guarantee</td>
<td>Within 30 calendar days following Effective Date of the Agreement</td>
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<td>1.03 B.</td>
<td>Off-site topsoil results</td>
<td>To be approved prior to delivery</td>
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<td>1.03 C.</td>
<td>Topsoil schedule of all materials</td>
<td>To be approved prior to delivery</td>
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<td>1.03 D.</td>
<td>Calendar time period for turf establishment</td>
<td>With schedule</td>
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<td>1.03 E.</td>
<td>Certifications of materials</td>
<td>To be approved prior to delivery</td>
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<td>1.03 F.</td>
<td>Seed reports</td>
<td>To be approved prior to delivery</td>
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<td>1.03 G.</td>
<td>Fertilizer</td>
<td>To be approved prior to delivery</td>
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<td>1.03 H.</td>
<td>Hydro mulch</td>
<td>To be approved prior to delivery</td>
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<tr>
<td>1.03 I.</td>
<td>Product data, manufacturer's specifications and recommended application rates</td>
<td>To be approved prior to scheduling delivery</td>
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<tr>
<td>1.03 J.</td>
<td>Soil quality control report</td>
<td>Upon receipt</td>
</tr>
</tbody>
</table>

SECTION XI - SUPPLEMENTAL SPECIFICATIONS

Section 01 33 01 - Project Submittals

1.2 1. Complete listing of submittals required with submittal number and due date to be submitted | 7 days after award of Contract |

Section 01 45 25 - Testing

1.4 A. 1. Site-specific OAMP | To be approved prior to sample collection |
| 1.4 A. 2. Proposed analytical laboratories, qualifications or certifications | To be approved prior to sample collection |
| 1.4 B. | Field sampling documentation- field sheets, OCDs, and field log book entries | Upon request, or prior to project closeout |
| 1.4 D. | Analytical data reports | Within 24 hours of receipt from laboratory |
| 1.4 E. | Sample location survey coordinates | Within 30 days of final completion |

Section 01 74 24 - Site Restoration

1.3 A. | Documentation of pre-construction condition of site | To be approved prior to intrusive activities |
<p>| 1.3 B. | Materials | To be approved prior to start of restoration |
| 1.3 C. | Substantial completion certificate and inspection request | Prior to substantial completion |
| 1.3 D. | Substantial completion punch list | Prior to substantial completion |
| 1.3 E. | Final completion certificate and inspection request | Prior to final completion |
| 1.3 F. | Record documents | Prior to final project closeout |
| 1.3 G. | Storm sewer pipe and fitting shop drawings | To be approved prior to delivery |</p>
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<thead>
<tr>
<th>Section</th>
<th>Submittal</th>
<th>Submission Timing/Associated Work Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 A</td>
<td>Qualifications of the hydrographic surveyors</td>
<td>To be approved prior to survey</td>
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<tr>
<td>1.2 B</td>
<td>Material labels and data sheets</td>
<td>At least 10 days prior to deployment onsite</td>
</tr>
<tr>
<td>1.2 C</td>
<td>As-built drawings of geomembrane installation</td>
<td>Upon installation</td>
</tr>
<tr>
<td>1.2 D</td>
<td>Shop drawings</td>
<td>Within 60 days of the notice to proceed</td>
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<td>1.2 E</td>
<td>Non-destructive field seam continuity testing</td>
<td>Upon installation</td>
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<td>1.2 F</td>
<td>Destructive field seam testing</td>
<td>Upon installation</td>
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<tr>
<td>1.2 G</td>
<td>Destructive seam test repairs</td>
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<td>1.3 A</td>
<td>Water Treatment Plan</td>
<td>To be approved prior to installation</td>
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<tr>
<td>1.3 B</td>
<td>Operation and Maintenance Plan</td>
<td>To be approved prior to installation</td>
</tr>
<tr>
<td>1.3 C</td>
<td>Pre-construction testing results</td>
<td>For approval by November 1</td>
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<tr>
<td>1.3 D</td>
<td>Water treatment system operation and maintenance records and reports</td>
<td>Daily and monthly</td>
</tr>
<tr>
<td>1.3 E</td>
<td>Licensed water treatment plant operator's qualifications</td>
<td>To be approved prior to installation</td>
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<td>1.4 A</td>
<td>Product Data</td>
<td>To be approved prior to delivery</td>
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<td>1.4 B</td>
<td>Delegated design submittal</td>
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<td>1.4 C</td>
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<td>1.4 D</td>
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<td>1.4 E</td>
<td>Samples of fill</td>
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<td>To be approved prior to delivery</td>
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<td>To be approved prior to delivery</td>
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<td>Applicable building permit applications and permits</td>
<td>To be approved prior to delivery</td>
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<td>1.4 I</td>
<td>Maintenance data</td>
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<td>Product Data</td>
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<td>1.5 B</td>
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<td>To be approved prior to installation</td>
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<td>1.5 C</td>
<td>Installation procedures and installation records</td>
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<td>Baseline pre-construction s,y,z,correction coordinates</td>
<td>Prior to intrusive activities</td>
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<td>1.5 E</td>
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<td>To be approved prior to delivery</td>
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<td>1.6 D</td>
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<td>To be approved prior to delivery</td>
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<td>Grain size analysis</td>
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<td>NYSDOT approved source or NYSDOT mining permits</td>
<td>To be approved prior to delivery</td>
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<td>Description of equipment and methods for compaction</td>
<td>To be approved prior to placement</td>
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<td>1.6 I</td>
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<td>Prior to installation of culvert</td>
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<td>Name of qualified independent compaction testing laboratory</td>
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<td>Description of equipment and methods for compaction</td>
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<tr>
<td>1.8 F</td>
<td>Copies of compaction test reports</td>
<td>Prior to installation of culvert</td>
</tr>
<tr>
<td>1.8 G</td>
<td>Name of qualified independent compaction testing laboratory</td>
<td>To be approved prior to placement</td>
</tr>
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</table>

**Section 01 33 01 - Table 1**

Project Submittals: NYSDOT Dzus Fasteners, Inc. Site No. 52033
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<td>Culvert Product data</td>
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<td>1.3 B.</td>
<td>Subgrade bearing capacity</td>
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<tr>
<td>1.3 C.</td>
<td>Manufacturer's installation instructions</td>
<td>Prior to delivery</td>
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<td>1.3 D.</td>
<td>Field quality control submittals</td>
<td>To be approved prior to installation of culvert</td>
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<td>1.3 E.</td>
<td>Qualifications statement</td>
<td>To be approved prior to delivery</td>
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<tr>
<td>1.3 F.</td>
<td>Permit application and subsequent permit for footbridge replacement</td>
<td>At time of application submittal and upon receipt</td>
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### Section 35 00 00 - Waterway and Marine Construction

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<td>1.4 A.</td>
<td>Qualifications of person(s) responsible for performing inspections of dredges and related equipment</td>
<td>To be approved prior to mobilization on water</td>
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#### Section 35 20 23 - Dredging

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<th>Section</th>
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<td>Dredge work plan</td>
<td>To be approved prior to initiation of dredging activities</td>
</tr>
<tr>
<td>1.4 C.</td>
<td>Daily COC reports</td>
<td>Daily</td>
</tr>
<tr>
<td>1.4 E.</td>
<td>Fish Management Plan</td>
<td>To be approved prior to initiation of dredging activities</td>
</tr>
<tr>
<td>1.4 F.</td>
<td>Winterization Plan</td>
<td>To be approved by November 1</td>
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#### Section 35 20 26 - Hydraulic Pipeline

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<tbody>
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<td>1.2 B.</td>
<td>Pipeline Construction and Operations Work Plan</td>
<td>Prior to initiation of hydraulic transport of dredged materials</td>
</tr>
<tr>
<td>1.2 C.</td>
<td>Hydraulic pipeline daily operations report</td>
<td>Daily</td>
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<tr>
<td>1.2 D.</td>
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<td>To be approved by November 1</td>
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#### Section 35 60 00 - Temporary Water Diversion and Flood Contingency Planning

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<td>1.6 A.</td>
<td>Groundwater/Surface Water Management Plan</td>
<td>To be approved prior to initiating groundwater/surface water management activities</td>
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<tr>
<td>1.6 B.</td>
<td>Flood Contingency Plan</td>
<td>With Dredging Work Plan (Section 35 20 23)</td>
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<tr>
<td>1.6 C.</td>
<td>Drawings and product data for temporary piping within work area</td>
<td>To be approved prior to delivery</td>
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#### Section 35 80 00 - Turbidity Barriers

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<tr>
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<tr>
<td>1.2 B.</td>
<td>Turbidity Barrier Plan</td>
<td>With Work Plan (SPEC 00014)</td>
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### SECTION XIII - WAGE RATES AND ASSOCIATED CONTRACT REQUIREMENTS

**Certified Payrolls**

<table>
<thead>
<tr>
<th>Section</th>
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<tr>
<td></td>
<td>NOTE: This list is not meant to be an all encompassing list of submittals. The Contractor is not exempt from providing submittals as required by the specifications.</td>
<td>With each payment</td>
</tr>
</tbody>
</table>
SECTION 01 45 25 – TESTING

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes Contractor requirements for developing a Sampling and Analysis Plan (SAP) and sampling, analyzing, validating, and reporting in accordance with the Plan and permits and United States Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (the DEPARTMENT) standards and requirements for environmental sampling and analysis.

1.2 PERFORMANCE REQUIREMENTS

A. The Contractor shall provide all labor, materials, equipment, subcontracting and incidentals required to collect, preserve, handle, transport, analyze, and report sample results related to the following:

1. Pre- and post-construction soil sampling at the middle school and high school staging area (Sections 01 74 24 SITE RESTORATION and 31 14 00 STOCKPILING)
2. Solids Processing System Monitoring (Section 02 73 00 SOLIDS PROCESSING)
3. Water Discharge Monitoring (Section 02 72 00 WATER TREATMENT)
4. Post-Dredging Sediment Confirmatory Testing – (Section 35 20 23 DREDGING)
5. Post-Excavation Soil Confirmatory Testing – Willets Creek (Section 00200 EXCAVATION)
6. Waste Characterization and Disposal (Sections 00015 OFFSITE T&D, 35 20 23 DREDGING, and 02 73 00 SOLIDS PROCESSING)
7. Backfill Material Testing (Sections 00201 BACKFILL, 31 05 16 AGGREGATES FOR EARTHWORK, 01 74 24 SITE RESTORATIONS, and 32 93 00 WETLAND PLANTING)
8. Other samples as requested by the ENGINEER.

B. The Contractor shall employ the services of a qualified independent testing laboratory, or laboratories, in accordance with Section 00013 SAMPLING, and approved by the Engineer to perform the testing.

C. Employment of laboratory shall, in no way, relieve Contractor of obligations to perform work.

1.3 CONTRACTOR’S RESPONSIBILITIES

A. Cooperate with laboratory personnel.

B. Coordinate and cooperate with the DEPARTMENT for the collection of duplicate samples for independent analysis, if needed.

C. Collect samples as outlined in the specifications and listed on Sampling Table 01 45 25-1.
D. Verify that laboratory submits copies of analytical test reports to Engineer, and that reports are received in accordance with the Sampling Table 01 45 25-1.

E. Furnish incidental labor and facilities:
   1. Provide access to Work to be tested.
   2. Obtain and handle samples at Project site.
   3. Facilitate inspections and tests.
   4. Properly store test samples (e.g. in coolers on ice).
   5. Transport samples promptly to laboratory under chain of custody protocols to ensure that required turnaround time for results is met.
   6. Determine proper usage/disposal options for removed sediments based upon test results, and subject to ENGINEER’S approval.

F. Contractor shall make arrangements with the laboratory for proper disposal of the samples after testing.

G. Contractor shall be responsible for calculating mass loadings for water discharges from the processing and treatment system in accordance with the NYSDEC discharge criteria as listed on Table 01 45 25-2 and any additional criteria provided by the ENGINEER for parameters not listed on the table.

1.4 SUBMITTALS

A. Submittals in this Specification shall be in accordance with Section 01 33 01 SUBMITTALS.

B. Contractor shall prepare a site-specific Quality Assurance Project Plan (QAPP) conforming to relevant protocols outlined in NYSDEC’s DER-10 Chapter 2.4 and in accordance with Section 00013 SAMPLING.

C. Proposed analytical laboratories, along with qualifications or certifications.

D. Field Sampling Documentation, including copies of completed field sheets, chain-of-custodies, and field log book entries.

E. Analytical Data Reports, including:
   1. Form I data and laboratory QA/QC results (i.e., blanks, MS/MSD, surrogate recovery, laboratory duplicates) for expedited turnaround reports.
   2. ASP Category B deliverables only for specified samples.
   3. All data generated under this Contract shall be submitted as an EQuIST™ Electronic Data Deliverable (EDD) or otherwise directed by the DEPARTMENT.
   4. Data Usability Summary Report (DUSR) in accordance with Sampling Table 01 45 25-1.

F. Sample location survey coordinates. Surveyed coordinates and elevation of each confirmation sample shall be submitted to the ENGINEER in .csv file format.

G. Additional submittal requirements are described in Section 00013 SAMPLING.
PART 2 – PRODUCTS
(Not Used)

PART 3 – EXECUTION

3.1 QUALITY CONTROL
A. Contractor shall notify Engineer at least 3 days prior to sediment and soil sampling and shall provide one day notice prior to all other sampling activities. ENGINEER will approve all sample locations prior to sampling and shall be present during sampling.
B. Analytical methods and procedures for all sampling shall be as detailed in the QAPP.
C. Sampling locations shall be surveyed, and coordinates shall be provided in project datums.

3.2 SAMPLE COLLECTION AND ANALYSIS
A. Pre and Post Construction Soil Sampling
1. Subgrade soil samples shall be collected from access roads and construction entrances and analyzed at an off-site laboratory in accordance with Section 01 74 24- SITE RESTORATION and as summarized in Sampling Table 01 45 25-1.
2. Surface soil samples shall be collected from stockpile and decontamination pads, and water treatment areas. These samples shall be analyzed at an off-site laboratory in accordance with Sections 31 14 00 – STOCKPILING and 01 74 24- SITE RESTORATION and as summarized in Sampling Table 01 45 25-1.
B. Solids Processing Monitoring
1. Paint filter tests shall be completed on all dewatered soils and sediment prior to offsite transportation and disposal and in accordance with Section 02 73 00 - SOLIDS PROCESSING and as summarized in Sampling Table 01 45 25-1.
2. Paint filter tests shall be performed at 3 sample locations per 100 cubic yards and shall be jointly selected with the ENGINEER. The frequency of sampling may be revised by the ENGINEER.
C. Treated Water Discharge Monitoring
1. Contractor shall collect unfiltered or filtered samples, as required, of the treated water in accordance with the Discharge Monitoring requirements specified in the NYSDEC discharge criteria listed on Table 01 45 25-2, for parameters to be established for this Project following issuance of final permit. It is anticipated that filtering through a 1.0-micron filter at the time of sampling and prior to sample preservation will be required. It is anticipated that required monitoring or sampling rate will be as follows:
   a. Continuously - flow rate (flow meter)
   b. Daily – Settleable Solids (analyzed onsite)
   c. Weekly – pH (field), TSS, TDS, Total Cadmium, and Total Iron
   d. Monthly – Dissolved Aluminum, Total Chromium, Cyanide amenable to chlorination, Total Lead, and Total Zinc.
2. It is anticipated that water samples will be required to be analyzed using the standard EPA methods, or NYSDEC methods, as approved by the DEPARTMENT and as shown in **Sampling Table 01 45 25-1**.

3. It is anticipated that detection limits shall be no greater than one-half the Daily Maximum Discharge Limitation concentrations listed for Outfalls 001, 002, and 003 in the Project-specific NYSDEC Effluent Limitations and Monitoring Requirements for Willets Creek and Lake Capri, Class C receiving water bodies. A copy of the Requirements will be provided when final permits have been received.

4. Analyses shall be completed, and final results reported with a maximum 5-day turnaround period.

5. Contractor shall calculate mass loadings (lb/day) each sampling event for each analyte, except pH, and forward results to Engineer.

D. **Soil Confirmatory Testing – Excavated Materials outside of the Wetland Boundary**

1. Contractor shall collect confirmatory samples in upland areas at locations specified by Engineer after the required soil is removed. All confirmatory sampling will be done in Engineer’s presence, and in accordance with the Contract Drawings or as directed by the Engineer.

2. All sampling shall be done before creek diversion and any turbidity barrier is relocated.

3. Samples locations along Willets Creek limits of excavation shall be at a rate of one sample from the midpoint or above the groundwater table of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area as shown in Contract Drawings or as directed by the Engineer.

4. Sample locations in the residential backyards shall be at a rate of one sample from the midpoint or above the groundwater table of each sidewall for every 30 linear feet of sidewall (maintaining a minimum of one sample per each sidewall along the perimeter of excavation) and one sample from the excavation bottom for every 900 square feet of bottom area (maintaining a minimum of one sample per excavation bottom) as shown in Contract Drawings or as directed by the Engineer.

5. Collect bottom grab samples with a small hand auger from the top six inches of the exposed bottom surface of the contaminated soil excavations. Samples will be placed at the midpoint between the OHWM and wetland boundary and the limits of excavation as shown in the attached Drawings.

6. Collect one 6-inch deep side wall grab sample from the mid-point or above the groundwater table of each sidewall (assuming per 30 linear feet)
   a. Soil Removal Areas along Willets Creek: The sampling location will be per 30 linear feet along limits of excavation.
   b. For Residential backyards: The sampling location will be per 30 linear feet along the perimeter of the excavation.

7. The sample location shall be staked for future reference until analytical results are reviewed by Engineer. Properly labeled and dated splits of the grab samples shall be given to Engineer upon request.

8. Contractor shall collect and analyze duplicate samples as defined in **Sampling Table 01 45 25-1**.
9. Contractor shall analyze each sample for Total Cadmium and Total Chromium, and report results on dry weight basis. Analysis shall be standard EPA Method 200 series, or DEC methods, as approved by the DEPARTMENT. The detection limit for cadmium shall be a maximum of 0.05 ppm and 0.1 ppm for chromium.

10. Analyses shall be completed, and final results reported within 24 hours of sampling. Objective is to verify that the material containing cadmium has been removed to acceptable level of 2.5 ppm cadmium and 36 ppm chromium (residential SCO) for OU3 and 2.5 ppm and 30 ppm (unrestricted SCO) for OU4 floodplain as stipulated in the OU-3 Record of Decision (ROD) and OU-4 PRAP for the Site. Confirmation sample analytical results reporting contaminant concentration values less than acceptable levels verifies that the soil cleanup is complete. If results are greater than or equal to the acceptable level, it indicates that the soil excavation limit has not been achieved and additional excavation of soil surrounding the failed sample location will be conducted. The Contractor’s means and methods cannot impede additional removal that may be required/directed by the ENGINEER. The following steps will be taken:

a. Failed Bottom Sample: Excavate 1-ft of soil from a 900-sf area (33 CY) of 15ft x 60ft (WxL) surrounding the failed sample location. A threshold of two additional confirmation samples (three totals including the initial sample) and excavation reaching groundwater table will be used as the criteria to stop further excavation. Failure to meet SCOs after the third confirmation sample would require placement of a barrier/demarcation layer (such as non-woven geotextile prior to placement of backfill materials as shown in the Contract Drawings.

Failed Sidewall Sample: Excavate an additional 3 ft horizontally from top of the bank along the 30 LF sidewall of the limits of excavation to the final cutline elevation of the nearest clean bottom sample prior to re-confirmation sampling. This excavation shall be performed maintaining 2:1 slope. As shown in the Contract Drawings, similar to the failed bottom sample, a threshold of two additional samples will used as the criteria to stop further excavation and placement of demarcation layer prior to backfill. At locations where the excavation limit cannot be expanded due to site access issue or due to structure or slope steeper than 26.5 degrees (2:1 slope), a barrier/demarcation layer shall be placed prior to placement of backfill materials as well.

11. Analytical report shall include Category B deliverables per NYSDEC ASP.

12. All soil confirmation samples shall be labeled in accordance with the following naming convention:

a. Willetts Creek

1) The bottom soil Samples along Willetts Creek shall follow “Type(BS)-Location(WCXX+XX)-Number/Direction(YYZ)” scheme, where

a) Type: ‘BS’ = bottom soil

b) Location: ‘WC’ = soil removal along Willetts Creek; XX+XX = the Willetts Creek station number associated with the sampling location (For example, 08+42, etc.)
c) Number: ‘YY’ = the number of sample within any given station; ‘Z’ = cardinal direction (north, south, east or west of the creek)

For example,  
BS-WC08+42-01E

2) Sidewall soil samples along Willetts Creek shall follow “Type(SWS)-Location(WCXX+XX)-Number/Direction(YYZ)” scheme, where
a) Type: ‘SWS’ = sidewall soil  
b) Location: ‘WC’ = soil removal along Willetts Creek; XX+XX = the Willetts Creek station number associated with the sampling location (For example, 08+42, etc.)  
c) Number: ‘YY’ = the number of sample within any given station; ‘Z’ = cardinal direction (north, south, east or west of the creek)

For example,  
SWS-WC08+42-01E

b. Residential Backyards
1) The bottom Samples along residential backyards shall follow “Type(BS)-Location(RXXX)-Number(YY) scheme, where
a) Type: ‘BS’ = bottom soil  
b) Location: ‘RXXX’ = Residential tax parcel ID identified during the RI/FS (for example, RDDD, RUUU, etc.)  
c) Number: ‘YY’ = Number of sample associated with the property

For example,  
BS-RUUU-01

2) Sidewall Samples in residential backyards shall follow “Type(SWS)-Location(RXXX)-Cardinal Direction(Z)-Number(YY)” scheme, where
a) Type: ‘SWS’ = sidewall soil  
b) Location: ‘RXXX’ = Residential tax parcel ID identified during the RI/FS (for example, RDDD, RUUU, etc.)  
c) Cardinal direction: “Z” = north, south, east, or west of the excavation  
d) Number: ‘YY’ = Number of sample associated with the property

For example,  
SWS-RUUU-W-01

13. All re-confirmation samples collected following further excavation due to a failed confirmation sample shall use similar convention as above for bottom and sidewall but will include the re-confirmation number at the end of the sample ID as follows: “Type(BS)-Location(RXXX)-Number(YY)-Re-Confirmation sampling number (RYY)” scheme, where
Confirmation sampling number: ‘RYY’ = consecutive numbers for additional sampling (for example, 01 for initial, and 02 for second confirmation sampling)

For example,

SWS-RUUU-S-R1

E. Post-Dredging Sediment Confirmatory Testing – Lake

1. Unbound areas - Confirmation Sampling to Address Potential Undredged Inventory

   a. Contractor shall collect confirmatory samples at locations specified by ENGINEER after the design elevations are reached and verified by the survey to determine if Additional Dredging is necessary, as shown in the decision matrix provided as attachment 3 of this specification. All confirmatory sampling will be done in accordance with the Contract Drawings or as directed by the ENGINEER.

   b. All sampling shall be done before any turbidity barrier is relocated.

   c. Following removal in an unbound grid cell (100 ft X 100 ft as shown in the Drawings), a two-foot core grab sample will be collected from the center of each quadrant (50 ft x 50 ft) of the grid cells established by the ENGINEER (shoreline grid cells or grid cells less than 100 ft x 100 ft are to have a minimum of two samples collected or one sample collected from each quadrant 50 ft x 50 ft area) as shown in the Contract Drawings. Samples will be collected from the 0-6 inch and the 12-24-inch intervals.

   d. Contractor shall collect and analyze duplicate samples as defined in Sampling Table 01 45 25-1.

   e. Contractor shall analyze each sample for Total Cadmium and Total Chromium, and report results on dry weight basis. Analysis shall be standard EPA Method, as approved by the DEPARTMENT. The detection limit for cadmium shall be a maximum of 0.05 ppm and 0.1 ppm for chromium.

   f. Analyses shall be completed, and final results reported within 24 hours of sampling.

   g. Objective is to verify that the material containing cadmium and chromium has been removed to acceptable levels (1 ppm for cadmium and 43 ppm for chromium) stipulated in the Records of Decision (ROD) for OU3 and OU4.

   h. Analytical report shall include Category B deliverables per NYSDEC ASP.

   i. If the confirmation sample exceeds 1 ppm cadmium or 43 ppm chromium, the quadrant where the exceedance was detected shall be re-dredged by Contractor with the additional production pass determined by
the depth of exceedance, 12 inches (if the 0 to 6-inch sample exceeds) or 24 inches (if the 12- to 24-inch sample exceeds). If the 0 to 6-inch sample is below 1 ppm cadmium or 43 ppm chromium, the quadrant can be closed.

j. Following the second production pass (if required) the Contractor shall collect and composite three surface samples (0-6-inches) spaced throughout the quadrant.

k. Composite sample results will be analyzed on a 24-hr turnaround time and results compared to the acceptable level of 1 ppm cadmium and 43 ppm chromium.

l. If the confirmation sample exceeds 1 ppm cadmium or 43 ppm chromium, a clean-up pass shall be conducted to remove remaining residuals.

m. The contractor shall collect a composite sample following the clean-up pass (composite of three surface samples spaced throughout the quadrant). If contamination remains following the clean-up pass 12 inches of backfill as part of site restoration will be placed over the entire area and the area will be closed.

n. The CONTRACTOR’s means and methods shall in no way impede additional removal which may be required/directed by the ENGINEER.

2. Bound Areas - Confirmation Sampling to Address Generated Residuals

a. Contractor shall collect confirmatory samples at locations specified by ENGINEER after the grade limits are reached to determine if Additional Dredging is necessary as shown in the decision matrix provided as attachment 3 of this specification. All confirmatory sampling will be done in accordance with the Contract Drawings or as directed by the ENGINEER.

b. All sampling shall be done before any turbidity barrier is relocated.

c. Following removal in a grid cell (100 ft X 100 ft), five surface samples (0-6-inches) and three to four samples (0-6-inches) in grids less than (100 ft x 100ft) shall be spaced throughout the grid cell and composited from the completed grid cell (as shown in Contract Drawings). Sample locations shall be approved by the ENGINEER.

d. Contractor shall collect and analyze duplicate samples as defined in Sampling Table 01 45 25-1.

e. Contractor shall analyze each sample for Total Cadmium and Total Chromium, and report results on dry weight basis. Analysis shall be standard EPA Method as approved by the DEPARTMENT. The detection limit for cadmium shall be a maximum of 0.05 ppm and 0.1 ppm for chromium.
f. Analyses shall be completed, and final results reported within 24 hours of sampling.

g. Objective is to verify that the material containing cadmium has been removed to acceptable levels (1 ppm for cadmium and 43 ppm for chromium) as stipulated in the Record of Decision (ROD) for the Site.

h. Analytical report shall include Category B deliverables per NYSDEC ASP.

i. If sample results exceed 1 ppm cadmium or 43 ppm chromium, a clean-up pass shall be conducted to remove remaining residuals.

j. Following the clean-up pass, post-dredge samples will be collected. If contamination remains in that final post-dredge sample(s), 12 inches of backfill contributing to restoration will be placed over the entire area and the area will be closed.

k. The CONTRACTOR’s means and methods shall in no way impede additional removal which may be required/directed by the ENGINEER.

3. All sediment confirmation samples for Lake Capri shall be labeled in accordance with the following naming convention:

   1) The bottom sediment samples in Lake Capri shall follow “Type(BSD)-Location(LCXX)-Number(Y)” scheme, where
      a) Type: ‘BSD’ = bottom sediment
      b) Location: ‘LC’ = sediment removal in Lake Capri, where ‘XXX’ = grid ID (For example, A12, B04, etc.)
      c) Number: ‘Y’ = number of sample in each quadrant (e.g. 1, 2, 3, etc.)

      For example, BSD-LCA12-01

4. All re-confirmation samples collected following further dredging due to a failed confirmation sample shall use similar convention as above for bottom but will include the re-confirmation number at the end of the sample ID as follows:

   Type(BSD)-Location(LCXXX)-Number(Y)-Re-confirmation sampling number (RYY)

   a. Re-confirmation sampling number: ‘RYY’ = consecutive numbers for additional sampling (for example, 01 for initial, and R01 for second confirmation sampling)

      For example, BSD-LCA12-R01

F. Post-Excavation Confirmatory Testing in Hotspot Areas– Willetts Creek

1. Hotspot areas - Confirmation Sampling to Address Potential Undredged Inventory
Contractor shall collect confirmatory samples at hotspot locations specified by ENGINEER after the required sediment is removed to determine if additional excavation is necessary. All confirmatory sampling will be done in ENGINEER’s presence, and under direction of ENGINEER.

All sampling shall be done before creek diversion and turbidity barrier is relocated.

Following removal in hotspot areas, generally between stationing 7+00 and 8+10, samples shall be collected for every 900 square feet of bottom area (approximately 5 samples) as shown in the Drawings and as directed by the ENGINEER.

Collect bottom grab samples with a small hand auger from the top six inches of the exposed excavation bottom surface.

The sample location shall be staked for future reference until analytical results are reviewed by the ENGINEER. Properly labeled and dated splits of the grab samples shall be given to ENGINEER upon request.

Contractor shall analyze each sample for Total Cadmium and Total Chromium, and report results on dry weight basis. Analysis shall be standard EPA or DEC methods, as approved by the DEPARTMENT. The detection limit for cadmium shall be a maximum of 0.05 ppm and 0.1 ppm for chromium per Generic Quality Assurance Project Plan.

Contractor shall collect and analyze duplicate samples as defined in Sampling Table 01 45 25-1.

Analyses shall be completed, and final results reported within 24 hours of sampling. Objective is to verify that the material containing cadmium has been removed to acceptable level of 1 ppm and 43 ppm for chromium. Confirmation sample analytical results reporting contaminant concentration values less than acceptable levels verifies that the sediment cleanup is complete. If results are greater than or equal to the acceptable level, it indicated that the sediment excavation limit has not been achieved and additional excavation of sediment surrounding the failed sample location will be conducted and the following steps shall be taken:

Excavate 1-ft of sediment from a 900-sf area (33 CY) surrounding the failed sample location. The CONTRACTOR’s means and methods shall in no way impede additional removal which may be required/directed by the ENGINEER. No more than two additional confirmation samples (three totals including the initial sample) shall be collected from each 900-sf area. Failure to meet the lower limit of SGV (1 ppm for cadmium and 43 ppm for chromium) after the third confirmation sample would require placement of 12 inch backfill materials.
2. All sediment confirmation samples shall be labeled in accordance with the following naming convention:

1) The bottom sediment samples in Willetts Creek shall follow “Type(BSD)-Location(WCXX+XX)-Number(YY)” scheme, where
   a) Type: ‘BSD’ = bottom sediment
   b) Location: ‘WC’ = sediment removal in Willetts Creek hotspot area; XX = the Willetts Creek station number associated with the sampling location (For example, 08,42 etc.)
   c) Number: ‘YY’ = the number of sample within any given station

For example,
BSD-WC08+42-01

3. All re-confirmation samples be collected following further excavation due to a failed confirmation sample shall use similar convention as above for bottom but will include the re-confirmation number at the end of the sample ID as follows:

“Type(BSD)-Location(LCXX)-Number(YY)-Re-confirmation sampling number (WW)”
   a. Re-confirmation sampling number: ‘WW’ = consecutive numbers for additional sampling (for example, 01 for initial, and 02 for second confirmation sampling)

For example,
BSD-WC08-02-01

G. Remediation Waste Characterization Sample Collection
1. Remediation Waste, Hazardous and Non-Hazardous, as defined in Section 35 20 23- DREDGING, generated during execution of Work shall be stored/stockpiled within designated separate storage/stockpile areas and as agreed upon with the ENGINEER.

2. Contractor shall collect and analyze samples from the stockpile of dredged or excavated material prior to excavation in accordance with requirements of the approved Disposal Facility and the applicable State and Federal requirements. Contractor shall include the Disposal Facility’s sampling and analytical requirements into the QAPP. Contractor shall provide a copy of analytical results to ENGINEER prior to transporting sediments.

H. Backfill (for upland, wetland, parking lot, and shoreline) and Topsoil Material Testing
1. As specified in Table 5.4(e) of the DER-10 and in the Sampling Table 01 45 25 - 1, Contractor shall analyze two composite samples (for SVOCs, Inorganics, & PCBs/Pesticides) for the first 1000 cy and an additional one for each additional 1000 cy and seven grab samples (for VOCs) for the first 1000 cy and an additional two for each additional 1000 cy of the common fill and topsoil material from a DOT-approved or commercial aggregate facility or quarry approved by the DEPARTMENT. Contractors shall analyze these samples prior to delivery of the materials to the Site for proposed use in the upland, wetland
and at the base of the lake perimeter bulkheads to verify that the material is not contaminated with environmentally deleterious components. Analysis shall be full NYSDEC ASP Target Compound List (TCL) and Target Analyte List (TAL) analyzed per CLP.

2. Contractor shall name the source, identify its location, indicate owner’s name, present a signed certification that the material is not contaminated, describe the sampling method and date, and present analytical results to ENGINEER for approval before bringing the material onsite.

3. Failure to meet these requirements may result in rejection of the material for onsite use at Contractor’s expense.

4. The Contractor shall collect discrete and composite samples from the volume of source of backfill and restoration material for geotechnical properties testing and analytical testing in accordance with Sampling Table 01 45 25-1 and Section 00201 – BACKFILL. Composite samples shall be collected for SVOCs, Inorganics, and PCBs/Pesticides from 5 random locations from the volume of source of backfill and restoration material. Samples shall be analyzed in compliance with Sampling Table 01 45 25-1. Samples shall be analyzed for geotechnical properties in accordance with Section 00201 – BACKFILL. Sampling results shall be submitted to the ENGINEER prior to use of fill and restoration materials onsite.

I. Other

1. Other sampling and testing required by ENGINEER during the Work, such as characterization of new and used construction materials and verification that the restored subgrade in the former work areas and decontaminated equipment are not contaminated, is specified elsewhere or will be managed on a case-by-case basis during construction.

END OF SECTION
<table>
<thead>
<tr>
<th>Waste Characterization: Sample Collection</th>
<th>Analytical Method</th>
<th>Sample Type</th>
<th>Sample Frequency</th>
<th>QA/QC Frequency</th>
<th>Required Turn Around Time</th>
<th>Level of Reporting</th>
<th>Data Validation Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remediation Waste (Hazardous and Non-</td>
<td>SW-940</td>
<td>Grab</td>
<td>As required by Destination Facility</td>
<td>One Trip Blank per Shipment</td>
<td>5 Day</td>
<td>NYS Category A</td>
<td>None</td>
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<td>Remediation Waste (Non-Hazardous)</td>
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<tr>
<td>Construction Waste</td>
<td>SW-846</td>
<td>Grab</td>
<td>As required by Destination Facility</td>
<td>One per 20 samples</td>
<td>24 Hour</td>
<td>NYS Category A</td>
<td>None</td>
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<tr>
<td>Remedial Soil and Sediment</td>
<td>SW-846</td>
<td>Grab</td>
<td>Those per 100 cubic yard</td>
<td>Duplicate/MS/MSD</td>
<td>24 Hour</td>
<td>NYS Category A</td>
<td>None</td>
</tr>
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</table>

**Characterization Decontamination and Stockpile Pad Samples**:  
As required by Destination Facility | A | None |

**Treated Discharge/Water Samples**:  
As required by Destination Facility | A | None |

1. Turn-Around-Time is the amount of time between submittal of samples to the analytical laboratory and receipt of analytical results.  
2. Standard level of reporting shall consist of a summary of laboratory results; laboratory 3-Sigma QC results; and a copy of the chain-of-custody submitted to the laboratory with the samples.  
3. Treated water discharge monitoring frequency and parameters are based on 1999 Dzus Contract Documents for Class C permitting. The frequency and parameters are subject to change based on the State Pollutant Discharge Elimination System (SPDES) permit.  
4. Notes:  
   - NYS = New York State  
   - EPA = U.S. Environmental Protection Agency  
   - MS = Matrix spike  
   - MSD = Matrix spike duplicate  
   - DER-10 = Technical Guidance for Site Investigation and Remediation  
   - N/A = Not applicable
### Table 01 45 25-2

**Generic Effluent Criteria for Surface Water Discharges**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CAS No.</th>
<th>Limitations Daily Max.</th>
<th>Units</th>
<th>Measurement Frequency</th>
<th>Sample Type</th>
<th>FN</th>
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</thead>
<tbody>
<tr>
<td><strong>Outfall 001, 002, and 003 – Treated water from excavation and dredging activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>NA</td>
<td>Monitor</td>
<td>GPD</td>
<td>Continuous Recorder</td>
<td></td>
<td></td>
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<tr>
<td>pH (range)</td>
<td>NA</td>
<td>6.5 – 8.5</td>
<td>SU</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Oil and Grease</td>
<td>NA</td>
<td>15</td>
<td>mg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td><strong>BOD, 5-day</strong></td>
<td>NA</td>
<td>5</td>
<td>mg/l</td>
<td>1</td>
<td>Grab</td>
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<tr>
<td>Solids, Total Suspended</td>
<td>NA</td>
<td>10</td>
<td>mg/l</td>
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<td>Grab</td>
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<tr>
<td>Solids, Total Dissolved</td>
<td>NA</td>
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<td>mg/l</td>
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<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>5.3</td>
<td>µg/l</td>
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<td>Grab</td>
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<td>Acenaphthylene</td>
<td>208-96-8</td>
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<td>Acetaldehyde</td>
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<td>Acetone</td>
<td>67-64-1</td>
<td>100</td>
<td>µg/l</td>
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<tr>
<td>Acrolein</td>
<td>107-02-8</td>
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<td>µg/l</td>
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<tr>
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<td>79-06-1</td>
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<td>µg/l</td>
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<td>79-10-7</td>
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<td>µg/l</td>
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<tr>
<td>Acrylonitrile</td>
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<td>µg/l</td>
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<td>Aldicarb</td>
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<td>Aldicarb sulfone</td>
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<td>µg/l</td>
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<td>Aldicarb sulfoxide</td>
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<td>Alkyl dimethyl benzyl ammonium chloride</td>
<td>68391-01-5</td>
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<td>µg/l</td>
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<tr>
<td>Alkyl diphenyl oxide sulfonates</td>
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<tr>
<td>Alkyl chloride</td>
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<td>Aluminum, Ionic</td>
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<td>Anilines</td>
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<td>Aminocresols</td>
<td>95-84-1; 2835-95-2; 2835-99-6</td>
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<td>Aminomethylene phosphonic acids salts</td>
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<td>50*</td>
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<td>* applies to each aminomethylene phosphonic acid salt individually</td>
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<td>Aminopyridines</td>
<td>462-08-8; 504-24-5; 504-29-0; 26445-05-6</td>
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<td>* applies to sum of these substances</td>
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<tr>
<td>3-Aminotoluene</td>
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<td>µg/l</td>
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<td>µg/l</td>
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<td>Anthracene</td>
<td>120-12-7</td>
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<td>µg/l</td>
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<td>µg/l</td>
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<td>Grab</td>
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<td>* applies to each aryltiazole individually</td>
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<td>Fibers/L</td>
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<td>Atrazine</td>
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<td>Azinphosmethyl</td>
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<tr>
<td>Azobenzene</td>
<td>103-33-3</td>
<td>0.5</td>
<td>µg/l</td>
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<tr>
<td>Barium</td>
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<td>µg/l</td>
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<tr>
<td>Benzo(a)anthracene</td>
<td>56-53-3</td>
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<td>µg/l</td>
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<tr>
<td>Benzene</td>
<td>71-43-2</td>
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<td>µg/l</td>
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<td>Benzenoazoiline</td>
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<tr>
<td>Benzo(a)anthracene</td>
<td>271-61-4</td>
<td>50</td>
<td>µg/l</td>
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<tr>
<td>Benzofluoranthenes</td>
<td>205-09-2</td>
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<td>µg/l</td>
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<td>Grab</td>
<td>2</td>
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<tr>
<td>Benzo(k)fluoranthenes</td>
<td>207-08-9</td>
<td>0.02</td>
<td>µg/l</td>
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<td>Grab</td>
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<tr>
<td>Benzofuran</td>
<td>50-32-8</td>
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<td>Grab</td>
<td>2</td>
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<td>Benzofuranisothiole</td>
<td>191-24-2</td>
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<td>µg/l</td>
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<tr>
<td>Beryllium</td>
<td>NA</td>
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<tr>
<td>1-1’-Biphenyl</td>
<td>92-52-4</td>
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<td>µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Bis(2-chloroethoxy)methane</td>
<td>111-91-1</td>
<td>5</td>
<td>µg/l</td>
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<td>Grab</td>
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<tr>
<td>Bis(2-chloroethyl)ether</td>
<td>111-44-4</td>
<td>0.03</td>
<td>µg/l</td>
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<td>Bis(chloromethyl)ether</td>
<td>542-88-1</td>
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<td>µg/l</td>
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<td></td>
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<tr>
<td>Bis(2-chloro-1-methyl)ether</td>
<td>108-60-1</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Bis(2-ethyl)phthalate</td>
<td>117-87-7</td>
<td>8</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
<td>2</td>
</tr>
<tr>
<td>Boric acid, Borates &amp; Metaborates</td>
<td>NA</td>
<td>125*</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
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<tr>
<td>* applies to the sum of these substances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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### Table 01 45 25 -2

**Generic Effluent Criteria for Surface Water Discharges**

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<thead>
<tr>
<th>Parameters</th>
<th>CAS No.</th>
<th>Limitations Daily Max.</th>
<th>Units</th>
<th>Minimum Monitoring Requirements</th>
<th>FN</th>
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<tr>
<td>Outfall 001, 002, and 003 – Treated water from excavation and dredging activities</td>
<td></td>
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<tr>
<td>Boron</td>
<td>NA</td>
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<tr>
<td>Bromide</td>
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<td>2,000 µg/l</td>
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<tr>
<td>Bromobenzene</td>
<td>108-86-1</td>
<td>5 µg/l</td>
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<tr>
<td>Bromochloromethane</td>
<td>74-97-5</td>
<td>5 µg/l</td>
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<td>Bromo dichloromethane</td>
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<td>Bromoform</td>
<td>75-25-2</td>
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<td>n-Butanol</td>
<td>71-36-3</td>
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<tr>
<td>cis-2-Butenal</td>
<td>15798-64-8</td>
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<td>trans-2-Butenyl</td>
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<td>Butoxypropyl ether</td>
<td>5131-66-8</td>
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<td>Butyl benzyl phthalate</td>
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<tr>
<td>Cadmium</td>
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<td>Carboxin</td>
<td>5234-68-4</td>
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<tr>
<td>Chloranil</td>
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<td>50 µg/l</td>
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<td>118-75-2</td>
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<tr>
<td>Chloralane</td>
<td>57-74-9</td>
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<td>Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans</td>
<td>NA</td>
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<td>Chlorine, Total Residual</td>
<td>NA</td>
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<td>95-51-2</td>
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<td>3-Chloroaniline</td>
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<td>Chlorobenzene</td>
<td>108-00-7</td>
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<td>Chloromethyl methyl ether</td>
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<td>2-Chloronaphthalene</td>
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<td>2-Chloronitrobenzene</td>
<td>88-73-3</td>
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<td>4-Chloronitrobenzene</td>
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<tr>
<td>4-Chloro-o-toluidine</td>
<td>95-69-2</td>
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<td>5-Chloro-o-toluidine</td>
<td>95-79-4</td>
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<td>460-35-5</td>
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<td>50 µg/l</td>
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<tr>
<td>Cobalt</td>
<td>NA</td>
<td>5 µg/l</td>
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<td></td>
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<tr>
<td>Copper</td>
<td>NA</td>
<td>* µg/l</td>
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<td>Grab</td>
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<tr>
<td>Cyanide (PQL)</td>
<td>NA</td>
<td>1.0 µg/l</td>
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<td>Sum of HCN and CN, expressed as CN</td>
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<td>Cyanogen bromide</td>
<td>506-68-3</td>
<td>5 µg/l</td>
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<tr>
<td>Cyanogen chloride</td>
<td>506-77-4</td>
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</table>
Table 01 45 25 -2

**Generic Effluent Criteria for Surface Water Discharges**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CAS No.</th>
<th>Limitations Daily Max.</th>
<th>Units</th>
<th>Minimum Monitoring Requirements</th>
<th>FN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalapon</td>
<td>NA</td>
<td>50* µg/l</td>
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<td>1 Grab</td>
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<tr>
<td>* Includes related forms that convert to the organic acid upon acidification to a pH of 2 or less; and esters of the organic acid</td>
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<tr>
<td>p,p'-DDD</td>
<td>72-54-8</td>
<td>0.02 µg/l</td>
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<td>p,p'-DDE</td>
<td>72-55-9</td>
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<td>p,p'-DDT</td>
<td>50-29-3</td>
<td>0.05 µg/l</td>
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<td>Dechlorane Plus</td>
<td>13560-89-9</td>
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<td>Demeton</td>
<td>8065-48-3; 298-03-3; 126-75-0</td>
<td>0.1 µg/l</td>
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<td>1 Grab</td>
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<td>FN: apply to the sum of these substances</td>
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<td>Diazinon</td>
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<td>Dibenzo(a,h) anthracene</td>
<td>53-70-3</td>
<td>0.1 µg/l</td>
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<td>1,2-Dibromobenzene</td>
<td>583-53-9</td>
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<td>1,4-Dibromobenzene</td>
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<td>Dibromochloromethane</td>
<td>124-48-1</td>
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<td>1,2-Dibromo-3-chloropropane</td>
<td>96-12-8</td>
<td>0.04 µg/l</td>
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<tr>
<td>Dibromochloromethane</td>
<td>594-18-3</td>
<td>5 µg/l</td>
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<td>Dibromomethane</td>
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<td>Di-n-butyl phthalate</td>
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<tr>
<td>Dichlorobenzenes</td>
<td>95-50-1; 541-73-1; 106-46-7</td>
<td>3* µg/l</td>
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<td>* applies to each isomer (1,2-, 1,3- and 1,4-dichlorobenzene) individually.</td>
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<td>3,3'-Dichlorobenzidine</td>
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<td>cis-1,4-Dichloro-2-butene</td>
<td>1476-11-5</td>
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<td>trans-1,4-Dichloro-2-butene</td>
<td>110-57-6</td>
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<td>trans-1,2-Dichloroethene</td>
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<td>*See limit for Phenolic compounds (total phenols)</td>
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<td>2,4-Dichlorophenoxyacetic acid</td>
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<td>Diethyl phthalate</td>
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<td>N,N-Dimethylameline</td>
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<tr>
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<tr>
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<td>1 Grab</td>
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<tr>
<td>2,6-Dimethylameline</td>
<td>87-62-7</td>
<td>5 µg/l</td>
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<td>1 Grab</td>
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</tr>
</tbody>
</table>

**Notes:**
- FN: Frequency Number
- Measurement Frequency refers to the frequency of measurement required for compliance monitoring.
<table>
<thead>
<tr>
<th>Parameters</th>
<th>CAS No.</th>
<th>Limitations Daily Max.</th>
<th>Units</th>
<th>Minimum Monitoring Requirements</th>
<th>FN</th>
</tr>
</thead>
<tbody>
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<td>95-64-7</td>
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<td>µg/l</td>
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<td>Grab</td>
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<td>3.5-Dimethylaniline</td>
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<td>µg/l</td>
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<td>Grab</td>
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<td>4.3.-Dimethylbenzidine</td>
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### Table 01 45 25-2

**Parameters**

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<th>Units</th>
<th>Minimum Monitoring Requirements</th>
<th>FN</th>
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<td>8.2</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Nitrate</td>
<td>NA</td>
<td>10,000</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Nitrate and Nitrite (as N)</td>
<td>NA</td>
<td>10,000</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Nitritotriacetic acid</td>
<td>NA</td>
<td>3*</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>*Includes realted forms that convert to nitritotriacetic acid upon acidification to a pH of 2.3 or less</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Nitrite (as N)</td>
<td>NA</td>
<td>1,000</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>2-Nitroaniline</td>
<td>88-74-4</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>3-Nitroaniline</td>
<td>99-09-2</td>
<td>5</td>
<td>µg/l</td>
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<tr>
<td>4-Nitroaniline</td>
<td>100-01-6</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Nitrobenzene</td>
<td>98-95-3</td>
<td>0.4</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>N-Nitrosodiphenylamine</td>
<td>86-30-6</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>2-Nitrotoluene</td>
<td>88-72-2</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>3-Nitrotoluene</td>
<td>99-08-1</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>4-Nitrotoluene</td>
<td>99-99-0</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>5-Nitro-o-toluidine</td>
<td>99-55-8</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Octachlorostyrene</td>
<td>29082-74-4</td>
<td>6 x 10^6</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Oxanil</td>
<td>23125-22-0</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Parathion</td>
<td>56-38-2</td>
<td>0.065</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Parathion and Methyl parathion ** Applies to the sum of these substances. For the waters of the Great Lakes System, the Department will substitute a guidance value for the aquatic Type standard if so determined under 702 15 ( )</td>
<td>5638-2; 298-00-0</td>
<td>0.008**</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>*</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>* See limit for Phenolic Compounds (total phenols)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Phenolic compounds – Total Phenols ** Applies to the sum of these substances</td>
<td>NA</td>
<td>8</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>28</td>
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<tr>
<td>Phenols, total chlorinated ** See limit for Phenolic Compounds (total phenols)</td>
<td>NA</td>
<td>*</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Phenols, total unchlorinated ** See limit for Phenolic Compounds (total phenols)</td>
<td>NA</td>
<td>*</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>1,2-Phenylenediamine</td>
<td>95-54-5</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>1,3-Phenylenediamine</td>
<td>108-45-2</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>1,4-Phenylenediamine</td>
<td>108-45-2</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>Phenyl ether</td>
<td>101-84-8</td>
<td>10</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Phenylhydrazine</td>
<td>100-63-0</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Phenylpropanolamine</td>
<td>14838-15-4</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>3-Phenyl-1-propene</td>
<td>637-50-3</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>cis-1-Phenyl-1-propene</td>
<td>766-90-5</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>trans-1-Phenyl-1-propene</td>
<td>873-66-5</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Phosphorus</td>
<td>NA</td>
<td>20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Picloram</td>
<td>NA</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Polychlorinated biphenyls ** Applies to each congener individually</td>
<td>NA</td>
<td>5*</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>PCB-1016</td>
<td>12674-11-2</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
</tr>
<tr>
<td>PCB-1221</td>
<td>11104-28-2</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
</tr>
<tr>
<td>PCB-1232</td>
<td>11141-16-5</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
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<tr>
<td>PCB-1242</td>
<td>53469-21-9</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
</tr>
<tr>
<td>PCB-1248</td>
<td>12672-29-6</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
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<tr>
<td>PCB-1254</td>
<td>11097-69-1</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
</tr>
<tr>
<td>PCB-1260</td>
<td>11096-82-5</td>
<td>0.20</td>
<td>µg/l</td>
<td>1 Grab</td>
<td>23</td>
</tr>
<tr>
<td>Prometon</td>
<td>1610-18-0</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Propham</td>
<td>122-42-9</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>n-Propylbenzene</td>
<td>103-65-1</td>
<td>5</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
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<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>1000</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>4.6</td>
<td>µg/l</td>
<td>1 Grab</td>
<td></td>
</tr>
<tr>
<td>Pyridine</td>
<td>110-86-1</td>
<td>50</td>
<td>µg/l</td>
<td>1 Grab</td>
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<tr>
<td>Parameters</td>
<td>CAS No.</td>
<td>Limitations Daily Max.</td>
<td>Units</td>
<td>Minimum Monitoring Requirements</td>
<td>FN</td>
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<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------</td>
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<td>-------</td>
<td>-------------------------------</td>
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<tr>
<td>Quaternary ammonium compounds (including dimethyl benzyl ammonium chloride &amp; dimethyl ethyl benzyl ammonium chloride)</td>
<td>NA</td>
<td>10* µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Selenium</td>
<td>NA</td>
<td>4.6 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Silver, Total</td>
<td>NA</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Simazine</td>
<td>122-34-9</td>
<td>0.5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Sulfate</td>
<td>NA</td>
<td>250,000 µg/l</td>
<td>1</td>
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<td></td>
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<tr>
<td>Sulfides, Total</td>
<td>NA</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Tetrabutiluron</td>
<td>34014-18-1</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Terbufos</td>
<td>13071-79-9</td>
<td>100 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Tetrachlorobenzens</td>
<td>636-66-2; 634-90-2; 95-94-3; 12408-10-5</td>
<td>5* µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>1,1,1,2-Tetrachloroethane</td>
<td>630-20-6</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<tr>
<td>Tetrachloroethene</td>
<td>79-34-5</td>
<td>0.2 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>alpha, alpha, alpha, 4-Tetrachlorotoluene</td>
<td>5216-25-1</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Tetrahydrofuran</td>
<td>109-09-9</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>1,2,3,4-Tetramethylbenzene</td>
<td>488-23-3</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>1,2,3,5-Tetramethylbenzene</td>
<td>527-53-7</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>95-93-2</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>Thallium</td>
<td>NA</td>
<td>0.5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>Theophylline</td>
<td>58-55-9</td>
<td>40 µg/l</td>
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<tr>
<td>Toluene</td>
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<td>1</td>
<td>Grab</td>
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<td>Toluene-2,4-diamine</td>
<td>95-80-7</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>Toluene-2,5-diamine</td>
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<td>Grab</td>
<td></td>
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<td>823-40-5</td>
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<td>Grab</td>
<td></td>
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<tr>
<td>o-Toluidine</td>
<td>95-53-4</td>
<td>0.6 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Tolvatriazole</td>
<td>29385-43-1</td>
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<td>Grab</td>
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<td>Toxaphene</td>
<td>8001-35-2</td>
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<td>1</td>
<td>Grab</td>
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<tr>
<td>1,2,4-Trichlorobenzene</td>
<td>615-54-3</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Tributyltin oxide</td>
<td>56-35-9</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>2,4,6-Trichloronitrobenzene</td>
<td>634-93-5</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>Trichlorobenzens</td>
<td>87-61-6; 120-82-1; 108-70-3; 12002-48-1</td>
<td>5* µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>71-55-6</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>1,1,2-Trichloroethane</td>
<td>79-00-5</td>
<td>1 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>Trichloroethene</td>
<td>79-01-6</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>Trichlorofluoromethane</td>
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<td>Grab</td>
<td></td>
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<td>2,4,5-Trichlorophenoxypropionic acid</td>
<td>93-72-1</td>
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<td>1,1,2-Trichloropropane</td>
<td>598-77-6</td>
<td>5 µg/l</td>
<td>1</td>
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<td></td>
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<td>1,2,3-Trichloropropane</td>
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<td>cis,1,2,3-Trichloropropene</td>
<td>13116-57-9</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>trans,1,2,3-Trichloropropene</td>
<td>13116-58-0</td>
<td>5 µg/l</td>
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<td>alpha,2,4-Trichlorotoluene</td>
<td>94-99-5</td>
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<td>2014-83-7</td>
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<td>alpha,3,4-Trichlorotoluene</td>
<td>102-47-6</td>
<td>5 µg/l</td>
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<td>Grab</td>
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<tr>
<td>alpha, alpha,2-Trichlorotoluene</td>
<td>88-66-4</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>alpha, alpha,4-Trichlorotoluene</td>
<td>13940-94-8</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>2,3,4-Trichlorotoluene</td>
<td>7359-72-0</td>
<td>0.34 µg/l</td>
<td>1</td>
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<td></td>
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<tr>
<td>2,3,5-Trichlorotoluene</td>
<td>56961-86-5</td>
<td>0.34 µg/l</td>
<td>1</td>
<td>Grab</td>
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<td>2077-46-5</td>
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<td>1</td>
<td>Grab</td>
<td></td>
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<tr>
<td>2,4,5-Trichlorotoluene</td>
<td>6639-30-1</td>
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<td>2,4,6-Trichlorotoluene</td>
<td>23749-65-7</td>
<td>0.34 µg/l</td>
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<tr>
<td>1,1,1-Trichloro-2,2,2-trifluoethane</td>
<td>354-58-5</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>1,1,2-Trichloro-1,2,2-trifluoethane</td>
<td>76-13-1</td>
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<td>1</td>
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<td>1,2,3-Trimethylbenzene</td>
<td>526-73-8</td>
<td>5 µg/l</td>
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<td>Grab</td>
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<td>95-63-6</td>
<td>5 µg/l</td>
<td>1</td>
<td>Grab</td>
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<tr>
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<td>Grab</td>
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<td>2,3,6-Trimethylpyridine</td>
<td>1462-84-6</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
<tr>
<td>2,4,6-Trimethylpyridine</td>
<td>108-75-8</td>
<td>50 µg/l</td>
<td>1</td>
<td>Grab</td>
<td></td>
</tr>
</tbody>
</table>
### Table 01 45 25 -2

#### Generic Effluent Criteria for Surface Water Discharges

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CAS No.</th>
<th>Limitations Daily Max.</th>
<th>Units</th>
<th>Minimum Monitoring Requirements</th>
<th>FN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outfall 001, 002, and 003 – Treated water from excavation and dredging activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sym-Trinitrobenzene</td>
<td>99-35-4</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>2,3,4-Trinitrotoluene</td>
<td>602-29-9</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>2,3,6-Trinitrotoluene</td>
<td>18292-97-2</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>2,4,5-Trinitrotoluene</td>
<td>610-25-3</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>2,4,6-Trinitrotoluene</td>
<td>118-96-7</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>3,4,5-Trinitrotoluene</td>
<td>603-15-6</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>Triphenyl phosphate</td>
<td>115-86-6</td>
<td>4</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>Vanadium</td>
<td>NA</td>
<td>14</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>Vinyl chloride</td>
<td>75-01-4</td>
<td>2</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>1,2-Xylene</td>
<td>95-47-6</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
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<tr>
<td>1,3-Xylene</td>
<td>108-38-3</td>
<td>5</td>
<td>µg/l</td>
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<td>Grab</td>
</tr>
<tr>
<td>1,4-Xylene</td>
<td>106-42-3</td>
<td>5</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
<tr>
<td>Zinc</td>
<td>NA</td>
<td>66</td>
<td>µg/l</td>
<td>1</td>
<td>Grab</td>
</tr>
</tbody>
</table>

**NOTES:**

1. Samples must be collected prior to each discharge event. Discharge may not commence until the sample results show compliance with the above discharge limitations.
2. Discharge limit is set at the Practical Quantitation Limit (PQL). Actual surface water effluent standard/limitation is below this limit. Analysis of this parameter shall be of the most stringent USEPA approved method in accordance with 40 CFR 136.
3. For PCBs:
   a. The treatment plant operator must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve a Minimum Detection Level (MDL) of 0.065 µg/l.
   b. 0.065 µg/l is the discharge goal. The treatment plant operator shall report all values above the MDL (0.065 µg/l per Aroclor). If the level of any Aroclor is above 0.65 µg/l, the treatment must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge.
   c. If the Department determines that effluent monitoring results above can be prevented by implementation of additional measures as proposed by the treatment plant operator in footnote 3.b above, and approved by the Department, the treatment plant operator shall implement such additional measures.
4. The water quality based effluent limit for mercury is 7 x 10^-4 µg/l. The enforceable limit is set at 0.05 µg/l for the purposes of compliance. The enforceable limit maybe revised in the future if DEC determines another limit is more appropriate. Mercury must be analyzed using USEPA Method 1631.
5. Only waters generated at remediation sites during sampling, pump tests, well development, or dewatering of excavations are authorized for treatment and discharge.
6. Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the holding tank prior to discharge to the receiving water.
7. Discharge is not authorized until such time as an engineering submission showing the method of treatment and discharge is approved by the Department. The discharge rate may not exceed the effective treatment system or ground adsorptive capacity. All monitoring data, engineering submissions and modification requests must be submitted to the following DER contact person: (To be specified at a later time)
8. Total phenolics must be analyzed using EPA Methods 420.1 or 420.2.
Dredge to design elevation targets

Bathymetric survey of dredge area

Have target elevations been met?

Yes

No

Is the grid cell bound or unbound?

Unbound

Bound

Is the grid cell less than 100-ft. x 100-ft.?

Yes

No

Collect a two-foot post-dredge core from the center of each quadrant (4 locations in each grid cell)

Collect three to four post-dredge 0-6 in. samples spaced throughout the grid cell and composite into one sample

Chemical analysis for Total Cadmium and Total Chromium

Is the sample above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Collect five post-dredge 0-6 in. samples spaced throughout the grid cell and composite into one sample

Is the 0-6-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Collect two samples (0-6 in. and 12-24-in.) from each core

Chemical analysis for Total Cadmium and Total Chromium

Is the confirmation sample above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Dredge area closed

Contractor will perform a “clean-up pass” to remove residuals

Collect post-dredge confirmation samples (spacing and number of samples consistent with initial post-dredge sampling)

Additional “production pass” excavation down to 24 inches

Collect and composite three surface samples (0-6 inches) spaced throughout the quadrant

Chemical analysis for Total Cadmium and Total Chromium

Is the 0-6-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Is the 12-24-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Additional 12 inch “production pass” excavation.

Is the 0-6-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Is this second “production pass”?

Yes

No

Place 12 inches of backfill contributing to restoration

Collect two samples (0-6- in. and 12-24-in.) from each core

Is the grid cell less than 100-ft. x 100-ft.?

Yes

No

Collect a two-foot post-dredge core from locations as shown in Contract Drawings

Is the 0-6-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Is the 12-24-inch interval above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Additional “production pass” excavation.

Is the grid cell 100-ft. x 100-ft.?

Yes

No

Collect a two-foot post-dredge core from the center of each quadrant (4 locations in each grid cell)

Collect two samples (0-6- in. and 12-24-in.) from each core

Chemical analysis for Total Cadmium and Total Chromium

Is the confirmation sample above RAOs of 1 ppm Cd or 43 ppm Cr?

Yes

No

Dredge area closed

Place 12 inches of backfill contributing to restoration

Note: Cd = Cadmium and Cr= Chromium

1 – Detection limits of a maximum 0.5 ppm for cadmium and 0.1 ppm for chromium, 24-hr results turn around.
2 – RAOs = Remedial Action Objectives.
3 – Sample numbers and locations as shown in Contract Drawings or as approved by the ENGINEER.
4 – Clean up pass extent and depth to be determined by contractor in consultation with Engineer as appropriate to reach RAOs on average throughout the grid cell.
5 – Production pass excavation depths are designed to remove remaining inventory in unbound areas.
6 – Bathymetric survey of post-dredge conditions.
Excavation to design elevation targets

Survey of Excavation area

Have target elevations been met?

Yes

No

Collect confirmation samples

Is the sample a sidewall sample or a bottom sample?

Sidewall

Bottom

Collect a sidewall grab sample from location as shown in Contract Drawings²

Is the sample along Willetts Creek or a Residential backyard?

Willetts Creek

Residential

Sample collected along limits of excavation⁷

Sample collected along perimeter of excavation⁸

Chemical analysis for Total Cadmium and Total Chromium⁴

Are the confirmation samples above RAOs⁵?

Yes

No

Is the bottom above groundwater table?

Yes

No

Excavate an additional 3-ft. from excavation extent, maintaining 2:1 slope

Excavate an additional 1-ft. of soil from a 900 sqft of 15ftx60ft (WxL) area surrounding sample location

Is this a third bottom confirmation sample?

Yes

No

Sidewall below RAO, bottom above RAO

Sidewall above RAO, bottom below RAO

Sidewall above RAO, bottom above RAO

Excavation area closed⁷

Place a barrier/demarcation layer

Place backfill materials as shown in the Contract Drawings

Is there an issue preventing expansion of the excavation limit⁶?

Yes

No

Is this a third SW confirmation sample for sidewall above RAO, bottom below RAO

Is this a third SW confirmation sample for sidewall above RAO, bottom above RAO

Excavate an additional 3-ft. from excavation extent, maintaining 2:1 slope and an additional 1-ft. of soil from the previously excavated bottom surface

¹ – Bottom samples collected from top 6-in. of exposed bottom surface at a rate of one sample per 900 ft of bottom area; sample locations and IDs as shown in Contract Drawings or as approved by the ENGINEER.

² – Sidewall samples collected 6-in. deep from the mid-point or above the groundwater table of each sidewall at a rate of one sample per 30 linear ft. of sidewall; sample locations and IDs as shown in Contract Drawings or as approved by the ENGINEER.

³ – Sidewall samples collected 6-in. deep from the mid-point or above the groundwater table of each sidewall at a rate of one sample per 30 linear ft. of sidewall (maintaining a minimum of one sample for each sidewall); sample locations and IDs as shown in Contract Drawings or as approved by the ENGINEER.

⁴ – Detection limits of a maximum 0.5 ppm for cadmium and 0.1 ppm for chromium; 24-hr results turn around.

⁵ – RAO – Remedial Action Objectives – OU-3: RAOs of 2.5 ppm Cd and 36 ppm Cr; OU-4: RAOs of 2.5 ppm Cadmium (Cd) and 30 ppm Chromium (Cr).

⁶ – Issues preventing excavation expansion include: site access, anomalous structure, or slope steeper than 26.5 degrees.

⁷ – Survey of post-excavation conditions
SECTION 01 74 24 - SITE RESTORATION

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Description
   2. Submittals
   3. Restoration of Willetts Creek Areas
   4. Restoration of Lake Capri
   5. Shoreline protection
   6. Restoration of asphalt areas
   7. Restoration of grassed areas.

B. Related sections:
   1. Section 32 12 16 ASPHALT PAVING
   2. Section 00203 SEED AND MULCH
   3. Section 00207 PLANTING
   4. Section 32 93 00 WETLAND PLANTING
   5. Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION.

1.2 DESCRIPTION

A. Upon completion of the work, Contractor shall be responsible for restoring all disturbed areas (work areas, access areas, staging areas, residential and school property excavation areas, and other areas as applicable) to original condition unless otherwise specified herein.

1.3 SUBMITTALS

A. Contractor shall submit documentation of the pre-construction condition of the site to the satisfaction of Engineer. Upon request of Engineer Contractor shall submit additional documentation. See also Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION.

B. Contractor shall submit and obtain Engineer’s approval for all materials prior to start of restoration.

C. Substantial completion certificate and inspection request.

D. Substantial completion punch list.

E. Final completion certificate and inspection request.

F. Record documents.

G. Storm sewer pipe and fitting shop drawings.
PART 2 – PRODUCTS

A. Class II reinforced concrete pipe manufactured in accordance with ASTM C76.

B. Type 1 corrugated metal pipe manufactured in accordance with ASTM A796 and installed in accordance with ASTM A798.

PART 3 – EXECUTION

3.1 RESTORATION OF WILLETTS CREEK AREAS

A. Areas graded for staging or placement of soils shall be maintained at level grades and seeded at the completion of work as specified in Section 00203 SEED AND MULCH and as approved by Engineer. Restoration plantings shall be installed per Sections 00207 PLANTING and 32 93 00 WETLAND PLANTING. All foundations and pads shall be removed and disposed by Contractor at no additional costs. Areas which may have come in contact with contaminated soils or water will be required to be tested for cadmium and chromium in accordance with Section 01 45 25 – TESTING and addressed as necessary at Contractor’s cost. Access routes to Willetts Creek excavation area shall be restored per the design drawings, which may include replacement of walkways, grading and seeding.

B. There are several storm sewers that discharge into Willetts Creek. Dredging activities will change where these pipes daylight through the streambank. As part of site restoration Contractor is responsible for relocating storm sewer discharge point 2 ft beyond new stream bank and install new flared-end section and rip rap outlet protection sized in accordance with Figure 3.18 of the New York State Standards and Specifications for Erosion and Sediment Control. Contractor is responsible for all material required to restore storm sewers.

C. Contractor shall install approximately 250 linear feet of 6 ft tall chain link fence (Section 00020 FENCES) at the northern end of the Middle School athletic field as a barrier between the Middle School property and the plaza.

3.2 RESTORATION OF LAKE CAPRI

A. Areas around the Lake, Lagoon, and Willetts Creek are to be restored per the design drawings. Areas shall be brought to proper grade and reseeded to prevent erosional conditions. as specified in Section 00203 SEED AND MULCH and as required by Engineer. Restoration plantings shall be installed per Sections 00207 PLANTING and 32 93 00 WETLAND PLANTING. Areas which may have come in contact with contaminated soils or water will be required to be tested for cadmium and chromium in accordance with Section 01 45 25 – TESTING and addressed as necessary at Contractor’s cost.

3.3 SHORELINE PROTECTION

A. Contractor shall replace any existing shoreline protection rip rap or structures that are moved or disrupted by Contractor, at no additional expense to the Department. Details for replacement are subject to engineer's review and approval.
3.4 RESTORATION OF ASPHALT AREAS

A. During the course of the work Contractor shall mill and replace the West Islip High School parking lot used as the processing area as well as Barberry Road and the 20-foot access corridor through the shopping plaza and. New asphalt will be placed over these locations as described in Section 32 12 16 ASPHALT PAVING and as approved by Engineer. Areas which may have come in contact with contaminated soils or water will be required to be tested for cadmium and chromium in accordance with Section 01 45 25 – TESTING and addressed as necessary at Contractor’s cost.

B. Concrete curbs and sidewalks that are affected by the construction shall be replaced during site restoration to pre-construction dimensions in accordance with Town of Islip building code.

3.5 RESTORATION OF GRASSED AREAS

A. Contractor shall repair any damage made to grassed/lawn areas associated with the work. Vegetation will be restored to existing conditions as specified in Section 00203 SEED AND MULCH and as approved by Engineer. Areas which may have come in contact with contaminated soils or water will be required to be tested for cadmium and addressed as necessary at Contractor’s cost.

3.6 RESTORATION OF ACCESS CORRIDOR

A. Contractor shall repair or replace any existing structures or structural features that are moved or disrupted by Contractor, in kind and to the satisfaction of the Engineer, at no additional expense to the Department.

END OF SECTION
SECTION 01 76 00 – PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes requirements for preventing damage or adverse impacts to infrastructure and other installed construction. Installed construction is both new construction per the Contract Documents and existing structures and facilities.

1.2 PERFORMANCE REQUIREMENTS

A. The intent of this Section is to document and formalize the Contractor’s plan to prevent damage or adverse impacts to existing structures and facilities within the limits of work and new construction per the Contract Documents; however, this does not relieve the Contractor’s obligation to protect from damage or injury all structures, utilities, or other above ground or buried infrastructure within the Limits of Work and also bordering the Limits of Work, and to repair all damage by the Contractor to the satisfaction of the Engineer, at no cost to the Department.

B. All existing infrastructure shall be protected that directly involve or may be encountered by Contractor operations. The Contractor shall protect existing infrastructure and other installed construction unless otherwise specified in the Contract Documents for removal or modification. This includes but is not limited to: buildings, garages, sheds, fences, bridges, bridge piers, stormwater structures, docks, fenders, sheet piles, utility crossings, and all associated and related structures. Stormwater structures include, but are not limited to, the water control structure weir and all outfalls in Willetts Creek and Lake Capri. This also includes temporary construction aids, regarding the Contractor’s responsibility to protect installed features such as temporary shoring, stream diversion features, and others to maintain productive operations and avoid delays.

C. Existing infrastructure of greatest concern for protection are all existing infrastructure on private property including decks, sheds, docks, fences, pools, play sets, garages, bulkheads, active and abandoned utility crossings in properties abutting Willetts Creek, Middle School and High School footbridges, stone bridge, public utilities within the project site, and infrastructure located at the Stop & Shop Shopping Center. However, the scope of this Section includes all existing structures and installed construction identified in the Infrastructure Protection Plan described in this Section, Section 13 50 00 SPECIAL INSTRUMENTATION, and on the Drawings.

D. The Contractor shall identify and document the condition of all existing structures within or affected by the work zones prior to work in a baseline structures inspection performed by a structural engineer licensed in New York and monitor the condition of existing infrastructure and other installed construction adjacent to work areas throughout the duration of the project. Monitoring shall be for movement, and damage or other effects requiring repairs, in accordance with this Section and Section 13 50 00 SPECIAL INSTRUMENTATION. Monitoring will include high-accuracy (and high-precision) survey, inclinometers, photo-documentation, and other methods as approved by the Engineer.
1.3 SUBMITTALS

A. Existing Structure and Infrastructure Protection Plan
   1. Initial
   2. Monitoring reports
   3. Final Revised

B. Structures Inspection Report
   1. Baseline Structures Inspection Report, signed by a New York State licensed Structural Engineer.
   2. Post-Construction Structures Inspection Report, signed by a New York State licensed Structural Engineer.

C. Structure Inspectors Qualifications
   1. The Contractor will subcontract a qualified engineering firm for inspection of existing structures, and all inspectors will have minimum qualifications of a degree in civil or structural engineering, 5 years of experience inspecting structures, additional experience evaluating inspection results for changes in load capacity of structural elements and overall structure integrity.
   2. All structure inspectors will have a minimum of 24-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) health and safety training compliant with 29 CFR 1910.120.
   3. All work shall be managed and overseen by the New York State licensed Structural Engineer signing structures inspection reports.

1.4 INFRASTRUCTURE PROTECTION PLAN

A. Submit an Infrastructure Protection Plan for review by the Engineer. Provide sufficient time for review and discussion of the Plan with the Engineer before significant work begins at the site. The purpose of the Infrastructure Protection Plan is to identify and present a comprehensive inspection of existing structures, as well as an overview of known or potential issues with the condition of infrastructure present in the Limits of Disturbance and vicinity. In the event that a structure (e.g. sheds, garages) needs to be moved, contents of structure shall also be photographed and inventoried. Additionally, the intent of the plan is to document any changes or damage as a result of the work, and finally to document that the Contractor activities have avoided impacts to existing infrastructure or have restored any damaged or otherwise affected structures to equal or better condition than before the work of the Contract.

B. Issues of concern with existing infrastructure must be defined within the Infrastructure Protection Plan, including the Contractor’s resolution to complete the work of the Contract Documents while managing operations to protect existing structures. Address each topic at a level of detail commensurate with the issue and required construction task(s) to provide the protection.

C. At a minimum, the Plan shall include:
   1. Identification of the infrastructure to be monitored.
   2. Detailed written description of the infrastructure protection measures that will be utilized and a detailed explanation of how they will be implemented and monitored, including deflection monitoring, deflection threshold criteria, and
stop work procedures. Requirements for deflection measurement instrumentation are in Section 13 50 00 SPECIAL INSTRUMENTATION, which shall be integrated in the Contractor’s Plan procedures.

3. For items that are to be temporarily relocated, (e.g. sheds, playsets, fences, etc.) the condition, inventory of contents as applicable, and proposed temporary location.

4. Protective measures to prevent vessel or equipment contact with, and to prevent damage to, existing infrastructure in the water and along the Lake Capri shoreline.

5. Plan view of locations for survey monitoring monuments, inclinometers, and other installed monitoring instrumentation and equipment, including drawing details identifying product specifications, size, and dimensions of monitoring features. Requirements for deflection measurement instrumentation are in Section 13 50 00 SPECIAL INSTRUMENTATION.

6. Description of all applicable utilities in service, their location relative to major elements of the project and the approach being taken to protect the structures.

D. The Infrastructure Protection Plan must identify in detail, all contractor structural engineering inspection activities to complete the Baseline Structures Inspection and the Post-Construction Structures Inspection.

E. Prior to submittal of the Initial Infrastructure Protection Plan, meet with the Engineer for the purpose of discussing the implementation of the initial Infrastructure Protection Plan; possible subsequent additions and revisions to the plan including any data processing and reporting requirements; and methods for administration. The Infrastructure Protection Plan must be current and maintained onsite by the Contractor under the supervision of the Contractor’s New York State-licensed Structural Engineer. Upon completion of the Post-Construction Structures Inspection, submit a Final Revised Infrastructure Protection Plan including the Post-Construction Structures Inspection Report.

F. A qualified Land Surveyor licensed in New York State, with a minimum of 5 years of experience in high-precision surveys for structure deflection monitoring or similar work shall be provided by the Contractor for survey monitoring of existing structures.

1.5 QUALITY CONTROL

A. A Structural Engineer licensed in the State of New York and experienced in structural condition inspections shall be responsible for performing the work of this Section and Technical Specifications Section 13 50 00 SPECIAL INSTRUMENTATION. The licensed Structural Engineer will coordinate all work of the structures inspections and survey of structures. The licensed Structural Engineer will be independent from the Contractor’s workforce and will supervise all monitoring activities during construction, and prepare, sign, and seal a post-construction structures inspection report that demonstrates the condition of structures has not been compromised or damaged without receiving necessary repairs.

B. Damage may be physical damage, structure movements such as settlement or deflection, or cosmetic damage that increases corrosion of coated metal surfaces or otherwise reduces design life of structural elements, appurtenances, and associated facilities.
PART 3 - EXECUTION

3.1 UTILITIES IN SERVICE

A. Call New York 811, and receive clearance not less than 10 working days before performing work.
   1. Request underground utilities to be located and marked within and surrounding construction areas.

B. Coordinate with public and private utility companies with underground utilities or utility crossings and describe in the Infrastructure Protection Plan all applicable utilities in service, their location relative to major elements of the project and the approach being taken to protect the structures.

C. Available utility information compiled during the design is provided on the Engineering Drawings. The existing utility information is provided for the Contractor’s information only and the Engineer assumes no responsibility for the accuracy or completeness of the information. Utility information for potential utility crossings of Willetts Creek and Lake Capri, bridge crossings, creek embankments and lake shorelines, and areas adjacent to Montauk highway are areas requiring additional Contractor investigation. The Contractor shall take full responsibility for verifying the provided information and collecting any additional information as necessary to assure the location of structures and utilities. This also includes utilities on residential properties.

D. The Contractor shall verify utility information prior to the start of construction, and during construction shall exercise their own judgment regarding prudence of dredging or capping nearby known or suspected utility crossings given the design intention to avoid risk to public health and the environment, and to provide for worker safety.

3.2 STRUCTURES INSPECTIONS

A. Prior to the start of construction activities, the Contractor’s Structural Engineer shall perform a joint Baseline Structures Inspection for pre-construction conditions. Following the structure inspections, the Contractor shall prepare a Baseline Structures Inspection Report. The report shall be signed by the Structural Engineer certifying its accuracy and completeness.

B. The inspection shall include, at a minimum, the following:
   1. For steel or other metallic structures, look for loose connections, corrosion and/or flaking, impact damage and pitting of the metal.
   2. For concrete structures, look for cracking, efflorescence/exudation and leaching (white deposits caused by moisture leeching through the concrete), scaling, delamination, spalling and/or signs of exposed rebar, and other damage.
   3. For timber structures, look for evidence of insect damage, rot, cracking or splitting, impact damage, connecting hardware problems, or broken pieces.
   4. Detail inspection using engineering sketches and measurements, video recordings, photographs, and notes, for any existing structural or cosmetic damage.
C. Any deviations from the existing conditions shown on the Drawings should be noted, and, in necessary, the Engineer shall be consulted to determine if changes are needed.

D. The Baseline Structures Inspection shall include representative photo documentation clearly labeled including position on the structure of interest.

E. Upon conclusion of Work, the Contractor’s Structural Engineer and the Engineer shall participate in a joint Post-Construction Structures Inspection. Following the post-construction structures inspection, the Contractor shall prepare the Post-Construction Structures Inspection Report.

F. The Post-Construction Structures Inspection Report shall compare the results of baseline and post-construction inspections, present and interpret monitoring data, and include a required statement that in the Engineer’s professional opinion, all structures included in the baseline inspection have interpreted conditions as follows (any combination or all these conditions may apply among the existing structures):

1. Unaffected during construction as demonstrated by monitoring
2. Any incidental damage sustained during construction has been repaired in such a manner to not reduce the remaining service life of the existing structural elements.
3. Any damage to structures of a more serious nature has been addressed through immediate repairs or other modifications in coordination with the Engineer and with written consent of the owner of the infrastructure, has been implemented safely and in accordance with accepted standards of practice, and has been restored to an equal or better condition than before the baseline structures inspection.
4. Demolished during construction and disposed offsite with agreement from Engineer and consent of the owner of the infrastructure and has been implemented safely and in accordance with accepted standards of practice.

3.3 MONITORING

A. Monitoring of structures that may be adversely affected by construction activities shall be performed continuously in accordance with Technical Specifications Section 13 50 00 SPECIAL INSTRUMENTATION.

B. The Infrastructure Protection Plan shall identify each existing structure or other site feature the licensed Structural Engineer has identified for monitoring, and the type of monitoring, and frequency of monitoring to be performed.

C. The Contractor shall prepare weekly and monthly reports for the Department documenting this monitoring, including daily reporting as indicated in Technical Specifications. The Contractor’s Daily Construction Quality Control (CQC) Report shall include all monitoring activities performed for the day, the time of the monitoring, and conditions at the time of monitoring (such as weather, air and water temperature, water level elevations, construction activities adjacent to the area of monitoring, any signs of disturbance or damage to monitoring components or equipment, and other relevant information) in accordance with Technical Specifications Section 13 50 00 SPECIAL INSTRUMENTATION.
3.4 PHOTO AND VIDEO DOCUMENTATION

A. Document the Baseline Structures Inspection of existing infrastructure and other installed construction prior to the beginning of work. Photos should be color and in digital JPG format, and of at least 10-megapixel quality.

B. Photo documentation for the Post-Construction Structures Inspection of existing structures shall be repeated from the same vantage point and scale as the baseline condition and included in the report with licensed Structural Engineer remarks on the comparison and final condition of the structure or structural element.

3.5 SURVEYS (X, Y, Z POSITION MONITORING)

A. Install fixed, sturdy, survey monitoring points on existing structures and use accurate instrumentation and experienced surveyors to provide repeatable and precise monitoring of the survey targets during the period of construction in accordance with Section 13 50 00 SPECIAL INSTRUMENTATION. Provide the Contractor’s degree of accuracy for survey in the Infrastructure Protection Plan for review by the Engineer.

B. Maximize use of high-accuracy survey, using methods that provide high-precision surveying for repeatability and avoidance of false positive or false negative trending. Required accuracy is 0.001 foot. All survey events shall utilize the same monitoring technologies for comparability and consistency.

C. It is the intent of design that all major structures within or adjacent to the Limits of Disturbance will undergo monitoring, in accordance with Section 13 50 00 SPECIAL INSTRUMENTATION, during the work to ensure that no adverse structural effects have taken place as a result of the work.

D. Utilize a New York State-licensed Land Surveyor for all position monitoring using land survey techniques for both the conventional land survey and optical survey methods.

3.6 INCLINOMETERS

A. Install inclinometers to document condition of structures and monitor for abnormalities or movement at the locations shown on the Drawings and in accordance with Section 13 50 00 SPECIAL INSTRUMENTATION. Locate the tops of inclinometers x,y,z using survey.

3.7 NOTIFICATION

A. The Contractor shall notify the Engineer immediately upon the discovery of any structural defects, deficiencies or damages which may cause loss of life, affect safety, or potentially damage property as part of the Infrastructure Protection Plan.

B. If damage or structural defects arise as the result of the Contractor activities, provide notifications as identified in the plan, and immediately repair damaged structures to the satisfaction of the owner of the infrastructure at no cost to the Department.

C. The Contractor shall repair and restore to the satisfaction of the owner of the infrastructure of any existing or temporary or other installed construction that may
become damaged or disturbed as a result of the work or the activity of the Contractor’s personnel.

D. If the Engineer determines that the damage cannot be repaired to the original (functioning) condition, then the damaged feature shall be replaced-in-kind at the Contractor’s expense.

END OF SECTION
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SECTION 02 21 19 – HYDROGRAPHIC SURVEYS

PART 1 – GENERAL

1.1 SUMMARY

A. This section describes the hydrographic surveys required to be performed by the Contractor prior to, during, and following construction in Lake Capri. For this Section, hydrographic survey shall include only bathymetric survey of the sediment surface. Includes minimum survey standards, units of measure, and the procedure for survey data submittal. Topographic survey requirements are described in Section 00004 SURVEYS.

B. The Contractor shall perform all hydrographic survey work described in the Technical Specifications and shown on the Engineering Drawings. Hydrographic surveys for measurement of dredging quantities shall be completed by the Contractor. This Work includes the following:
   1. Pre-dredge hydrographic survey of Lake Capri
   2. Interim hydrographic surveys of Lake Capri as required, for progress payment requests and contractor dredging controls only.
   3. Post-dredge hydrographic survey of Lake Capri

C. The Contractor shall retain the services of a Hydrographic Surveyor to perform hydrographic surveying in accordance with U.S. Army Corps of Engineers (USACE) Engineering and Design – Hydrographic Surveying guidance (EM 1110-2-1003).

D. The Contractor’s Hydrographic Surveyors shall make all measurements of length, depth, and area of the Work performed consistent with these Technical Specifications and as shown on the Engineering Drawings. The results of these survey measurements and all relevant backup calculations shall be provided for review and approval.

E. The Contractor shall prepare survey data files and survey Record Drawings to be used for confirming quantities and documenting construction. The final Survey Record Drawings shall be prepared and certified by the Contractor’s surveyors.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 33 01 SUBMITTALS.

B. Pre-Construction submittals:
   1. The qualifications of the hydrographic surveyors (1.3 of this section). The Engineer reserves the right to disallow the person(s) selected by the Contractor for hydrographic surveying. If, in the Engineer’s opinion, the person is not qualified to do the Work, the Contractor shall select another hydrographic surveyor and submit qualifications until a qualified person is approved. Use of alternative hydrographic surveyors shall be at no additional cost to the Department.
   2. Manufacturer’s specifications of the real-time kinematic (RTK) differential global positioning system (DGPS) or equivalent equipment.
   3. Proposed survey methods for each area, including, but not limited to, open water areas, adjacent to existing structures, and shorelines.
4. The delineation of any division of the total dredge area proposed for partial surveying.

C. Start of Construction submittals
   1. The hydrographic data presented on the Engineering Drawings are based on Site surveys conducted during the dates indicated on the Engineering Drawings. The Contractor shall perform hydrographic surveys of the Site as a basis for comparison with final surveys in accordance with Section 01 33 00 SUBMITTALS.
      a. The Contractor’s surveyor(s) shall perform the pre-dredge hydrographic surveys in accordance with the requirements of this Section.
      b. The Contractor shall submit detailed survey information in accordance with the requirements of this Section.
      c. The Contractor shall submit the pre-dredge hydrographic Survey Record Drawings in accordance with Section 01 33 01 SUBMITTALS. The Survey Record Drawings shall be certified by the Contractor’s surveyor(s). Material removal activities shall not be initiated until the hydrographic survey work is accepted by the Engineer.
      d. The Contractor shall submit a letter certifying that the Work is located as required by the Contract in accordance with Section 01 33 01 SUBMITTALS. If the Contractor’s Survey determines that the Work is not located as required by the Contract, the Contractor shall notify the Engineer immediately and provide documentation prepared by surveyor(s) describing and illustrating the inconsistencies with the Contract.

D. During Construction submittals
   1. The Contractor’s Hydrographic Surveyor shall conduct surveys and submit Survey Record Drawings for the following:
      a. Interim hydrographic surveys as required, for progress payment requests only.
      b. Post-dredge verification hydrographic survey.
   2. At any time during the Work, the Contractor shall provide, on request of the Engineer, documentation of accuracy of survey work, survey logs, and survey field notes.

E. At the Completion of Construction submittals:
   1. The Contractor shall submit final hydrographic plans as part of the Survey Record Drawings in accordance with Section 01 33 01 SUBMITTALS.
   2. The Contractor shall submit, at the completion of Construction, all survey logs, field notes, and all survey XYZ data files developed over the course of Construction.

1.3 QUALIFICATIONS OF SURVEYORS

A. Hydrographic Surveyor
   1. The Hydrographic Surveyor selected by the Contractor shall be a Registered Hydrographic Surveyor certified by the American Congress on Surveying and Mapping with qualifications acceptable to the Engineer, and the Hydrographic Surveyor shall perform the hydrographic surveys. The Hydrographic Surveyor
shall have actively engaged in hydrographic survey operations during the past 3 years.

1.4 PROJECT DATUMS

A. All hydrographic surveys shall be prepared using the project datums listed in these Technical Specifications and as shown on the Engineering Drawings:

1.5 SURVEY REFERENCE POINTS

A. Existing control points (horizontal and vertical control) for the project shall be provided prior to Construction.

B. The Contractor shall locate and protect monuments and control points prior to starting the Work and preserve all permanent reference points during Construction.
   1. The Contractor shall not make changes or relocations without prior written notice to the Engineer and after obtaining approval.
   2. The Contractor shall report to the Engineer when any reference point is lost, destroyed, or requires relocation because of necessary changes in grades or locations.
   3. Surveyor shall correctly replace project monuments or control points that may be lost or destroyed as a result of the Contractor Work and establish replacements based on original horizontal and vertical controls, at no additional cost to the Department.

PART 2 – PRODUCTS – Not Used

PART 3 – EXECUTION

3.1 SURVEY LIMITS

A. The Contractor’s surveyor(s) shall use hydrographic survey methods to execute the survey work within the limits of Lake Capri. The Contractor’s surveyor(s) shall provide the required surveys for a given area using a consistent survey technique over the course of construction.

B. The survey limits for a given area shall extend to edge-of-water.

C. Hydrographic surveys shall be completed in accordance with this section where the current water depth in Lake Capri allows. Shallow water areas in Lake Capri, where the approved hydrographic survey equipment cannot access and perform accurate surveys, shall be surveyed as a topographic survey in accordance with Section 00004 SURVEYING.

3.2 HYDROGRAPHIC SURVEYS

A. Pre-Dredge Surveys
1. The Contractor’s Hydrographic Surveyor shall perform a pre-dredge survey prior to construction in Lake Capri.

2. The pre-dredge survey must be accepted by the Engineer before any in-water Work commences.

B. Interim hydrographic surveys

1. The Contractor will be permitted to perform interim surveying of the post-dredge surface as the Work progresses. These partial post-dredge surveys shall only be permitted when all dredging upstream and all dredging within 300 feet lateral or downstream of the survey limits has been performed.

C. Post-Dredge Surveys

1. The Contractor’s Hydrographic Surveyor shall perform a post-dredge survey, of all areas not yet surveyed in the interim surveys, upon completion of construction in Lake Capri.

D. Pre-, interim, and post-dredge surveys shall be conducted using the methods outlined in this Section. The same survey method shall be used for all surveys for a given area.

E. Survey procedures including, but not limited to, positioning modes, calibration, data reduction, adjustment, processing, and plotting shall conform to recognized industry best practices and capable of meeting the repeatability and accuracy limits herein. Horizontal location observations shall compensate for errors, geodetic corrections, and atmospheric variations. Failure to perform and process such surveys in accordance with recognized standards will result in a rejection and non-payment for Work performed.

F. The Contractor’s surveyor(s) shall verify Work utilizing manufacturer calibration and field verification procedures per industry standards.

G. Hydrographic surveys shall meet the following criteria, at a minimum:

1. Positioning shall be by real-time kinematic (RTK) differential global positioning system (DGPS) or equivalent technology capable of providing the same level of positioning accuracy.

2. Single-beam hydrographic surveying techniques shall be used.

3. Single-beam hydrographic surveys shall comply with the standards defined in USACE Engineering and Design – Hydrographic Surveying guidance, unless otherwise stated herein.

4. Transect spacing for hydrographic data collected using single-beam survey equipment shall not exceed 5 feet.

5. Survey point spacing along each transect for hydrographic data collected using single-beam survey equipment shall not exceed 5 feet.

6. All hydrographic surveys shall meet the following repeatable accuracy:
   a. For elevation, to the nearest 0.1 foot.
   b. For horizontal distance, to plus or minus 0.2 feet.

3.3 DREDGE VERIFICATION

A. The Contractor is required to achieve the dredge elevations as shown on the Engineering Drawings and as specified in Section 35 20 23 DREDGING. Verification of the dredge elevations shall be as specified herein. If required dredging has not been achieved as
determined by the Engineer, the Contractor shall re-dredge and re-survey the area. The re-surveying shall be conducted at no additional cost to the Department.

B. The Contractor shall provide survey comparison, including XYZ data and AutoCAD Civil3D surface, for the Engineer review and approval verifying that the post-dredge elevations achieves the minimum required percentage of the dredge area specified in Section 35 20 23 DREDGING. This verification will be determined by comparing the post-dredge survey elevations to the dredge design surface elevations.

C. The Contractor shall verify that no high spots are greater than that specified in Section 35 20 23 DREDGING by comparing the post-dredge survey elevations to the dredge design surface elevations. The Contractor shall provide this survey comparison, including XYZ data and AutoCAD Civil3D surface, to the Engineer for review and approval.

3.4 SURVEY RECORD DRAWINGS AND REPORTING

A. The Contractor shall maintain a complete, accurate log of all control and survey work as it progresses. Survey logs and field notes shall be provided to the Engineer upon request.

B. The contractor’s licensed surveyor shall compute quantities for final quantity tracking and payment. Quantities shall be computed to the nearest tenth of a cubic yard of volume. The Contractor shall submit the actual dredging quantities achieved signed and certified by a licensed surveyor.

C. The Contractor shall provide the Engineer the following items for Survey Record Drawings and reporting:
   1. All Survey Record Drawings.
   2. File of survey XYZ data.
   3. AutoCAD Civil 3D (2017 or later) format or compatible Digital Terrain Model (DTM) of the survey. The DTM must contain adequate 3-D points and 3-D break lines required to accurately model the digital surface to within the above-stated accuracy. The DTM must also provide a 2-D polyline defining the limits and footprint of the area(s) surveyed.

   END OF SECTION
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SECTION 02 56 13 – WASTE CONTAINMENT GEOMEMBRANE

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. This section includes geomembrane requirements for decontamination pads, wastewater treatment pads, and dewatering pads.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 00021 SUBMITTALS, and Section 01 33 01 PROJECT SUBMITTALS AND PROCEDURES.

B. Material labels and data sheets:
   1. Submit at least 10 days prior to deployment onsite.

C. Shop Drawings:
   1. As-built drawings of the geomembrane installation shall be prepared. These drawings shall include panel numbers, seam numbers, location of repairs, destructive seam samples, and penetrations.
   2. Shop drawing must be submitted within 60 days of the notice to proceed.

D. Test Reports:
   1. Non-Destructive Field Seam Continuity Testing
   2. Destructive Field Seam Testing
   3. Destructive Seam Test Repairs.

1.3 QUALIFICATIONS

A. Manufacturer:
   1. Manufacturer shall have produced the proposed geomembrane sheets for at least five completed projects having a total minimum area of 10 million square feet (ft).

B. Fabricator:
   1. The fabricator is responsible for seaming geomembrane sheets into panels. Fabricator shall have fabricated the proposed geomembrane panels for at least five completed similar projects.

C. Installer:
   1. The installer is responsible for field handling, deploying, seaming, anchoring, and field quality control (QC) testing of the geomembrane. The installer shall have installed the proposed geomembrane material for at least five completed similar projects using the same type of seaming equipment and geomembrane thickness specified for this project.

1.4 DELIVERY, STORAGE AND HANDLING

A. Delivery:
   1. The QC inspector shall be present during delivery and unloading of the geomembrane. Each geomembrane roll/panel shall be labeled with the manufacturer's name, product identification number, roll/panel number, and roll dimensions.
B. Storage:
1. Temporary storage at the project site shall be on a level surface, free of sharp objects where water cannot accumulate. The geomembrane shall be protected from puncture, abrasion, excessive heat or cold, material degradation, or other damaging circumstances. Storage shall not result in crushing the core of roll goods or flattening of the rolls. Rolls shall not be stored more than two high. Palleted materials shall be stored on level surfaces and shall not be stacked on top of one another. Ultraviolet sensitive materials (i.e., polyvinyl chloride) shall be covered with a sacrificial opaque and waterproof covering or placed in a temporary shelter. Damaged geomembrane shall be removed from the site and replaced with geomembrane that meets the specified requirements at no additional expense to Department.

C. Handling:
1. Rolls/panels shall not be dragged, lifted by one end, or dropped. A pipe or solid bar, of sufficient strength to support the full weight of a roll without significant bending, shall be used for all handling activities. The diameter of the pipe or solid bar shall be small enough to be easily inserted through the core of the roll. Chains shall be used to link the ends of the pipe or bar to the ends of a spreader bar. The spreader bar shall be wide enough to prevent the chains from rubbing against the ends of the roll. Alternatively, a stinger bar protruding from the end of a forklift or other equipment may be used. The stinger bar shall be at least three-fourths the length of the core and can support the full weight of the roll without significant bending. If recommended by the manufacturer, a sling handling method utilizing appropriate loading straps may be used.

1.5 AMBIENT CONDITIONS

A. Geomembrane shall not be deployed or field-seamed in the presence of excess moisture (i.e., rain, fog, dew), in areas of ponded water, or in the presence of excess wind. Unless authorized by the Engineer, no placement or seaming shall be attempted at ambient temperatures below 32 degrees Fahrenheit (°F) or above 104 °F. Ambient temperature shall be measured at a height no greater than 6 inches (in.) above the ground or geomembrane surface. Tests shall be conducted in accordance with paragraph Destructive Field Seam Testing.

PART 2 PRODUCTS

2.1 MATERIALS

A. 40-mil high-density polyethylene (HDPE) geomembrane sheets used in the decontamination and wastewater treatment pads shall be unreinforced and manufactured as wide as possible to minimize factory and field seams. Liner sheets shall be uniform in color, thickness, and surface texture. The geomembrane sheet shall be free of and resistant to fungal or bacterial attack and free of cuts, abrasions, holes, blisters, contaminants, and other imperfections. Failure to meet specified requirements as determined by Engineer shall require replacement by Contractor at no additional expense to the Department.

B. Geomembrane materials and seams shall meet the requirements listed in Tables 1–4.
<table>
<thead>
<tr>
<th>Property</th>
<th>Test Value</th>
<th>MQC Testing Frequency (min)</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (min ave)</td>
<td>40 mils per roll</td>
<td></td>
<td>ASTM D5199</td>
</tr>
<tr>
<td>Lowest individual of 10 values</td>
<td>-10 percent per roll</td>
<td></td>
<td>ASTM D5199</td>
</tr>
<tr>
<td>Density (min)</td>
<td>0.940 g/cc per 200,000 lb</td>
<td></td>
<td>ASTM D1505</td>
</tr>
<tr>
<td>Tensile Properties (1) (min ave)</td>
<td>84 lb/in. 152 lb/in. 12 percent</td>
<td>per 20,000 lb</td>
<td>ASTM D638 Type IV</td>
</tr>
<tr>
<td></td>
<td>break stress yield elong break</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>elong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tear Resistance (min ave)</td>
<td>28 lb per 45,000 lb</td>
<td></td>
<td>ASTM D1004</td>
</tr>
<tr>
<td>Puncture Resistance (min ave)</td>
<td>72 lb per 45,000 lb</td>
<td></td>
<td>ASTM D4833/D4833M</td>
</tr>
<tr>
<td>Stress Crack Resistance (2)</td>
<td>200 hr per 200,000 lb</td>
<td></td>
<td>ASTM D5397 (Appendix)</td>
</tr>
<tr>
<td>Carbon Black Content</td>
<td>2.0–3.0 percent per 20,000 lb</td>
<td></td>
<td>ASTM D1603 (3)</td>
</tr>
<tr>
<td>Carbon Black Dispersion</td>
<td>Note (4) per 45,000 lb</td>
<td></td>
<td>ASTM D5596</td>
</tr>
<tr>
<td>Oxidative Induction Time (OIT) (min ave) (5)</td>
<td>Std OIT 100 min</td>
<td>per 200,000 lb</td>
<td>ASTM D3895</td>
</tr>
<tr>
<td></td>
<td>High Pres OIT 400 min</td>
<td></td>
<td>ASTM D5885</td>
</tr>
<tr>
<td>Oven Aging at 85 °C 185 °F (min ave) (5), (6)</td>
<td>Std OIT 55 percent at 90 days</td>
<td>per year and change in</td>
<td>ASTM D5721</td>
</tr>
<tr>
<td></td>
<td>or High Pres OIT 80 percent at 90 days</td>
<td></td>
<td>formulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UV Resistance (min ave) (7)</td>
<td></td>
<td>per year and change in</td>
<td>ASTM D7238</td>
</tr>
<tr>
<td></td>
<td></td>
<td>formulation</td>
<td></td>
</tr>
<tr>
<td>High Pres OIT (8)(9)</td>
<td>50 percent at 1600 hours</td>
<td></td>
<td>ASTM D5885</td>
</tr>
</tbody>
</table>

*Notes 1 through 11 are provided in Table 3.

NOTES:
°C = Degrees Celsius
°F = Degree Fahrenheit
ASTM = ASTM International
ave = Average
g/cc = Grams per cubic centimeter
HDPE = High density polyethylene
hr = Hour(s)
lb = Pound(s)
mil = One-thousandth of an inch (0.001 inch)
MQC = Manufacturing quality control
min = Minute
pres = Pressure
OIT = Oxidative induction time
Std = Standard
UV = Ultraviolet
<table>
<thead>
<tr>
<th>Property</th>
<th>Test Value</th>
<th>MQC Testing Frequency (min)</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Thickness</td>
<td>40 mils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thickness (min ave)</td>
<td>-5 percent of nominal</td>
<td>per roll</td>
<td>ASTM D5994</td>
</tr>
<tr>
<td>Lowest individual for 8 out of 10 values</td>
<td>-10 percent of nominal</td>
<td>per roll</td>
<td>ASTM D5994</td>
</tr>
<tr>
<td>Lowest individual of 10 values</td>
<td>-15 percent of nominal</td>
<td>per roll</td>
<td>ASTM D5994</td>
</tr>
<tr>
<td>Asperity Height (min ave) (10)</td>
<td>10 mils</td>
<td>every second roll</td>
<td>ASTM D7466 (11)</td>
</tr>
<tr>
<td>Density (min)</td>
<td>0.940 g/cc</td>
<td>per 200,000 lb</td>
<td>ASTM D1505</td>
</tr>
<tr>
<td>Tensile Properties (1) (min ave)</td>
<td></td>
<td>per 20,000 lb</td>
<td>ASTM D638 Type IV</td>
</tr>
<tr>
<td></td>
<td>yield stress</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>break stress</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>84 lb/in.</td>
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<td></td>
<td>60 lb/in.</td>
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<tr>
<td></td>
<td>12 percent</td>
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<tr>
<td></td>
<td>100 percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tear Resistance (min ave)</td>
<td>28 lb</td>
<td>per 45,000 lb</td>
<td>ASTM D1004</td>
</tr>
<tr>
<td>Puncture Resistance (min ave)</td>
<td>60 lb</td>
<td>per 45,000 lb</td>
<td>ASTM D4833/D4833M</td>
</tr>
<tr>
<td>Stress Crack Resistance (2)</td>
<td>200 hr</td>
<td>per 200,000 lb</td>
<td>ASTM D5397 (Appendix)</td>
</tr>
<tr>
<td>Carbon Black Content</td>
<td>2.0–3.0 percent</td>
<td>per 20,000 lb</td>
<td>ASTM D1603 (3)</td>
</tr>
<tr>
<td>Carbon Black Dispersion</td>
<td>Note (4)</td>
<td>per 45,000 lb</td>
<td>ASTM D5596</td>
</tr>
<tr>
<td>Oxidative Induction Time (OIT) (min ave)</td>
<td></td>
<td>per 200,000 lb</td>
<td>ASTM D3895</td>
</tr>
<tr>
<td></td>
<td>Std OIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 min</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>or High Pres OIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 min</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oven Aging at 85 °C 185 °F (min ave) (5), (6)</td>
<td></td>
<td>per year and change in formulation</td>
<td>ASTM D5721</td>
</tr>
<tr>
<td></td>
<td>Std OIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 percent at 90 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>or High Pres OIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>80 percent at 90 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UV Resistance (min ave) (7)</td>
<td></td>
<td></td>
<td>ASTM D7238</td>
</tr>
<tr>
<td>High Pres OIT (8)(9)</td>
<td>50 percent at 1600 hours</td>
<td></td>
<td>ASTM D5885</td>
</tr>
</tbody>
</table>

*Notes 1 through 11 are provided in Table 3.
Table 3 Notes

<table>
<thead>
<tr>
<th>Note</th>
<th>Manufacturing Quality Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Minimum average machine direction and minimum average cross machine direction values shall be based on 5 test specimens in each direction. For HDPE geomembrane, yield elongation is calculated using a gauge length of 33 millimeters (mm) 1.3 in. For HDPE geomembrane, break elongation is calculated using a gauge length of 50 mm 2.0 in. For linear low-density polyethylene (LLDPE) geomembrane, break elongation is calculated using a gauge length of 50 mm 2.0 in. at 50 mm/min 2 in./min.</td>
</tr>
<tr>
<td>(2)</td>
<td>For HDPE geomembrane, the yield stress used to calculate the applied load for test method ASTM D5397, shall be the manufacturer's mean value. ASTM D5397 does not need to be run on LLDPE geomembrane.</td>
</tr>
<tr>
<td>(3)</td>
<td>Other methods such as ASTM D4218 or microwave methods are acceptable if an appropriate correlation to ASTM D1603 can be established.</td>
</tr>
<tr>
<td>(4)</td>
<td>Carbon black dispersion for 10 different views – minimum 8 of 10 in Categories 1 or 2 all 10 in Categories 1,2, or 3.</td>
</tr>
<tr>
<td>(5)</td>
<td>The manufacturer has the option to select either one of the OIT methods to evaluate the antioxidant content.</td>
</tr>
<tr>
<td>(6)</td>
<td>Evaluate samples at 30 and 60 days and compare with the 90-day response.</td>
</tr>
<tr>
<td>(7)</td>
<td>The condition of the test shall be a 20-hour UV cycle at 75 degrees C 167 degrees F followed by a 4-hour condensation cycle at 60 degrees C 140 degrees F.</td>
</tr>
<tr>
<td>(8)</td>
<td>The standard OIT test (ASTM D3895) shall not be used in determining UV resistance.</td>
</tr>
<tr>
<td>(9)</td>
<td>UV resistance is based on percent retained value regardless of the original High-Pressure HP)-OIT value.</td>
</tr>
<tr>
<td>(10)</td>
<td>Textured geomembrane only – of 10 readings; 8 out of 10 must be 0.18 mm, 7-mil, and lowest individual reading must be 0.13 mm 5 mil.</td>
</tr>
<tr>
<td>(11)</td>
<td>Textured geomembrane only – alternate the measurement side for double sided textured sheet.</td>
</tr>
</tbody>
</table>

Table 4 High Density Polyethylene Seam Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seam Shear Strength (min) (1)</td>
<td>80 lb/in.</td>
<td>ASTM D6392</td>
</tr>
<tr>
<td>Seam Peel Strength (min) (1) (2)</td>
<td>48 lb/in.</td>
<td>ASTM D6392</td>
</tr>
</tbody>
</table>

(1) Seam tests for peel and shear must fail in the Film Tear Bond mode. This is a failure in the ductile mode of one of the bonded sheets by tearing or breaking prior to complete separation of the bonded area.

(2) Where applicable, both tracks of a double hot wedge seam shall be tested for peel adhesion.

2.2 TESTS, INSPECTION, AND VERIFICATIONS

A. Employ geotechnical engineer to conduct testing.

2.3 EQUIPMENT

A. Equipment used in performance of the work shall be in accordance with the geomembrane manufacturer's recommendations and shall be maintained in satisfactory working condition.
PART 3 – EXECUTION

3.1 GEOMEMBRANE PREPARATION

A. Rocks larger than ½ in. in diameter, and any other material which could damage the geomembrane, shall be removed from the surface to be covered with the geomembrane. Construction equipment tire or track deformations beneath the geomembrane shall not be greater than 1.0 in. in depth. Each day during placement of geomembrane, the QC officer and installer shall inspect the surface on which geomembrane is to be placed and certify in writing that the surface is acceptable. Repairs to the subgrade and/or geomembrane shall be performed at no additional cost to the Department.

3.2 GEOMEMBRANE DEPLOYMENT

A. The procedures and equipment used shall not elongate, wrinkle, scratch, or otherwise damage the geomembrane, other geosynthetic layers, or the underlying subgrade. Geomembrane damaged during installation shall be replaced or repaired. Only geomembrane panels that can be anchored and seamed together the same day shall be deployed. The Contractor shall use large panels prepared by the manufacturer to provide area coverage and reduce field seaming to the maximum extent practical. Adequate ballast (i.e., sand bags) shall be placed on the geomembrane, without damaging the geomembrane, to prevent uplift by wind. No equipment shall be operated on the top surface of the geomembrane without permission from the Engineer. Seams shall be oriented parallel to the line of maximum slope. Where seams can only be oriented across the slope, the upper panel shall be lapped over the lower panel. The methods used to deploy and backfill over the geomembrane shall minimize wrinkles and tensile stresses in the geomembrane. The geomembrane shall have adequate slack to prevent the creation of tensile stress. The wrinkle height to width ratio for installed geomembrane shall not exceed 0.5. In addition, geomembrane wrinkles shall not exceed 6 in. in height. Wrinkles that do not meet the above criteria shall be cut out and repaired in accordance with the installer's approved QC manual.

3.3 FIELD SEAMING

A. Trial Seams:
  1. Trial seams shall be made under field conditions on strips of excess geomembrane. Trial seams shall be made each day prior to production seaming, whenever there is a change in seaming personnel or seaming equipment and at least once every 4 hours, by each seamer and each piece of seaming equipment used that day. Trial seam samples shall be collected and tested in accordance with ASTM D6392. One sample shall be obtained from each trial seam. This sample shall be at least 36 in. long by 12 in. wide with the seam centered lengthwise. Ten random specimens 1 in. wide shall be cut from the sample. Five seam specimens shall be field tested for shear strength and five seam specimens shall be field tested for peel adhesion using an approved quantitative tensiometer. To be acceptable, four out of five replicate test specimens shall meet seam strength requirements specified in Table 4. If the field tests fail to meet these requirements, the entire operation shall be repeated. If the additional trial seam fails, the seaming apparatus or seamer shall not be used until the deficiencies are corrected by the installer and two consecutive successful trial seams are achieved.
B. Field Seams:
   1. Panels shall be seamed in accordance with the geomembrane manufacturer's recommendations. In sumps, corners and odd-shaped geometric locations, the number of field seams shall be minimized. Seaming shall extend to the outside edge of panels. Soft subgrades shall be compacted in accordance with Section 00201 BACKFILL and approved prior to seaming. The seam area shall be free of moisture, dust, dirt, and foreign material at the time of seaming. Fish mouths in seams shall be repaired.

C. Polyethylene Seams:
   1. Polyethylene geomembranes shall be seamed by thermal fusion methods. Extrusion welding shall only be used for patching and seaming in locations where thermal fusion methods are not feasible. Seam overlaps that are to be attached using extrusion welds shall be ground prior to welding. Grinding marks shall be oriented perpendicular to the seam direction and no marks shall extend beyond the extrudate after placement. Extrusion welding shall begin within 10 minutes after grinding. Where extrusion welds are temporarily terminated long enough to cool, they shall be ground prior to applying new extrudate over the existing seam. The total depth of the grinding marks shall be no greater than 10 percent of the sheet thickness.

3.4 TESTS

A. Provide all QC samples to the QC laboratory to determine density, thickness, tensile strength at break, and elongation at break in accordance with the methods specified in Table 4. Samples not meeting the specified requirements shall result in the rejection of applicable rolls/panels. At a minimum, rolls/panels produced immediately prior to and immediately after the failed roll/panel shall be tested for the same failed parameter. Testing shall continue until a minimum of three successive rolls/panels on both sides of the original failing roll/panel pass the failed parameter. Submit test reports within 2 days of test completion.

B. Non-Destructive Field Seam Continuity Testing:
   1. Field seams shall be non-destructively tested for continuity over their full length in accordance with the installer's approved QC manual. Seam testing shall be performed as the seaming work progresses, not at the completion of field seaming. Any seams which fail shall be documented and repaired in accordance with the installer's approved QC manual.

C. Destructive Field Seam Testing:
   1. Coordinate destructive field testing with the Government.
   2. A minimum of one destructive test sample per 750 ft of field seam shall be obtained at locations determined by the Contractor QC (CQC) System Manager. Sample locations shall not be identified prior to seaming. Samples shall be a minimum of 12 in. wide by 42 in. long with the seam centered lengthwise. Each sample shall be cut into three equal pieces, with one piece retained by the installer, one piece given to the QC laboratory, and the remaining piece given to the Contracting Officer for quality assurance (QA) testing and/or permanent record. Each sample shall be numbered, and cross referenced to a field log which identifies:
      a. Panel number
      b. Seam number
      c. Date and time cut
      d. Ambient temperature within 6 in. above the geomembrane
      e. Seaming unit designation
3. Name of seamer

g. Seaming apparatus temperature and pressures (where applicable). Ten 1 in. wide replicate specimens shall be cut from the installer's sample. Five specimens shall be tested for shear strength and five for peel adhesion using an approved field quantitative tensiometer. Jaw separation speed shall be in accordance with the approved QC manual. To be acceptable, four out of five replicate test specimens shall meet the seam strength requirements specified in Table 4. If the field tests pass, five specimens shall be tested at the QC laboratory for shear strength and five for peel adhesion in accordance with the QC laboratory's approved procedures. To be acceptable, four out of five replicate test specimens shall meet the seam strength requirements specified in Table 4. If the field or laboratory tests fail, the seam shall be repaired in accordance with paragraph Destructive Seam Test Repairs at no additional expense to Department. Holes for destructive seam samples shall be repaired the same day they are cut.

3. The Contractor may propose non-destructive testing methods to substitute for destructive testing methods within the interior of the geomembrane liner.

3.5 DEFECTS AND REPAIRS

A. Destructive Seam Test Repairs:

1. Seams that fail destructive seam testing may be overlaid with a strip of new material and seamed (cap stripped) at no additional expense to Department. Alternatively, the seaming path shall be retraced to an intermediate location a minimum of 10 ft on each side of the failed seam location. At each location a 12 in. by 18 in. minimum size seam sample shall be taken for two additional shear strengths and two additional peel adhesion tests using an approved quantitative field tensiometer. If these tests pass, then the remaining seam sample portion shall be sent to the QC laboratory for five shear strengths and five peel adhesion tests in accordance with the QC laboratory's approved procedures. To be acceptable, four out of five replicate test specimens must meet specified seam strength requirements. If these laboratory tests pass, then the seam shall be cap stripped or repaired using other approved methods between that location and the original failed location. If field or laboratory tests fail, the process shall be repeated. After repairs are completed, the repaired seam shall be non-destructively tested in accordance with paragraph Non-Destructive Field Seam Continuity Testing. Submit testing results within 2 days after completion of testing.

B. Patches:

1. Tears, holes, blisters and other defects shall be repaired with patches. Patches shall have rounded corners, be made of the same geomembrane, and extend a minimum of 6 in. beyond the edge of defects. Minor localized flaws shall be repaired by spot welding or seaming as determined by the QC Inspector. Repairs shall be non-destructively tested. Perform additional destructive seam tests required by the Government or CQC System Manager on suspect areas.

3.6 VISUAL INSPECTION AND EVALUATION

A. Immediately prior to covering, the geomembrane, seams, and non-seam areas shall be visually inspected by the QC Officer for defects, holes, or damage due to weather conditions or construction activities. At the QC Officer’s discretion, the surface of the geomembrane shall be brushed, blown, or washed by the installer if the amount of dust, mud, or foreign material inhibits inspection or functioning of the overlying material. Each suspect location
shall be non-destructively tested in accordance with paragraph Non-Destructive Field Seam Continuity Testing. Each location that fails non-destructive testing shall be repaired in accordance with paragraph Patches and non-destructively retested.

B. Geomembrane penetration details shall be in accordance with ASTM D6497 or as recommended by the geomembrane manufacturer. Factory fabricated boots shall be used wherever possible. Field seams for penetrations shall be non-destructively tested in accordance with the installer's approved QC manual. Seams that fail non-destructive testing shall be repaired in accordance with the installer's approved QC manual and non-destructively tested prior to acceptance.

3.7 PROTECTION AND BACKFILLING

A. The deployed and seamed geomembrane shall be covered with the specified material within 5 calendar days of acceptance. Wrinkles in the geomembrane shall be prevented from folding over during placement of cover materials. Cover material shall not be dropped onto the geomembrane or overlying geosynthetics from a height greater than 3 ft. The material shall be pushed out over the geomembrane or overlying geosynthetics in an upward tumbling motion. The cover material shall be placed from the bottom of the slope upward. Equipment with ground pressure less than 7 pounds per square inch shall be used to place the first lift over the geomembrane. Equipment placing cover material shall not stop abruptly, make sharp turns, travel at speeds exceeding 5 miles per hour, or other movements which could cause damage to geomembrane.

END OF SECTION
SECTION 02 72 00 – WATER TREATMENT

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes requirements for treating water generated by Work activities including, but not limited to, decontamination activities, equipment wash water, dredging process water, surface water pumped from work areas, and rainwater coming in contact with stockpiles or solids processing equipment.

B. Stormwater and surface water management shall be completed according to Section 35 60 00 TEMPORARY WATER DIVERSION AND FLOOD CONTINGENCY PLANNING.

C. For the purpose of this specification, the terms water and wastewater are used interchangeably.

1.2 PERFORMANCE REQUIREMENTS

A. The Contractor shall be responsible for all aspects of verifying design parameters, designing, providing, installing, starting, operating, maintaining, performance, and removing the water treatment system.

B. In the event that the water treatment system is not operating properly or in regulatory compliance, and the Engineer or Department determines that it needs to be shut down, delays shall be at the Contractor’s expense.

C. Contractor shall be responsible for constructing and operating a water treatment system that will handle all water generated by Work activities, meet project-specific permitted discharge criteria, and discharge in a controlled fashion into Willetts Creek and Lake Capri.

D. Sampling of the treated water effluent must be in accordance with Section 01 45 25 TESTING. The treated water effluent must meet the NYSDEC Generic Effluent Criteria for Surface Water Discharges provided as Table 01 45 25-2 unless directed otherwise by the Department.

E. In this Section, water to be treated prior to discharge to Willetts Creek and Lake Capri includes but is not limited to the following:
   1. Water generated through the Contractor’s chosen dredging methods, such as hydraulic conveyance and solids processing activities.
   2. Water removed from dredging areas during sediment removal, including stormwater runoff.
   3. Stormwater from solids and water processing areas.
   4. Water from decontamination activities.

F. The Contractor shall complete start-up testing and demonstration that the water treatment system meets pre-treatment discharge criteria in the final permits.

G. The water treatment system shall include:
1. Influent and effluent holding tanks with the necessary surge capacity to efficiently accommodate the contractor’s planned approach within the footprint limitations as shown in the Contract Drawings.

2. Effluent holding tanks designed to allow on-site testing of water quality prior to discharge. The Contractor shall provide sufficient storage capacity for treated water as needed until effluent testing results demonstrate permit discharge requirements have been met.

3. Recycle capability for retreatment of effluent not meeting the discharge requirements of this Section, as determined by effluent testing.

4. Pump for effluent discharge designed to provide adequate discharge flow rate to the selected discharge locations, including diffusion techniques to minimize sediment resuspension and erosion to the lake bottom.

5. All other processes/components (e.g. hydrocyclones, flocculant and coagulant, polymer storage, metering mixing, settling, filtration pumps, etc.).

1.3 SUBMITTALS

A. Contractor shall prepare a Water Treatment Plan including details on all unit processes of treatment equipment, including interconnecting piping and pumps, to be employed in the treatment train. The Contractor shall specify the water treatment method to be used and specify the equipment required for that method. As a minimum, The Water Treatment Plan shall include:

1. Include detailed description of treatment by unit process and monitoring systems installation procedures and maintenance of equipment.

2. Include flow chart or schematic as process and instrumentation diagram of water treatment system processes in sequence with flow direction.

3. Include detailed description of treated water discharge pipeline and temporary outfall. Contractor shall submit a design sketch and location of the discharge end of the pipe depicting these features to the Engineer for approval.

4. Details regarding the types, sizes, and quantities of equipment Contractor proposes to use for water storage and treatment and preparation for discharge. Include detailed specifications on the proposed equipment. Include treatment capacities, performance ratings, and guarantees.

5. Proposed processing area utilization, with emphasis on maintaining compact use of space for all Work. Include size and layout of the Temporary enclosure structure, Water Treatment, Decontamination, Dewatering, and Solids Processing equipment.

6. Equipment arrangement, scaled diagrams and elevations as applicable, which illustrate component location, connections, and utilities.

7. Power system location and capacity, phase, voltage, and service amperage. Mechanical and electrical design drawings stamped by a Professional Engineer, licensed in New York.

8. Include description of emergency procedures to follow when problems arise.

9. Include the following product data:

   a. Catalog data on all water treatment system components.

   b. Safety Data Sheets (SDSs) for all chemical components of the water treatment system.

   c. Treatment media change-out frequency and procedures. Describe process for the characterization and disposal of treatment system media.

   d. Water treatment system manufacturer’s operation and maintenance recommendations.
B. Operation and Maintenance Plan for water treatment systems in accordance with Manufacturer’s requirements. Include a description of the approach required for the decontamination of equipment upon conclusion of treatment activities.

C. Winterization Plan for protection from freezing to allow for continuous operation if applicable.

D. Daily and Monthly water treatment system operation and maintenance records and reports.

E. Licensed Water Treatment Plant Operator’s qualifications. NYS DOH Grade A Certification required.

PART 2 – PRODUCTS

2.1 WATER TREATMENT SYSTEM

A. Supply sufficient materials and equipment to meet the following performance requirements:
   1. Water treatment system to handle influent flow required to perform the Work.
   2. Meet New York State Water Quality Standards permitting criteria.

B. Submit Shop Drawings and Operations and Maintenance Plan:
   1. Water treatment system layout and components including pump locations, pipe sizes, capacities, and grades, surface water control devices, valves, and water disposal methods and locations.

C. Provide and maintain equipment with the ability to meet treated water discharge criteria through the duration of activities that generate wastewater. The Contractor shall treat/pre-treat water for all constituents identified in the New York State Water Quality Standards permitting criteria. Any interruptions in project activities as a result of the Contractor’s inability to achieve required permitted discharge standards will be at the sole expense of the Contractor.

D. Any polymers, flocculants, coagulants or other additives used shall be approved by the Engineer and the Department (Division of Water) and authorized under the final permits.

PART 3 – EXECUTION

3.1 PREPARATION

A. The Contractor is required to meet the special requirements of any permits that have been issued including those identified in the Contract Documents, or those to be obtained by the Contractor. These special requirements as specified by local, state, and/or federal permitting agencies shall have precedence to this Section.

3.2 WATER TREATMENT SYSTEM

A. Install, startup, test, and troubleshoot water treatment system before commencing operation. Do not discharge any water until tests results showing water is below allowable permit limits.
B. Operate water treatment system in accordance with permits, Contract Documents and manufacturer’s recommendations. Update permits with any changes in treatment process, including flow rate, treatment components, treatment media, and additives. The Contractor shall provide a full-time NYS DOH Grade A certified water treatment plant operator at all times plant is in operation.

C. Contractor shall perform all discharge monitoring as required by the NYSDEC Discharge Limits. Concurrent with effluent monitoring sampling, Contractor shall collect two additional samples as directed by the Engineer from upstream components of the treatment system to be analyzed.

D. The Contractor shall design and construct an appropriately sized water treatment system that both meets permit requirements and the treatment capacity necessary to achieve the Contractor’s approved schedule. If it is determined that the design water treatment system capacity is insufficient to maintain work progress and complete the work in accordance with the Contract Documents and the Contractor’s approved schedule, the Contractor is responsible for resizing the system to meet the needs of the Contract at no additional cost to the Department.

E. Monitor, test, and adjust the water treatment system in accordance with the Contractor’s Approved Operation and Maintenance Plan, or as otherwise modified by special regulatory requirements. If there is a conflict between requirements, the more stringent requirement shall prevail. Test water in accordance with Contract Documents and applicable permits.

F. Do not discharge any water until test results showing water is below allowable permit limits and approval to discharge is provided by the Engineer. Discharge of treated water shall be to Willetts Creek and Lake Capri at the permitted outfalls. A flow diffuser at the end of the discharge pipeline into the creek and lake, combined with appropriate erosion control measures will be provided to prevent flow discharge scour and erosion-related impacts to the creek and lake at the point-of-discharge.

3.3 SYSTEM OPERATION AND MAINTENANCE

At all times, Contractor shall comply with the approved Operations and Maintenance Plan for the Work, or as otherwise modified by special regulatory requirements.

A. Contractor shall maintain a full-time qualified Operator (NYS DOH Certified Grade A), approved by the Engineer, at the site in charge of all aspects of system performance and compliance. Operators shall have at least 5 years of experience in the operation and maintenance of water treatment systems at sediment remediation or equivalent projects.

B. The Contractor shall maintain management, operation, and maintenance records; and prepare management, operation, and maintenance reports. All records and copies of reports shall be turned over to the Engineer within 5 days after contract completion.

C. Contractor shall submit Daily Logs each morning, which cover the prior 24-hours’ work and Monthly Logs on the first Monday of each month for the preceding month’s work. Daily and Monthly Logs shall note any significant performance or compliance problems during the preceding period, the measures undertaken to correct those problems, and a running summary or such prior problems until their resolution.
D. Operate water treatment system until all water generated has been treated and discharged in accordance with Contract Documents.

E. Provide 24-hour supervision of water treatment system by personnel skilled in operation, maintenance, and replacement of system components. Make required repairs and perform scheduled maintenance.

F. Fill fuel tanks before tanks reach 25 percent capacity.

3.4 WINTERIZATION

A. If Contractor is required to work in winter months, water treatment systems and all supporting areas shall be winterized to protect from freezing to allow for continuous operation. Submit a Winterization Plan for Engineer approval prior to winterization. Winterization shall include protecting the water treatment system pipelines, pumps, valves, tanks, generators, and all other necessary equipment from freezing and ice accumulation with enclosures, insulation, conductive heating, or other approved equivalent. Winterization is optional and shall only be implemented with Engineer approval.

3.5 EQUIPMENT REMOVAL AND SITE RESTORATION

A. Remove water treatment system only after all water has been treated. The Contractor is responsible for management of all water generated during remedy construction.

B. At the conclusion of the work and prior to removing equipment from the site, decontaminate equipment or dispose of project waste in accordance Section 00003 HEALTH AND SAFETY.

END OF SECTION
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SECTION 02 73 00 - SOLIDS PROCESSING

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes Contractor requirements for segregating and dewatering excavated soil and dredged sediment, to maximize solids content for disposal to an appropriate disposal facility.

B. Contractor shall install a solids processing system as depicted on the Drawings, or Engineer-approved equal, and as set forth in this specification.

C. Contractor shall be responsible for the construction, operation, maintenance, and performance specifications as noted in Drawings and Technical Specifications.

1.2 PERFORMANCE REQUIREMENTS

A. Contractor shall be responsible for the selection, design, furnishing, construction, installation, commissioning, testing, operation, maintenance, and performance of the solids processing system and all equipment, materials, containment and staging areas, access ways, and other supporting features necessary to complete the Work specified herein.

B. Contractor may select to complete the dewatering Work by methods including, but not limited to, the following:
   1. Gravity dewatering
   2. Filter press (in a temporary enclosure)
   3. Geotextile tubes

C. Other means of dewatering solids may be proposed in the Contractor’s Dredge Work Plan, but not executed until work plan approval. If other means of dredging in the Contractor’s Dredge Work Plan are approved by the Engineer, the requirements of this specification will apply.

D. Contractor is responsible for providing solids processing activities that dewater the solids to a state of passing EPA’s paint filter method. The dewatering process shall eliminate all free liquids from solids prior to loading for disposal and shall provide any additional solids processing using a combination of additional dewatering and mixing with drying agents or cement to provide geotechnical suitability of solids that meet the receiving landfill’s disposal requirements. Failure to meet Engineer approved disposal facility acceptance criteria shall result in a modification to the Contractor’s means and methods to achieve acceptable conditions at no additional cost to Department.

E. Geotechnical information about the existing soils and sediment, and results of treatability testing is provided with these Contract Documents.

F. Processed solids shall be characterized and disposed of at an approved offsite landfill in accordance with Section 00015 OFFSITE TRANSPORTATION AND DISPOSAL.
G. Debris shall bypass solids processing and be stockpiled and disposed in accordance with Section 35 20 23 DREDGING.

1.3 DEFINITIONS

A. Solids
   1. Excavated material, including soil excavated in accordance with Section 00200 EXCAVATION, and dredged material including sediment (not including debris) removed in accordance with Section 35 20 23 DREDGING.

B. Solids and Water Processing Area
   1. Shall include both the Middle School processing area and the High School processing area as shown on the Drawings. All stockpiling, solids dewatering, and water treatment shall be completed in the solids and water processing area.

1.4 SUBMITTALS

A. Contractor shall prepare a Solids Processing Plan including details on all unit processes (i.e., primary processing components) of processing equipment, including interconnecting piping and transfer equipment, to be employed in the process train. The Contractor shall specify the dewatering method to be used and specify the processing equipment required for that method. As a minimum, The Solids Processing Plan shall include (items listed shall apply to gravity dewatering, filter press, and geotextile tubes, or approved equal, unless otherwise noted):
   1. A written description of the major elements of Work involved and the operation and maintenance procedures at the solids processing area.
   2. A detailed description of the means and methods, including all equipment and personnel, for solids processing, dewatering, and preparation for disposal.
   3. Details regarding the types, sizes, and quantities of equipment Contractor proposes to use for solids processing and preparation for disposal. Include detailed specifications on the proposed equipment. Include processing capacities, performance ratings, and guarantees.
   4. A flow chart depicting the processing steps and illustrating the various process streams, including all inputs and outputs and an overall material balance.
   5. Proposed solids processing area utilization, with emphasis on maintaining compact use of space for all Work. Include size and layout of the Decontamination, Dewatering, and Wastewater Treatment Pad.
   6. Equipment arrangement, scaled diagrams and elevations as applicable, which illustrate component location, connections, and utilities.
   7. Power system location and capacity. Mechanical and electrical design drawings stamped by a Professional Engineer, licensed in New York.
   8. Product data, mixing methodology, dosage rate, weight receipts and safety data sheets for all proposed dewatering and stabilization agents.
   9. Manufacturer’s operation and maintenance recommendations.
   10. Temporary enclosure structure footprint and relative position of equipment, if required.
   11. Should the filter press or geotextile tube solids processing methods be selected, provide qualifications for a technician with a minimum of 5 years of experience operating the chosen process for sediment remediation or similar projects.
B. The Contractor shall submit an Operation and Maintenance Plan for the system and submit the following operation and maintenance information to verify continuing efficient operation and limit break-downs and other work stoppages:
1. Daily operation and maintenance records and reports.
2. Monthly operation and maintenance records and reports.
3. Spare parts lists for major pieces of equipment.
4. Preventative maintenance schedule for major pieces of equipment.

C. Winterization Plan for protection from freezing to allow for continuous operation

1.5 QUALITY ASSURANCE

A. Contractor shall maintain at or near the Site, equipment and personnel for performing moisture content analysis of dredge slurries, stockpiles, geotextile tubes, or filter cake at different points in the system. Contractor shall perform moisture content analysis on a daily basis as required to assess performance of the solids processing system and as directed by the Engineer.

B. Contractor shall perform testing of liquid turbidity to monitor and maintain efficiency of the liquids used in the solids processing system.

C. Contractor shall complete paint filter tests on all dewatered soils and sediment prior to offsite transportation and disposal. Paint filter tests shall be performed at 3 sample locations per 100 cubic yards. The sample locations shall be jointly selected with the Engineer. The frequency of sampling may be revised by the Engineer.

PART 2 – PRODUCTS

2.1 GENERAL MATERIALS

A. Contractor shall be responsible for the selection of all types, sizes, and quantities of equipment and vessels to perform the Work. Equipment shall meet the minimum specified requirements and meet the production requirements of the Work.

B. Materials and equipment chosen for this work shall be adequate in capacity for required usage, shall not create unsafe conditions, and shall meet requirements of applicable codes and standards and approval of the Engineer.

C. Materials shall be new and unused unless otherwise approved by the Engineer. Approval for such items may be withheld due to excess wear, inappropriate size, or other factors which may compromise efficient use of the item.

D. Transfer equipment shall be of a design to resist clogging, prevent equipment damage in the event of clogging, and allow orderly and prompt removal of obstructions.

2.2 DECONTAMINATION, DEWATERING, AND WASTEWATER TREATMENT PAD

A. The Decontamination, Dewatering, and Wastewater Treatment Pad shall be constructed at the solids and water processing area to isolate stored and processed contaminated material
from the environment. Contractor shall construct the pad in accordance with details provided in the Drawings or approved equal.

B. The Decontamination, Dewatering, and Wastewater Treatment Pad shall include a sump to accommodate surface run-off from solids and water processing area in accordance with the Drawings. Sump shall be sized for storage of a 2-year 24-hour storm event (3.52” rainfall) over the surface of the solids and water processing area for a period of 24 hours. Run-off shall be directed to the wastewater treatment system for treatment and discharge.

C. The Decontamination, Dewatering, and Wastewater Treatment Pad as shown in the Drawings shall include:
   a. A high-density polyethylene liner in accordance with Section 02 56 13 WASTE CONTAINMENT GEOMEMBRANE.
   b. Jersey barriers surrounding the stockpile, a minimum of 3 feet in height. Vehicle access points shall also be bermed.
   c. Nonwoven geotextile and aggregate materials to provide a well-drained pad as shown on the Drawings.
   d. The liner system shall be sloped, using a sand base, to a sump to allow collection of leachate and stormwater.

2.3 GRAVITY DEWATERING

A. Gravity Dewatering shall be completed on the Decontamination, Dewatering, and Wastewater Treatment Pad. The pad shall be sized large enough for gravity dewatering and stockpiling solids for disposal. The Contractor shall submit, as part of the Solids Processing Plan, the number of days solids will be stockpiled on the pad for gravity dewatering.

B. Site shall be graded to allow for water to drain from solids stockpiles to Decontamination, Dewatering, and Wastewater Treatment Pad sump.

C. Overturn stockpiles on dewatering pad from top to bottom 24 hours after placement.

D. Contractor shall act to minimize rainwater impact on solids moisture content during gravity dewatering. Measures shall include covering stockpiles or longer dewatering times. At minimum, the Contractor shall cover stockpiles using plastic sheeting prior to rain events which are forecasted to have ½ inch of precipitation or greater.

E. Solids that pass paint filter test shall be transported offsite for disposal but shall meet landfill geotechnical requirements regarding workability for placement.

F. Excess moisture shall be allowed to gravity drain from material for a minimum of 24 hours before applying amendments.

G. Solidification amendments (such as Portland cement Type 1 or approved equal) may be added up to the maximum rate listed, and thoroughly mixed with solids stockpiles, as needed to meet landfill requirements. Higher rates shall be approved by Engineer. The Department shall bear no costs associated with the additional processing or management of solids to meet landfill geotechnical requirements, including application of amendment above the maximum allowed rate, unless approved by Engineer.
1. For dry weight of amendment added to wet weight of solids: Maximum 10% of solids wet weight unless otherwise approved by the Engineer.

H. Contractor shall provide all sediment processing products such as Portland cement and dosage rates up to the maximum allowed, including approaches to track, verify, or adjust dosage as needed.

I. Contractor shall allow additional dewatering and amendment cure time on the pad, minimum overnight, following the application and mixing of amendments for off-site disposal.

J. Contractor shall provide means and methods for reducing nuisance odor, dust and noise.

2.4 FILTER PRESS DEWATERING

A. The filter press design shall include facility components for separation of coarse and fine-grained media, management of separate media, and dewatering of fine-grained sediment.

B. Contractor shall provide sediment processing products and dosage rates, including approaches to track, verify, or adjust polymer feed rate and other amendments for optimal dosage.

C. Contractor shall provide means and methods for reducing nuisance odor, dust and noise.

D. Contractor shall provide and maintain a Tensioned Fabric Structure (Section 13 31 33 TENSIONED FABRIC STRUCTURES) to manage fugitive dust, odors, chemical emissions, and noise from the filter press system. The temporary enclosure shall:

1. Include a temporary building or tent such as fabric structures.
2. Include installation and removal of temporary enclosure.
3. Include adequate area and height to conduct dewatering and processing of solids.
4. Shall provide negative air pressure management systems for control of dust and odors.
5. Protect mechanical and electrical equipment from being contaminated by dust, dirt and moisture.
6. Maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

E. Mechanical and electrical design drawings shall be stamped by a Professional Engineer, licensed in New York.

2.5 GEOTEXTILE TUBE DEWATERING

A. Geotextile tubes shall be constructed with a Tencate Geotube® GT500 fabric, or approved equivalent. The geotextile tube shall be fabricated from a high tenacity permeable fabric to allow water passage through the filter tube. The Geotube material shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

B. Contractor shall furnish all labor, materials, equipment, polymer, polymer feed system, and incidentals, specified, and required in connection with deployment, testing, and filling of the geotextile tube, in accordance with the lines, grades, design, and dimensions shown on the Drawings as Technical Specifications.
C. Geotextile tube shall be constructed atop the Decontamination, Dewatering, and Wastewater Treatment Pad to provide sufficient voided area for filtrate drainage at no additional expense to Department.

D. Contractor shall furnish the geotextile tube by positioning it on a prepared surface that is level across the width of the geotextile tube with a maximum slope of 0.5% in the overall length direction of the geotextile tube. The geotextile tube shall be filled with material to a height not to exceed the manufacturer’s specifications.

E. Contractor shall provide sediment processing products and dosage rates, including approaches to track, verify, or adjust polymer feed rate and other amendments for optimal dosage.

F. Contractor shall provide supplemental reagent addition dosing and mixing methods, if required.

G. Contractor shall provide a site plan, geotextile tube container layout, mass balance system showing density, percent solids, and flow measurements, filling method, and methods for collecting all filtered water shall be described in the Contractor’s Solids Processing Plan.

H. Contractor shall provide means and methods for reducing nuisance odor, dust and noise.

PART 3 – EXECUTION

3.1 GENERAL

A. These execution specifications shall apply to all solids processing methods specified herein.

B. The Contractor shall provide all supervision, labor, tools, materials, utilities, equipment, services, and appurtenances necessary for, or incidental to, solids processing and related Work shown on the Drawings and described herein.

C. Contractor shall make all arrangements and pay all service, connection, and other fees associated with obtaining utilities for the work.

D. Contractor shall be advised that several light poles exist in the high school parking lot treatment area. Contractor shall protect light poles. Contractor may temporarily relocate, protect, and replace light poles, as needed, at their expense.

E. Contractor shall conduct dewatering and/or stabilization as required to meet disposal requirements. Contractor shall coordinate with the approved disposal facility regarding requirements for disposal, i.e. paint filter test and/or any other requirements.

F. Contractor shall at all times maintain sufficient personnel, materials, and equipment to maintain effective operation of the solids processing systems.

G. Contractor shall perform all preventative maintenance, repairs, and replacement of system components as required.
H. At all times, the Contractor shall maintain the process systems and working area in a clean and orderly condition, free of debris, unused materials, and hazards of any kind.

I. Safety guards and placards shall not at any time be removed from equipment unless equipment is locked and tagged out of operation.

J. Fugitive dust, odors, chemical emissions, and noise shall be controlled according to Section 00003 HEALTH AND SAFETY and Section 00010 TEMPORARY FACILITIES AND CONTROLS.
   1. Contractor shall locate equipment to minimize noise and odor impacts due to prevailing wind direction.
   2. Plastic sheeting or equivalent will be used to minimize odor from gravity dewatering stockpiles.
   3. Contractor is responsible for planning, implementing, and maintaining effective control measures as may be required. Control measures shall include installation of a tensioned fabric structure over the processing area if this method is selected by the Contractor. If Contractor fails to control their methods of operation or the noise levels of his equipment, then Contractor shall, at their expense, construct other noise minimizing structures and/or take other measures to prevent noise disturbances. This may include re-locating equipment.
   4. Contractor shall be advised that killed fish commonly sink; and therefore, may become debris during dredging. If the filter press method is used, dredged/mangled fish flesh should be specifically pulled off screens and immediately placed in airtight receptacles so that it doesn’t mix with granular materials and cause odor.

3.2 SYSTEM TESTING AND START-UP

A. Prior to start of full-scale processing, Contractor shall demonstrate for the Engineer’s approval the operation of all system components.

B. Contractor shall correct any problems as directed by the Engineer.

C. Processing shall not commence until all components are approved.

3.3 SYSTEM OPERATION AND MAINTENANCE

A. At all times, Contractor shall comply with the approved Operations and Maintenance Plan for the Work.

B. Contractor is responsible for the containment and cleanup of all spills and contamination resulting from their operations.

C. Contractor shall maintain a qualified NYSDOH Certified Grade A Operator, approved by the Engineer, at the site in charge of all aspects of system performance and compliance. Operators shall have at least 5 years of experience in the operation and maintenance for the chosen dewatering method, chemical precipitation system including coagulation, flocculation and clarification units, and hazardous waste site remediation or similar work.
D. The Contractor shall maintain management, operation, and maintenance records; and prepare
management, operation, and maintenance reports. All records and copies of reports shall be
turned over to the Engineer within 5 days after contract completion.

E. Conduct daily observation of solids processing system and monitoring system. Make
required repairs and perform scheduled maintenance.

F. Contractor shall submit Daily Logs each morning, which cover the prior 24-hours’ work and
Monthly Logs on the first Monday of each month for the preceding month’s work. Daily and
Monthly Logs shall note any significant performance or compliance problems during the
preceding period, the measures undertaken to correct those problems, and a running summary
or such prior problems until their resolution.

G. Operate solid processing system continuously until work within dewatered areas is complete
in accordance with Contract Documents.

3.4 CONTRACTOR ADJUSTMENTS

A. Operational adjustments:
   1. Daily operational adjustments shall be noted on the Daily Log sheets.
   2. Operational adjustments shall be reported to the Engineer as required by the
      Engineer.

B. Process adjustments:
   1. Significant adjustments include removal or addition of unit process components or
      significant elements governing unit process performance, and any adjustment that
      reduces the sustained operation of equipment below the rate proposed in the initial
      Solids Processing Plan.
   2. If the Contractor decides that an adjustment is required to improve performance or
      reduce costs of processing, the Contractor may present a proposal describing the
      changes requested for review by the Engineer. This proposal shall be accompanied
      by data, calculations, and manufacturer guarantees as needed to support the
      application.
   3. The Engineer may request additional information prior to approval.
   4. Adjustments shall not be made without the prior approval of the Engineer.

3.5 WINTERIZATION

A. If Contractor selects to work in winter months, the solids processing system and all
   supporting areas shall be winterized to protect from freezing to allow for continuous
   operation. Submit a Winterization Plan for Engineer approval prior to winterization.
   Winterization shall include protecting the solids processing pipelines, pumps, valves, tanks,
   generators, filter presses, geotextile tubes, and all other necessary equipment from freezing
   and ice accumulation with enclosures, insulation, conductive heating, or other approved
   equivalent. Winterization is optional and shall only be implemented with Engineer approval.
3.6 EQUIPMENT REMOVAL AND SITE RESTORATION

A. Remove solids processing system after operations are discontinued and Work within the processing area is completed. Do not remove solids processing systems until Engineer has approved.

B. At the conclusion of work, Contractor shall decontaminate and remove all equipment, restore the site to original conditions, and conduct confirmatory sampling as required by the Drawings and Section 01 45 25 TESTING.

C. Prior to removing equipment from the site, the Contractor shall decontaminate all equipment or dispose of project waste in accordance with Section 00003 HEALTH AND SAFETY.

D. All disturbed areas shall be restored according to the Drawings and Section 01 74 24 SITE RESTORATION.

E. Confirmation sampling shall be collected beneath processing areas prior to and after remedial work in accordance with Section 01 45 25 TESTING.

F. Repair damage caused by solids processing system or resulting from failure of systems to protect property. Repair school parking lot in accordance with Section 32 12 16 ASPHALT PAVING.

END OF SECTION
SECTION 13 31 33 - TENSIONED FABRIC STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

Both designated sediment processing areas (Middle School & High School) shall be enclosed via a tensioned fabric structure (TFS). The CONTRACTOR shall size, design, permit, install and disassemble upon completion of the work the two (2) TFSs based on their approved operations work plan.

1.2 SECTION INCLUDES

A. Delegated design of tensioned fabric structures.
B. Structure supporting tensioned fabric.
C. Cables and fittings.
D. Tensioned fabric.

1.3 RELATED REQUIREMENTS

A. 02 56 13 – Waste Containment Membrane
B. 02 72 00 – Water Treatment
C. 02 73 00 – Solids Processing

1.4 SUBMITTALS

A. Qualification Data: For Installer, fabricator and design engineer.
B. The Delegated Design Submittal shall include:
   1. Certification of compliance with CONTRACTOR’s performance requirements and delegated design criteria established in the approved work plan
   2. Analysis data and drawings signed and sealed by the qualified NYS structural professional engineer responsible for their preparation
   3. Plans, elevations, sections, mounting heights, and frame assembly details
   4. Frame member sizes and required wall thicknesses.
   5. Welding requirements.
   6. Details of bolted and pin connections for frame assembly.
   7. Required sizes of bolts, pins, plates and tubing.
   8. Verify the fabric meets minimum engineering requirements.
   9. Details fabric attachment methods and identify thickness of all membrane plates, clamps and other attachment components.
   10. Cable sizes and pretension requirements.
11. Anchor-bolt plans before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach the tensioned fabric structures to foundation. Indicate column reactions at each location.

C. Product Data: Provide product criteria, characteristics, accessories, jointing and seaming methods, and termination conditions.

D. Shop Drawings:
   1. Include plans, elevations, sections, mounting heights, and frame assembly details.
   2. Member sizes with wall thickness.
   3. Footing layout and foundation design.
   4. Show intended fabric attachment hardware and details.
   5. Identify direction, details and locations of fabric seams.
   6. Show details of fabric dimensions including length of spans, sag curvature and actual shaded area.

E. Samples:
   1. Tensioned Fabric: 8.5-inch x 11-inch samples of tensioned fabric for appearance, texture, finish and light transmittance.
   2. Structure Finish: Manufacturer's standard sample size on metal for color, texture and gloss.
   3. Accessories: One of each exposed accessory in selected color and finish.

F. Manufacturer's Installation Instructions: Indicate special preparation of substrate, attachment methods, and perimeter conditions requiring special attention.

G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

H. All applicable building permit applications, and subsequent permits, if required.

I. Maintenance Data: For tensioned fabric structures including:
   2. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.

1.5 QUALITY ASSURANCE

A. Fabric Manufacturer's Qualifications: Company specializing in manufacturing the products specified in this section with minimum 5 years of documented experience in tensioned fabric manufacture.

B. Delegated designer Qualifications: Professional Structural Engineer with 5 years of documented experience in design of TFS and licensed in the state of New York.

C. Fabricator/Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years experience on projects of similar size, complexity and fabric.
1.6 DELIVERY, STORAGE, AND HANDLING

A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Delegated design Criteria.

1.7 WARRANTY

A. Fabric Manufacturer Warranty: Provide manufacturer's standard 15 year material replacement warranty for water resistance and tearing of fabric.

PART 2 - PRODUCTS

2.1 FABRICATORS/INSTALLERS

A. Delegated design is based on tensioned fabric structures being designed, engineered, fabricated and installed by one of the following qualified fabricator/installers.
   1. Birdair, Amherst, NY
   2. Eide Industries Inc, Cerritos, CA.
   3. Structurflex, Kansas City, MO.
   4. Fabritec, Dallas, TX.

B. Substitutions for fabricators/installers other than those listed above:

   Include qualification data indicating 10 projects of similar scope and complexity with same type of structure supporting tension fabric and tensioned fabric as specified.

2.2 FABRIC MANUFACTURERS

A. Specification is based on Tenara Fabric by SEFAR.
   1. Substitution requests for products by manufacturers other than SEFAR shall:
      a. Include side by side comparison of performance, design criteria and features listed for both specified product and proposed substitution.
      b. Include full set of product data and samples for both specified product and proposed substitution.

2.3 DESCRIPTION

A. Engineering, fabrication and installation of tensioned fabric, structure supporting tensioned fabric, and all associated cables, fittings and accessories.

2.4 PERFORMANCE AND DESIGN CRITERIA

A. Include adequate area and height to conduct dewatering and processing of solids.

B. Shall provide negative air pressure management systems for control of dust and odors.

C. Protect mechanical and electrical equipment from being contaminated by dust, dirt and moisture.
D. Maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

E. Design structure supporting the tensioned fabric to be self supporting and not rely on fabric for structural stability.

F. Design the precise interface geometry, determination, reaction loads imposed on structural steel framing, anchoring loads, connection details, interfaces and seam layouts.

G. Include large deflection numerical shape generation that will insure a stable, uniformly stressed, three dimensionally curved shape that is in static equilibrium with the internal pre-stress forces and is suitable to resist all applied loads.

H. Use large deflection finite element method structural analysis of the membrane system under all applicable wind and seismic loads.

I. Design connections including bolt, weld and ancillary member sizing.

J. Consult biaxial fabric test specification; include interpretation and fabric compensation determination.

K. Include accurate generation of the two dimensional compensated fabric templates required to generate the three dimensional equilibrium shape.

L. Design tensioned fabric structure:
   1. To withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7 including but not limited to live load, dead load, snow load, seismic loads, and wind loads.
   2. In accordance with fabric manufacturer's requirements for warranted installation.
   3. To allow for thermal movements from ambient and surface temperature changes of 120 deg F, ambient; 180 deg F, material surfaces.
   4. To limit corrosion and prevent galvanic action by isolating metals and other materials from direct contact with incompatible materials.
   5. To provide criteria on which the design is based:
      a. Expected Fabric Life: 10 years.

M. Solar Reflectance Index (SRI): minimum values dictated by basis of design fabric, calculated in accordance with ASTM E1980, Approach II.

2.5 MATERIALS

A. Structure Supporting Tensioned Fabric:
   1. General: Provide structural components and accessories in accordance with fabricator/installers standard practice unless specified otherwise. Provide shapes and profiles as determined in CONTRACTOR’s approved work plan.
   2. Design structure with steel, stainless steel or aluminum in accordance with delegated design of tensioned fabric structure.
3. Features:
   a. Profile: As indicated in CONTRACTOR’s approved work plan.
   c. Finish:
      1) Hot dipped galvanized finish.

B. Cables and Fittings:
   1. Fittings:
      a. Galvanized Steel Fittings: Basis of Design Product: Wire Rope and end fittings by
         The Crosby Group or PFEIFER Wire Rope & Lifting. Comparable and substituted
         products will be judged based on the specified performance and design criteria,
         features, and warranty.
         1) Performance Criteria:
            a) Connectors of types indicated or required, fabricated from hot dip
               galvanized steel, and with capability to sustain, without failure, a load
               equal to minimum breaking strength of cable with which they are
               used.
         2) Features:
            a) Industrial Finish.
            b) Long term rust reduction.
   2. Structural Cable:
      a. Galvanized Wire Rope: Complying with ASTM A 603; strand configuration,
         diameter, cable constructions and minimum breaking load to be selected by
         delegated design engineer.

C. Tensioned Fabric:
   1. Basis of Design Product: Tenara Fabric by SEFAR. Comparable and substituted products
      will be judged based on the specified performance and design criteria, features, warranty,
      and qualifications.
      a. Performance Criteria:
         1) Fire-Test-Response Characteristics: Flame-Resistance Ratings: Passes
            NFPA 701.
         2) Surface Burning Characteristics: Class A; Flame Spread Index of 25,
            maximum; Smoke Developed Index of 450, maximum; when whole system
            is tested in accordance with ASTM E84.
         3) Tenara 4T40HF Light Transmission per ASTM D 1003:
            a) Degree of Transmission: 38%.
            b) Degree of Reflection: 59%.
            c) Degree of Absorption: 3%.
         4) Tenara 4T20HF Light Transmission per ASTM D 1003:
            a) Degree of Transmission: 19%.
            b) Degree of Reflection: 78%.
            c) Degree of Absorption: 3%.
         5) Maximum Tensile Strength per ASTM D4851:
            a) Warp: 456 pounds per inch
            b) Weft: 456 pounds per inch.
      b. Features:
         1) Product Contents: PVC Free.
2) Tenara fabrics are a flexible and pliable ePTFE scrim with a fluoropolymer (PTFE) coating to increase performance.
3) Fabric Material: ePTFE (e polytetrafluorethylene).
4) Coating Material: 100% Fluoropolymer.
5) Thickness: 0.002 Inch
6) Weight: 31.9 oz/square yard.
7) UV-resistant and colorfast.
8) Plasticizer Free.
9) Dirt and Water Repellent.
10) Color: Bright white at time of installation.
11) Manufactured in the United States

2.6 ACCESSORIES

A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.

PART 3 - EXECUTION

3.1 EXAMINATION / PERMITTING

A. Verify existing conditions meet the manufacturer's requirements before starting work.
B. CONTRACTOR shall apply for, and obtain, all required building permits.

3.2 PREPARATION

A. Prepare surfaces to receive work in accordance with manufacturer's instructions.
B. CONTRACTOR shall install a Waste Containment Geomembrane (SPEC 02 56 13) under the two TFS.

3.3 INSTALLATION

A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
B. Structure Supporting Tensioned Fabric:
   1. Clean and strip primed steel items to bare metal where site welding is required.
   2. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.
   3. Install items plumb and level, accurately fitted, free from distortion or defects.
   4. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
   5. Field weld components indicated.
   6. Perform field welding in accordance with AWS D1.1/D1.1M.
   7. Obtain approval prior to site cutting or making adjustments not scheduled.
   8. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.
C. Cables and Fittings: Install in accordance with delegated design documents and manufacturer's instructions.

D. Tensioned Fabric: Install in accordance with delegated design documents and manufacturer's instructions.

3.4 INSTALLATION TOLERANCES

A. Maximum Variation From Plumb: 1/2 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/2 inch.

C. Maximum Out-of-Position: 1/2 inch.

3.5 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 and Structural drawings.

3.6 PROTECTION

A. Protect installed work as required by the manufacturer to maintain product performance, design criteria and warranty.

3.7 DISSASSEMBLY

A. CONTRACTOR shall disassemble and remove the two TFS from the site as part of demobilization ahead of site restoration.

END OF SECTION
SECTION 13 50 00 – SPECIAL INSTRUMENTATION

PART 1 GENERAL

1.1 SUMMARY

A. This section includes fabricating, furnishing, installing, protecting, and maintaining all required monitoring instrumentation required to implement the Infrastructure Protection Plan in accordance with Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION.

1.2 PERFORMANCE REQUIREMENTS

A. Work covered by this Section includes the furnishing of all labor, materials and equipment required for installation of the instrumentation (including purchase, supply, and maintenance of all read-out devices) and monitoring activities required to implement the Infrastructure Protection Plan in accordance with Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION. This also includes timely replacement of any malfunctioning instrumentation during the monitoring period. The instrumentation includes inclinometers, high-precision conventional survey, and associated read-out devices and appurtenances as well as construction aids to install all special instrumentation.

B. The Contractor shall monitor the instrumentation and provide the data and calculations to the Engineer. The Contractor shall subcontract the services of a New York State licensed land surveyor with qualifications that include installation and monitoring of special instrumentation and high precision surveying of structures for structure deflection monitoring purposes. Subcontractors are required to utilize equipment and personnel that are independent of the Contractor’s operations.

C. Structures to be monitored and monitoring locations shall be indicated in the Infrastructure Protection Plan. The following monitoring installations are required at a minimum as part of implementing monitoring activities for the Infrastructure Protection Plan:

1. Installation of inclinometers at Stop & Shop shopping center.
2. Installation of conventional survey monuments at existing structures adjacent to the work as shown on the Drawings or as required in the Contractor’s Infrastructure Protection Plan.
3. Infrastructure/structures to be monitored at a minimum include: decks, sheds, docks, fences, pools, play sets, garages, bulkheads, active and abandoned utility crossings in properties abutting Willetts Creek, Middle School and High School footbridges, stone bridge, public utilities within the project site, and infrastructure located at the Stop & Shop Shopping Center.

1.3 SUBMITTALS

A. Product Data

1. Inclinometers
2. Conventional Survey Monuments
B. Pre-installation test results

C. Installation Procedures and Installation Records, including the following:
   1. Shop Drawings that detail the precise locations for installing the inclinometer casings, including all installation details using a borehole diagram.
   2. Shop Drawings that provide installation details for conventional survey monuments, including all mounting details.
   3. Shop Drawings will include dimensions for all features demonstration position and operation of the special instrumentation. Vertical position will be included in a cross section view relative to existing grade and distinguishing structure features and using project vertical datum.
   4. The manufacturer’s technical specifications indicating that the inclinometers meet the minimum requirements outlined in this Section.
   5. Relevant health and safety measures applicable to special instrumentation installation and removal.
   6. Detailed narrative descriptions of the proposed installation procedures for the special instrumentation to supplement Shop Drawings.
   7. Manufacturer’s installation requirements and Contractor’s statement that installations have met manufacturer requirements, including identification and description of any Contractor’s construction aids used for mounting.
   8. Methods for demarcating the location of special instruments and providing for high visibility.
   9. Proposed methods for reinstalling the instruments or appurtenances if they are damaged, fail to operate properly, or otherwise require temporary removal and reinstallation.
   10. Signed drawing and AutoCAD file providing as-installed survey monitoring locations and inclinometers with table providing horizontal and vertical position coordinates relative to project datums.

D. Baseline pre-construction x,y,z-coordinate readings (using project datums) for all monitoring locations in an Excel table.

E. Daily and weekly Deflection and Position Monitoring Reports. Reports shall include an Excel workbook of all deflection and position monitoring, including graphical summary of structure incremental and cumulative position changes.

PART 2 PRODUCTS

2.1 GENERAL

A. All special instrumentation monitoring instruments and appurtenances shall be new (not leased or rented).

B. High visibility monitoring locations. All optical survey targets, survey monuments, and will be brightly colored or flagged for ease of identification, including markers or orange construction paint to provide visibility for non-Contractor personnel to identify locations from up to 100 feet.

C. Provide lightning protection and appropriate grounding for sensors and data logging units in full accord with manufacturer’s recommendations.
D. Provide all connections of sensors to data loggers.
E. Provide readout units for each type of instrument.
F. Provide sufficient cable lengths and appurtenances to enable secure and reliable connections of both the devices and ports for data loggers.
G. Provide all required supporting materials.

2.2 SURVEY EQUIPMENT
A. Surveying shall be in accordance with Technical Specification Section 00004 SURVEYING with additional requirements for structure monitoring in this Section, including the higher accuracy for structure monitoring, and higher precision than conventional survey procedures. For higher precision, a fixed rod mounted to a tripod or equivalently constrained measurement to maximize repeatability of measurement procedures, shall be required, as approved by the Engineer.

2.3 INCLINOMETERS
A. Use probe-style inclinometers DGSI Probe 5030250, or Engineer approved equivalent inclinometer, installed in vertical casing behind existing structures to monitor movement.

2.4 DATA LOGGERS
A. Use data loggers for inclinometers. Provide a written manufacturer-certified statement that data loggers and associated instrumentation are in accordance with manufacturer specifications to the Engineer.

2.5 CONVENTIONAL SURVEY MONUMENT
A. Conventional survey monuments shall be a fixed, sturdy, survey monitoring point installed on existing structures. Shall provide repeatable and precise monitoring of the survey targets during the period of construction. Monuments shall be high quality, using high-visibility mounts or reference flagging, and provide a secure installation by rigid connectors rather than adhesive or epoxy.

PART 3 EXECUTION

3.1 PRE-INSTALLATION ACCEPTANCE TESTS
A. When instruments are received, the Contractor's instrumentation personnel shall perform pre-installation acceptance tests to ensure that the instruments, readout units, and wireless transmission are functioning correctly prior to installation. Pre-installation acceptance tests shall include relevant items from the following list:
1. Examine factory calibration curve and tabulated data, to verify completeness.
2. Examine manufacturer's final quality assurance inspection check list, to verify completeness.
3. Check cable length.
4. Check tag numbers on instrument and cable.
5. Check, by comparing with procurement document that model, dimensions, and materials are correct.
6. Bend cable back and forth, at point of connection to instrument, while reading the instrument, to verify connection integrity.
7. Perform resistance and insulation testing, in accordance with criteria provided by the instrument manufacturer, using a gage insulation or circuit tester that applies 2 volts or less for resistance testing and 15 volts or less for insulation testing.
8. Verify that all components fit together in the correct configuration.
9. Check all components for signs of damage in transit.
10. Check that quantities received correspond to quantities ordered.
11. Verify that the wireless data transmission is occurring properly and there are no issues with interference from other electronic devices.
12. Complete these steps as a checklist for each instrument and submit to Engineer.

B. During pre-installation acceptance testing of each instrument the Subcontractor’s instrumentation personnel shall complete a pre-installation acceptance test record form.

C. An instrument that fails the specified pre-installation acceptance test shall be repaired such that it passes a subsequent pre-installation acceptance test or shall be replaced by an identical instrument at no additional cost to the Department.

D. The Contractor shall not perform work if monitoring system is not functional. Delays associated with non-working monitoring system shall be borne by the Contractor.

3.2 GENERAL

A. The Contractor's instrumentation personnel shall install instruments that remain fully functional over the desired period. Install instruments in accordance with the Contractor's detailed step-by-step procedures that were submitted and reviewed by the Engineer. Any component that fails to give reliable readings shall be replaced by the Contractor at no additional cost to the Department.

B. The Subcontractor shall notify the Engineer at least 24 hours prior to installing each instrument.

C. Monitoring performed by the Contractor is subject to the review of the Engineer. The Contractor will make appropriate changes in procedures or other necessary accommodations in the presentation of data to allow for a timely review by the Engineer.

D. As each instrument is installed, an installation record sheet shall be prepared, including appropriate items from the following list (items 6, 8, 9 are specific to inclinometers):
   1. Project name.
   2. Contract name and number.
   3. Instrument type and number, including readout unit.
   4. Location in horizontal position and elevation.
   5. Personnel responsible for installation.
   6. Plant and equipment used, including diameter and depth of any drill casing or augers used.
   7. Date and time of start and completion.
8. Spaces on record sheet for necessary measurements or readings required at hold points during installation to ensure that all previous steps have been followed correctly, including instrument readings made during installation.
9. Type of backfill used.
10. As-built location in horizontal position and elevation.
11. Weather conditions at the time of installation.
12. A space on record sheet for notes, including problems encountered, delays, unusual features of the installation, and details of any events that may have a bearing on instrument behavior.

3.3 DELIVERY, STORAGE, AND HANDLING

A. Prior to installation, store special sensors and accessory hardware in a dry location protected from direct sunlight, moisture, theft, extreme temperatures (>90 and <20 degrees Fahrenheit [°F]), physical, and chemical hazards.

B. Special instruments will be calibrated and in working order at the time of installation and will be verified on site by the Engineer, prior to installation; therefore, all instrumentation must be verified and ready in sufficient time to provide replacements prior to the start of sheet pile installation and dredging.

3.4 INSTRUMENT PROTECTION, MAINTENANCE AND REPLACEMENT

A. The Contractor shall protect all instruments and appurtenant fixtures, leads, connections, and other components of instrumentation systems from damage due to construction operations, weather, traffic, and vandalism. If selected, sensor monitoring stations shall be placed in an area protected from construction vehicles and equipment, and land owner operations.

B. If an instrument is damaged or becomes inoperative due to inadequate protection by the Contractor, or due to the Contractor’s operations, the Contractor shall replace the damaged instrument within 48 hours at no additional cost to the Department. If damaged instrumentation is the result of actions determined to be out of the Contractor’s control, upon Engineer approval, additional replacements will be provided within 48 hours of written authorization.

C. Extreme care shall be exercised by the Contractor when working near and around the special instrumentation.

3.5 INCLINOMETERS

A. Install inclinometers to document condition of structures and monitor for abnormalities or movement. Locate the tops of inclinometers x,y,z using survey. Locations for inclinometers are provided in the Drawings.

B. Depth of inclinometers shall be provided by the Contractor, submitted in the Infrastructure Protection Plan, and approved by Engineer. Depths shall be measured from ground surface above the excavation area and shall be 10 feet below the deepest tip elevation for installed shoring, or 20 feet below the lowest elevation of the adjacent excavation, whichever is greater.
C. The Contractor is responsible for furnishing new probe-style inclinometer and establishing repeatable measuring points.

D. Inclinometers shall be installed within drilled boreholes immediately adjacent to shoring structures, or for open cuts within 10 feet of the existing structure, unless approved by the Engineer.

E. Installation procedures for instruments in boreholes shall be such that all steps in the procedure can be quality assured and meet manufacturer’s installation requirements.

F. The grout mixture shall be placed in depth increments not exceeding 2 feet. The depth to the top of each increment of cement-bentonite (or other approved borehole sealing material) shall be checked after placement.

G. During drilling inclinometer boreholes, every effort to minimize disturbance of surrounding soil shall be implemented in procedures. If significant heaving or other disturbances occur, the Engineer reserves the right to reject the installation.

H. Whenever withdrawing drill casing or augers during instrument installation in a borehole, care shall be taken to minimize the length of unsupported borehole and the rate of casing or auger withdrawal. For fixed installations, the instrument shall be installed in the borehole in a continuous operation. Partially completed instrument installations shall not be left in unsupported boreholes overnight.

I. Grout shall be placed using a tremie method with side discharge ports on the tremie pipe.

J. The Contractor will provide safe access to the inclinometers.

K. The Contractor shall abandon inclinometers following construction, and only with Engineer approval, using accepted procedures consistent with federal, state, and local requirements.

3.6 CONVENTIONAL SURVEY MONUMENTS

A. A qualified surveyor in accordance with Section 00004 Surveying, provided by the Contractor, will establish conventional survey monuments on existing structures. These points will consist of fixed monuments that allows the points to be accurately and consistently surveyed to maximum repeatability of measurements. Monuments will be securely attached and have clear and reliable markings for survey rod placement on the monitoring point.

B. The Contractor will establish baseline x,y,z-coordinate readings and the Engineer will provide an independent verification of the coordinates before any construction activities begin.

C. All conventional survey monument surveys will be referenced back to a minimum of two survey control points as shown in the Drawings. Survey monuments installations and associated measurements shall be reported using project datums in the Drawings.
D. Survey points established on structures for the purpose of deflection monitoring and
structure position monitoring shall be surveyed according to the higher accuracy and
precision standards in this Specification.

E. At a minimum, conventional surveys will be performed daily during sediment dredging
activities, and once weekly after dredging has occurred.

3.7 DATA MONITORING, RECORDING, AND SUBMISSION

A. The Contractor shall monitor the special instrumentation for the duration of the
project. The detailed monitoring program shall be developed by the Contractor and
included in the Infrastructure Protection Plan (in accordance with Section 01 76 00
PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED
CONSTRUCTION) for review by the Engineer.

B. The monitoring program shall include daily data collection of conventional survey and
inclinometer readings.

C. The Contractor shall prepare an Excel workbook of spreadsheets to provide tracking and
assessment of all deflection and position monitoring. Prior to construction, this
workbook must be reviewed and approved by the Engineer. This shall include at
minimum, the following:
1. Data shall include the date and time of each measurement, weather conditions,
   the measurement (elevation, pressure, etc.), physical condition of the
   instrumentation being monitored, and any issues encountered.
2. Spreadsheet for inclinometer data and calculation of deflection. The spreadsheet
   will record all position readings from inclinometers at 1-foot vertical increments
   for the complete height of the structure. The spreadsheet will provide a graphical
   plot of each inclinometer (x-axis deflection and y-axis elevation), with
   subsequent measurements overlain for visual assessment of incremental and
   cumulative wall deflection with time. The spreadsheet will include a summary
   table and plot of deflection versus time.
3. Spreadsheet for conventional survey points containing position readings,
   incremental changes in x,y,z position, and cumulative change in x,y,z position.
4. As part of the Daily Construction Quality Control (CQC) Report submittal (in
   accordance with Section 01 76 00 PROTECTING EXISTING
   INFRASTRUCTURE AND INSTALLED CONSTRUCTION), the
   Contractor shall provide a summary table of measured and calculated deflection
   for each structure, and graphical plots of inclinometer and other monitoring
   results. The tracking spreadsheet shall provide a tabulation of data and graphical
   plot and trend of the result versus time. As part of weekly submittals, the
   Contractor shall provide an updated version of the Excel workbook to the
   Engineer for review. Monitoring data shall be maintained over the entire
   project.

3.8 STOP WORK INDICATOR

A. The Contractor’s Structural Engineer shall determine deflection thresholds for each
structure to be monitored. Deflection thresholds shall be included in the Infrastructure
Protection Plan (in accordance with Section 01 76 00 PROTECTING EXISTING
INFRASTRUCTURE AND INSTALLED CONSTRUCTION) and submitted for approval by the Engineer.

B. Coordination with Engineer during deflection monitoring will be required if the deflection criteria are exceeded. The process for coordination with the Engineer and conditions for continuing work before and immediately after a deflection threshold is exceeded shall be described in the Infrastructure Protection Plan (in accordance with Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION) and submitted for approval by the Engineer.

C. At a minimum, if measurements exceed deflection thresholds indicated in the Contractor’s Infrastructure Protection Plan, as required in Section 01 76 00 PROTECTING EXISTING INFRASTRUCTURE AND INSTALLED CONSTRUCTION, the Contractor will stop work and perform an inspection of the structure. Data review will be initiated to identify survey trends and determine if other instruments validate the survey measurements, determine if results imply survey error, or determine if inspection and measurements are inconclusive. Based on the data review, the Contractor and the Engineer will jointly determine if construction will resume with immediate backfilling or continued dredging under more frequent monitoring.

D. Existing structure inspection and deflection monitoring data will be used to determine if immediate backfilling is required; therefore, the Contractor must be prepared to provide immediate backfilling when dredging near structures.

E. After stopping construction based on measured deflection or observed changes in the existing (permanent) structures, immediately notify the Engineer, and coordinate with the Engineer before resuming construction.

3.9 REMOVING OR ABANDONING THE INSTRUMENTATION AT COMPLETION

A. After the Engineer determines that there is no further need to monitor existing structures, the instrumentation shall be removed or abandoned, as described herein.

B. Instrumentation installed less than 2 feet below the ground surface shall be removed in its entirety.

C. Inclinometer boreholes will be abandoned in accordance with New York State requirements for wells. The surface completion must be approved by the land owner.

D. All disturbed area shall be restored to the original condition; i.e., the same condition as before removal or abandonment.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. This section includes requirements for aggregates to be used to complete Work required by the Contract Documents, including but not limited to sizing, gradation, and installation requirements.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO):
   1. AASHTO T-99 – Standard Method of Test for Moisture – Density Relations of Soils Using a 2.5-kilogram (5.5-pound) Rammer and a 305-millimeter (12-inch [in.]) drop.

B. ASTM International (ASTM):
   2. ASTM D4253 – Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.

C. SECTION 01 45 25 – TESTING

D. State of New York Department of Transportation Standard Specifications (NYSCOTSS), Design and Construction Division, Construction and Materials.

1.3 SUBMITTALS

A. Material testing laboratory results.

B. Materials source – submit name of imported materials suppliers.

C. Manufacturer's certificate – certify Products meet or exceed specified requirements.

D. Certification in accordance with NYSDEC DER-10 5.4 (e).

E. A typical grain-size analysis for all aggregate materials.

F. The moisture density curve for the select granular fill material.

G. NYSDOT approved source or NYSDEC mining permits.

H. A description of the equipment and methods proposed to be used for compaction.

I. Copies of all compaction test reports. The test reports shall include the test methods used, results, a narrative of tests conducted, locations, elevations material tested, equipment used, the name of the technician conducting the tests and a signed certification from the laboratory.
J. Name of qualified independent compaction testing laboratory.

1.4 QUALITY ASSURANCE

A. Comply with the applicable provisions and recommendations of the following, unless otherwise shown or specified:

B. SOURCE
   1. Where available, materials specified herein shall come from sources and stockpiles possessing current NYSDOT certification for item supplied.
   2. Materials from non-NYSDOT approved sources may be acceptable to Engineer provided material testing and acceptance criteria of NYSDOTSS are met and mining permits have been obtained.

C. TESTING
   1. Contractor shall obtain representative samples of materials specified herein and test for the following minimum parameters at no additional cost prior to delivering material to the site:
      a. Particle Size Analysis of Soils (ASTM C136)
      b. Maximum Index Density (ASTM D4253)
      c. Minimum Index Density (ASTM D4254)
      d. Moisture Content (ASTM D2216)
   2. Contractor shall perform NYSDOTSS compliance testing if required, at no additional cost.
   3. Analytical testing in accordance with NYSDEC DER-10 5.4 (e).

PART 2 – PRODUCTS

<table>
<thead>
<tr>
<th>Material</th>
<th>Estimated Quantity</th>
<th>Compaction Testing Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone</td>
<td>2,600 CY</td>
<td>No</td>
</tr>
<tr>
<td>Channel Bed Material</td>
<td>2,200 CY</td>
<td>No</td>
</tr>
<tr>
<td>Rip Rap</td>
<td>100 CY</td>
<td>No</td>
</tr>
<tr>
<td>Select Granular Fill</td>
<td>100 CY</td>
<td>Yes</td>
</tr>
<tr>
<td>Sand Backfill</td>
<td>15,000 CY</td>
<td>No</td>
</tr>
<tr>
<td>Bedding Material</td>
<td>10 CY</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: The above aggregates must be itemized on the associated bid item breakdown.

2.1 CRUSHED STONE:

A. Crushed stone shall meet NYSDOTSS requirements under 703-02 Course Aggregates.

B. Crushed stone shall meet NYSDOTSS Number (No.) 1 and No. 2 size requirements in Table 703-4.
C. Crushed stone shall be used in sediment processing areas as shown on the plans and as directed by the Engineer. The quantity identified in the schedule is based on constructing drainage layer associated with gravity dewatering approach at the sediment processing areas.

D. Material may also be used for access road if Contractor selects to construct a stone access road per Section 00023 ACCESS ROADS.

2.2 CHANNEL BED MATERIAL

A. Stone filling shall meet NYSDOTSS requirements for Fine Stone Filling Item No. 733-2101 and Medium Stone Filling Item No. 733-2103 as shown on the drawings.

B. Fine stone filling shall be used as channel bed material as shown on the plans and as directed by the Engineer.

2.3 RIP RAP

A. Medium stone filling shall meet NYSDOTSS Item 733-2103 requirements.

B. Medium stone filling shall be used as rip rap in the new culvert and at all storm sewer outlets shown on the plans and as directed by the Engineer.

2.4 SELECT GRANULAR FILL

A. Select granular fill material shall meet NYSDOTSS Item 733-11 requirements.

B. Select granular fill to be used to backfill behind wingwalls as shown on the plans and as directed by the Engineer.

2.5 SAND BACKFILL

A. Sand backfill shall meet NYSDOTSS requirements under 733-15A.

B. Sand backfill is intended for general use as backfill material and to protect geomembrane where and if needed.

2.6 BEDDING MATERIAL

A. Bedding Material shall meet NYSDOTSS requirements under 733-2302.

B. Bedding Material will be used for the box culvert as shown on the plans and as directed by the Engineer.

PART 3 – EXECUTION

3.1 INSTALLATION

A. The bottom layer of material shall be placed so that the placed materials are in full contact with the underlying material.
B. The ground surface on which the any aggregate is to be placed shall be free of brush, trees, stumps, and other objectionable material and shall be dressed to a smooth surface. All soft or spongy material shall be removed to the depth specified or as directed by the Engineer and replaced with bedding material and compacted in an approved manner.

C. The stone shall be so placed and distributed that there will be no pockets of uniform size material.

D. The desired distribution of the various sizes of stone throughout the mass shall be obtained by selective loading of the material at the quarry or other source; by controlled dumping of successive loads during the final placing; or by other methods of placement, which will produce the specified result.

E. Rearranging of individual stones by mechanical equipment or by hand will be required to the extent necessary to secure the specified results.

F. See Section 00201 BACKFILL for compaction of structural fill (select granular fill). Material shall be compacted to meet 95% Modified Proctor (ASTM D1557).

G. Sand backfill compacted with 3 passes of a CAT 308 or equivalent size piece of equipment.

H. Rip rap, channel bed material and bedding material shall be tamped/compacted with the bucket of a CAT 308 or equivalent size piece of equipment.

I. Crushed stone identified in Part 2 is intended to be used as a drainage material. Because it is a drainage material crushed stone does not require compaction.

J. Aggregates shall be installed in maximum 6-in. lifts unless directed otherwise by the Engineer.

3.2 STOCKPILING

A. The Contractor shall propose material stockpile locations in their work plan.

B. Stockpile in sufficient quantities to meet Project Schedule and requirements.

C. Separate different aggregate materials with dividers or stockpile individually to prevent mixing.

D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

END OF SECTION
SECTION 31 14 00 – STOCKPILING

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes the requirements for the project stockpiling area including but not limited to liner requirements, sizing, drainage, and material segregation.

B. Related sections:
   1. Section 00010 TEMPORARY FACILITIES & CONTROLS
   2. Section 00014 WORK PLAN
   3. Section 31 25 00 EROSION AND SEDIMENTATION CONTROLS.

1.2 QUALITY ASSURANCE

A. Perform work in accordance with New York Code Rules and Regulations.

PART 2 – PRODUCTS

2.1 SUBSOIL MATERIALS

A. Provide stockpile bottom liner (40 mil high-density polyethylene (HDPE) geomembrane sheets) in accordance with Section 02 56 13 WASTE CONTAINMENT GEOMEMBRANE, and cover (20-mil HDPE) in accordance with Section 00010 TEMPORARY FACILITIES & CONTROLS.

PART 3 – EXECUTION

3.1 STOCKPILING

A. Proposed stockpiling areas shall be sampled prior to installation as a basis for comparison for post-remediation confirmation sampling, per Section 01 45 25 TESTING.

B. All hazardous and non-hazardous excavated and processed soil shall be transported in a secure manner to staging/soil stockpile areas. Stockpile containment shall utilize jersey barriers. Processed soil materials will be segregated and stockpiled as a result of screening. Contractor will use the High School lot and designated Middle School area to stockpile soils. Contractor shall show proposed stockpile locations on the work plan in accordance with Section 00014 WORK PLAN. If additional room is required for storage in excess of that provided areas, then Contractor shall:
   1. Obtain Engineer’s approval for any other area
   2. Include costs of any other area in the bid
   3. Allow Engineer to inspect other areas proposed
   4. Provide security at other area
   5. Assume any and all costs of utilizing another storage area.

C. Contractor shall construct a berm around the perimeter of the stockpile pad and sumps to prevent noncontact surface water run-on. As the stockpile is constructed it is to be covered temporarily with a properly anchored geomembrane material that extends over the sumps to
enable non-contact precipitation to drain away from the stockpile and sumps. The staging/stockpile area shall be enclosed with a chain-link fence with locking gate(s).

D. Stockpiled soil is to be segregated into one or more piles delineated within the stockpile area to allow for testing of one pile, while future excavated materials are stockpiled in a separate pile. Contractor shall excavate the dewatered soils and load it into trucks for offsite transport and disposal.

E. Stockpile materials onsite as indicated on design plans or as directed by the Engineer.

F. Stockpile in sufficient quantities to meet Project Schedule and requirements.

G. Prevent intermixing of soil types or contamination.

H. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

3.2 STOCKPILING OF CONTAMINATED SOIL

A. Contaminated soils shall be stockpiled in the designated stockpile areas. Eliminate depressions that could pond water. Promote and maintain positive drainage off the stockpile. Debris and vegetation that has been reasonably cleaned of soils shall not be placed in the soil stockpiles. These materials are to be separated and placed in separate stockpiles within the processing areas, at locations to be designated by the Engineer.

B. The contaminated soils shall be covered by the approved stockpile cover as the filling progresses. The cover is to be deployed at the end of work each day or more after if required to control odors or protect from rain. Care shall be taken to avoid the placement of sharp stones or other objects within 6 inches of the upper pile surface to be covered with the geomembrane material.

C. Once covered the inactive portions of stockpile at elevation shall remain covered and the active portions shall be covered at the end of each working day. Contractor is responsible to notify the Engineer of any materials spilled over the barriers and to cleanup spilled material.

D. Sandbags or other approved means shall be used as required to prevent lifting or lateral movement of the stockpile cover. The stockpile cover shall be anchored by a means acceptable to the Engineer such that the membrane will not rip or tear under severe weather conditions. The anchoring system will be secured to the perimeter barriers or the existing ground surface on all sides of the stockpile in a manner acceptable to the Engineer. Sandbag fill material must be certified clean in the manner proscribed for all fill materials delivered to the site.

E. The stockpile shall also be protected by the Soil Erosion and Sediment Control measures discussed in Sections 31 25 00 EROSION AND SEDIMENTATION CONTROLS and 00010 TEMPORARY FACILITIES & CONTROLS and as shown on the Drawings. These measures shall remain in place during the work. At no additional cost to Department.

F. Stockpiles shall not be filled beyond their design capacity.

G. Stockpiles will be labeled, and a log kept which outlines when the stockpiles were filled, when sampling was conducted, and when the piles were removed.
H. Roll-Off Units
   1. Roll-off units used to temporarily store contaminated material shall be water tight. A cover shall be placed over the units to prevent precipitation from contacting the stored material. The units shall be located as approved by the Engineer. Liquid which collects inside the units shall be removed and treated in accordance with paragraph Liquid Storage.

I. Liquid Storage
   1. Un-treated liquid collected from dewatering systems, mechanical dredging, decontamination pads, dewatering pad, wastewater treatment pad, excavations and stockpiles shall be temporarily stored until the Contractor treats the liquid in accordance with permit requirements or disposed of at an approved disposal/treatment facility. Liquid storage containers shall be water-tight and shall be located as approved by the Engineer.

3.3 GEOMEMBRANE INSTALLATION

A. Place in accordance with manufacturer's instructions, approved submittals and conditions outlined in this section. Protect geomembrane from excessive heat, cold, puncture, cutting, or other damaging or deleterious conditions during loading, transport, unloading and storage at site. Contractor to protect geomembrane from dirt, water, and other sources of damage once on site.

B. Acceptance at site:
   1. Conduct surface observations of each roll for defects and damage. This examination shall be conducted without unrolling rolls unless defects or damages are found or suspected.
   2. Defected or damaged rolls or portions of rolls will be rejected and shall be removed from site and replaced with new rolls.
   3. Contractor shall conduct testing of membranes in accordance with manufacturers recommendation.

C. Repairs to geomembrane:
   1. Prior to placing material, replace liner surface showing damage due to scuffing, scraping, penetration of foreign objects or distress from rough subgrade.
   2. Remove rough subgrade as required to remove damaging material and recompact as required.
   3. Make necessary repairs to liner using additional liner material and providing 3-inch overlap.
   4. Apply adhesive to contact surfaces of patch and lining to be repaired, press surfaces together, and smooth out wrinkles.

3.4 STOCKPILE CLEANUP

A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION
SECTION 31 25 00 - EROSION AND SEDIMENTATION CONTROLS

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes requirements related to the Contractor’s responsibility to furnish all labor, equipment, and materials associated with erosion and sediment control required to complete the work as shown on the Contract Drawings and specified herein. All erosion control work is to be done in conformance with all federal, state and local permits and regulations.

B. Section includes:
   1. Silt fences
   2. Erosion control matting
   3. Haybales
   4. Straw wattles
   5. Rip rap

C. Related sections/references:
   1. Section 00010 TEMPORARY FACILITIES AND CONTROLS
   2. Section 00014 WORK PLAN

1.2 SUBMITTALS

A. Product data:
   1. Submit product data for all erosion control products to verify compliance with New York State Department of Environmental Control material requirements.

B. The Erosion and Sediment Control (ES&C) Plan must meet the intent of a Stormwater Pollution Prevention Plan (SWPPP) per the State Pollutant Discharge Elimination System General Permit-02-01. This ES&C Plan shall detail erosion control methods and surface water management procedures which will be implemented by the Contractor throughout the work, per Section 00014 WORK PLAN. A Storm Water Notice of Intent for State Pollutant Discharge Elimination System coverage will not be required on this State Superfund project. However, the ES&C Plan will be required to be submitted by the Contractor to the Engineer/Department for review and approval.

C. Erosion and Sediment Control Inspection logs.

1.3 QUALITY ASSURANCE

A. Perform work in accordance with requirements of Section 00014 WORK PLAN.

B. Perform work in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (2016 Blue Book or subsequent revision), and the Town of Islip, New York Code Chapter 47 – Stormwater Management and Erosion and Sediment Control.
PART 2 – PRODUCTS

2.1 EROSION CONTROL PRODUCTS

A. Erosion control products to be used include but are not limited to silt fence, erosion control mat, haybales, wattles, and rip rap.

B. Furnish materials in accordance with New York State Standards and Specifications for Erosion and Sediment Control.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Provide silt fences where shown on the Contract Drawings and ES&C Plan as a temporary structural practice to minimize erosion and sediment runoff.

B. Install silt fences to retain sediment prior to initiating each phase of work where erosion would occur in the form of sheet and rill erosion (e.g., clearing and grubbing, excavation, embankment, and grading).

C. Place silt fence parallel with grading contour.

D. The ends of the fence shall be extended up slope to prevent water from flowing around ends of the fence.

Erosion controls shall remain in place during the entire construction period or as otherwise specified.

3.2 FIELD QUALITY CONTROL

A. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.

MAINTENACE

A. Inspect the silt fences in accordance with the paragraph titled FIELD QUALITY CONTROL (Section 3.2). Any required repairs shall be made promptly. Pay close attention to the repair of damaged silt fence resulting from end runs and undercutting. Should the fabric on a silt fence decompose or become ineffective when the barrier is still necessary, replace the fabric promptly. Remove sediment deposits when deposits reach one-third of the height of the barrier.

B. Do not damage structure or device during cleaning operations.

C. Replace control system promptly if fabric decomposes or system becomes ineffective prior to the expected usable life.

D. Maintain or replace system until no longer necessary for the intended purpose.
E. Contractor shall be responsible to fix and/or replace all damaged erosion control systems damaged by severe weather to the satisfaction of the Engineer.

F. Do not permit sediment to erode into construction or site areas or natural waterways.

3.3 REMOVAL

A. Remove and dispose of silt fence after respective upgradient areas stabilize with stable growth or as directed by the Engineer.

END OF SECTION
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SECTION 32 12 16 - ASPHALT PAVING

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Asphalt materials
   2. Aggregate materials
   3. Subgrade preparation
   4. Milling and saw cutting damaged asphalt
   5. Asphalt paving
   6. Cleaning.

As part of site restoration this contract includes milling and placement of 1.5 inches of top course asphalt concrete NYSDOT Type 6F. Paving schedule is as follows:

<table>
<thead>
<tr>
<th>Paving Schedule</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>West Islip High School Parking Lot</td>
<td>85,000 ft²</td>
</tr>
<tr>
<td>Barberry Road</td>
<td>39,000 ft²</td>
</tr>
<tr>
<td>Ivy Court</td>
<td>7,500 ft²</td>
</tr>
<tr>
<td>Stop and Shop Plaza Parking Lot</td>
<td>25,000 ft²</td>
</tr>
</tbody>
</table>

Note: The above paving areas must be itemized on the associated bid item breakdown.

The Contractor shall obtain permit from Town of Islip for resurfacing Barberry Road and will have to bond paving work. Paving and re-striping of High School parking lot must be performed no later than July 31, 2020.

1.2 SUBMITTALS

A. Section 00021 SUBMITTALS – requirements for submittals.

B. Product data:
   1. The Contractor shall submit proof that the asphalt concrete and aggregate being supplied is from a New York State Department of Transportation (NYSDOT) approved source.
   2. The Contractor shall submit mix design with laboratory test results.
   3. The Contractor shall submit batch data on hot mix asphalt (HMA), tack coat, and joint adhesive with verification that the materials have the properties designated in Section 400 – HMA, Section 633 – Conditioning Existing Pavement Prior to HMA Overlay, and Section 608 – HMA Sidewalks, Driveways, Bicycle Paths, and Vegetation Control Strips of the NYSDOT Standard Specifications.

C. Permit application and subsequent permit from Town of Islip for resurfacing Barberry Road.

1.3 QUALITY ASSURANCE

A. Perform work in accordance with the NYSDOT Standard Specifications for HMA, Section 400.

B. Perform work in accordance with the Americans with Disability Act.
C. Mixing plant shall conform to NYSDOT Standard Specifications for the production of HMA outlined in Section 400 -HMA.

D. The Contractor shall be responsible for quality control (QC) measures to ensure product and placement meet NYSDOT Standard Specifications.

E. Provide copies of mix design test results for air voids and density for HMA as prepared by independent testing laboratories or by NYSDOT Materials Laboratory to the Engineer.

F. Asphalt ticket requirements:
   1. Immediately place delivery tickets for loads delivered to the project on a clipboard on the paving machine in a location that will avoid damage to the tickets. Alternately, place the tickets in a location on the job site, which is acceptable to the Town of Islip Construction Coordinator.
   2. Tickets given to the Engineer after the fact will not be accepted.
   3. Each ticket shall include the following information:
      a. Name, plant number, and location of the plant
      b. Name of contractor purchasing the material
      c. Project location and number
      d. Date and time
      e. Type of mixture
      f. Maximum size of aggregate
      g. Truck number
      h. Net weight of load. Each ticket shall have the weight stamped by an automatic type register beam platform scale or marked by a bonded weighmaster.

1.4 AMBIENT CONDITIONS

A. Do not place asphalt mixture between 1 December to 31 March unless approved by Engineer in writing.

B. Do not place asphalt mixture when base surface temperature is less than 45 degrees Fahrenheit, or surface is wet or frozen.

PART 2 – PRODUCTS

2.1 ASPHALT PAVING

A. Performance/design criteria:
   1. Paving – design for damaged parking lot, roads, and sidewalks.
   2. Produce HMA in accordance with the procedures outlined in NYSDOT’s Materials Method 5.16, Superpave HMA Mixture Design, and Mixture Verification Procedures.

B. Asphalt materials:
   1. Asphalt mix – use New York State Specification 6F hot plant mix in accordance with the Town of Islip Construction Standards, Sheet 4 – Road Section, in the Subdivision and Land Development Regulations.
   2. Asphalt binder – use Performance Graded (PG) binder 64-22 in accordance with NYSDOT Standard Specifications. The used of polyphosphoric acid to modify the PG binder properties is prohibited for mixtures containing limestone.
C. Tack coat:
   1. The tack coat shall meet requirements outlined in Section 407 – Tack Coat and Section 702 – Bituminous Materials in the NYSDOT Standard Specifications.
   2. The consistency of the tack coat shall be appropriate for pumping and uniform application.
   3. The tack coat shall meet the following requirements for asphalt emulsion tack coat.

D. Aggregate materials:
   1. Aggregates for 6F HMA mixture shall meet the requirements of Section 703-02 – Coarse Aggregate, in the NYSDOT Standard Specifications.

PART 3 – EXECUTION

3.1 PREPARATION

A. Milling:
   1. Milling shall be performed at the locations and in accordance with the details indicated in the Drawings.
   2. Milling shall be completed on Barberry road, portions of the Stop & Shop plaza parking lot, and parking lots to a depth of 1.5 inches (in.).
   3. Areas not accessible to the milling machine, such as around inlets, manholes, curbs, and transverse joints on structures, may be removed by a small milling machine, handwork, or other methods approved by the Engineer.

B. Asphalt sidewalks:
   1. Sidewalks shall be saw cut at the nearest joint or 12 in. outside the damaged asphalt to be replaced.
   2. Repair subbase as needed to match existing (concrete or aggregate subbase).

C. Remove and properly dispose of all removed asphalt offsite.

D. Clean and dry all surfaces exposed from removal operation such that they are clean and free of dust and debris.

E. Verify that gradients and elevations of base are correct.

F. Work shall be coordinated with the respective owners of areas to be paved i.e. plaza owner, West Islip School District, and Town of Islip.

3.2 INSTALLATION

A. Tack coat:
   1. Uniformly apply asphalt emulsion tack coat on all milled surfaces to be paved.
   2. Paving over tack coat shall not commence until emulsion has broken or is tacky when touched.

B. Single-course asphalt paving:
   1. Install work in accordance with Town of Islip and NYSDOT Standards.
   2. Place asphalt within 24 hours of applying tack coat.
3. Place 6F hot plant mix to 1½ in. compacted thickness with no more than ¼ in. above the existing surface.
4. Compact paving by rolling to the specified density in Section 3.4. Do not displace or extrude paving from position. This course shall be rolled with an 8 to 10-ton roller. Hand compact in areas inaccessible to rolling equipment.
5. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

C. Adjacent surfaces:
   1. Adjacent pavement edges shall be painted and sealed with approved bituminous and/or bluestone material before or after placing the course of asphalt.

D. Striping:
   1. New pavement shall be re-striped to match pre-construction layout. Contractor’s pre-construction survey shall include all striping in work and traffic areas. This survey shall be used for layout of replacement pricing.

3.3 TOLERANCES

A. Flatness – maximum variation of ¼ in. measured with 10-foot straight edge.
B. Scheduled compacted thickness – within ¼ in.
C. Variation from Existing Elevation – within ½ in. Removed and replaced asphalt shall be replaced in-kind within given tolerance.

3.4 FIELD QUALITY CONTROL

A. Contractor shall measure and record the temperature of, at a minimum, every other truckload of type 6F hot plant mix asphalt that is supplied for the project. Temperature measurement should be taken immediately after the asphalt mix is placed on the paving surface. Truckloads with asphalt below 250 degrees Fahrenheit (°F) shall be rejected and removed from the site. Provide copies of temperature logs to the Engineer.

B. Asphalt shall be compacted with an 8 to 10-ton roller. Field compaction of asphalt shall be 95% of design density, using a density gauge in accordance with the NYSDOT Standard Specifications.

C. Asphalt Paving Thickness: ASTM International D3549; test one core sample from every 1000 square yards compacted paving.

D. Pavement shall weather one winter season prior to bond release by Town of Islip. Any damaged pavement shall be repaired and/or replaced at the discretion of the Engineer, with support by the Town Engineer, and at no expense to the Department.

3.5 PROTECTION

A. Immediately after placement, protect paving from mechanical injury for 24 hours or until surface temperature is less than 140 °F.
3.6 CLEANING
A. At completion of work, remove rubbish, debris, dirt, equipment, and excess material from site. Clean adjoining surfaces that were soiled by and during this work.

END OF SECTION
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PART 1 GENERAL

1.1 SUMMARY

A. Scope:

1. This section specifies the requirements for establishing vegetative covering over final soil surfaces, including fill materials, seeding, planting, fertilizing, mulching, and vegetation establishment period. This section is to be used with the requirements contained in all other sections, including the related sections listed below. The Contractor shall provide all labor, materials, equipment, and incidentals to complete the work specified in this section.

B. Related Sections:

1. Section 00202 TOPSOIL
2. Section 00203 SEED AND MULCH
3. Section 00207 PLANTING
4. Section 00303 FILTER FABRIC
5. Section 00304 Erosion Control Blanketing
6. Section 01 74 24 Site Restoration

1.2 REFERENCE STANDARDS

A. ASTM International:

1. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))
2. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
3. ASTM D6913/D6913M – Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
4. ASTM D6938 – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

1.3 SUBMITTALS

A. Product Data: Contractor shall submit list for fill materials, seed mix data, plant sources, fertilizer, mulch, soil amendments, and other accessories.

B. Materials Source: Submit name of commercial imported fill materials suppliers.

C. Pre-Construction Testing: The Contractor shall submit results of pre-construction testing at least 5 days before delivery of materials to project site. Tests must document compliance with Part 2 requirements for each material.

D. Construction Testing: The Contractor shall submit results within 5 days of performing tests.
E. Post-excavation and final surface surveys in accordance with Sections 00004 SURVEYING and 02 31 19 HYDROGRAPHIC SURVEYS.

1.4 PRE-CONSTRUCTION TESTING

A. Contractor shall retain the services of a qualified geotechnical laboratory to conduct pre-construction tests on samples of each fill material.

B. Contractor shall conduct a minimum of one grain size test (ASTM D6913/D6913M) and one soil classification (ASTM D2487) on a representative sample of size and source of each fill material. The testing shall be conducted prior to delivery of fill material to the project site. The results of this testing shall be submitted to the Engineer a minimum of 5 days before the delivery of the material.

C. Imported Wetland Substrate Fill: Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt, organic matter, and pH value. One test per source of topsoil is required prior to delivery to site. The results of this testing shall be submitted to the Owner a minimum of 5 days before the delivery of the material.

D. The Owner and Engineer reserve the right to request additional tests, and more frequent testing, by Contractor when there is a change (i.e. source or physical properties) in the material being delivered to the site or when materials do not comply with the specifications at no additional cost to the Owner.

1.5 QUALITY ASSURANCE

A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Fill Materials

1. Material shall not be transported until Engineer has approved pre-construction test results.

B. Seed

1. Deliver seed mixtures in sealed containers. Seed in damaged packaging is not acceptable.
2. Protect seed from drying out and from contamination during delivery, on-site storage, and handling.
3. Store in cool, dry locations away from contaminants.

C. Fertilizer

1. Deliver to site in original, unopened containers bearing the manufacturer’s chemical analysis, name, trade name, trademark, and indication of conformance to state and federal laws.

D. Plants

1. Protect and maintain plant life until planted.
2. Deliver plants immediately prior to placement. Keep plants moist.
3. Plant material damaged as a result of delivery, storage, or handling will be rejected.
4. Bare root plants shall be heeled-in and maintained in moist soil or other suitable material until planted.
5. Plants being transported to and from the planting area shall have their roots protected from drying by means of covering with canvas, burlap, or straw and shall be kept moist.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Do not install plants or seed when ambient temperatures may drop below 35 degrees F or rise above 90 degrees F.
B. Do not install plants or seed immediately following rain, when ground is too dry, or when winds are over 12 mph.

PART 2 – PRODUCTS

2.1 FILL MATERIALS

A. Leaf Mold Material: Leaf mold shall consist of partially composted leaves, sourced from municipal collections or composting facilities. Leaf mold will be free of plastic, bags, and non-decomposable materials. Leaves should be sourced from deciduous trees and have limited pine straw content. Leaf mold may contain up to 15% woodchips, twigs, and other woody debris, and no more than 10% grass clippings and straw. Topsoil, compost, sawdust, ashes or filler shall not be allowed.

B. Topsoil for Upland Planting Zone: See Section 00202 TOPSOIL.

C. Topsoil for Wetland Planting Zones:

1. Topsoil must originate from off-site
2. Topsoil from areas from which no topsoil has been taken previously and from areas that are producing or have produced fair to good yield farm crops without unusual fertilization for a minimum period of 10 years or from arable or cultivable areas supplied with good normal drainage.
3. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil materials and entirely free of vegetative debris, dense material, hardpan, sod or any other objectionable foreign material.
4. Containing not less than 2 percent nor more than 20 percent organic material in that portion of a sample passing a 1/4-inch sieve when determined by wet combustion method on a sample dried at 105 degrees C.
5. Containing a pH value within the range of 4.5 to 7 on that portion of a sample which passes a 1/4-inch sieve.
6. Free of atrazine and other herbicides.
7. Containing the following gradations: 100% passing 1-inch sieve, 97-100% passing 1/4-inch sieve, and 20-65 % (of the 1/4-inch sieve) passing the No. 200 sieve.

D. All imported fill materials shall be certified clean in accordance with NYSDEC DER-10 5.4(e) by borrow source provider.
2.2 PLANTS

A. See planting details on Contract Drawings for planting schedule.

B. Plant suppliers:
   1. Or approved equal

C. Planting Stock: Label individual plants or each bundle of plants when tied in bundles.
   1. All plants shall be well-branched, vigorous and balanced root and top growth, free from disease, injurious insects, mechanical wounds, broken branches, decay, or other defects. Plants shall be grown in climatic conditions similar to those in locality of the work.
   2. Trees shall be furnished with reasonably straight trunks, well balanced tops, and single leader.

D. Upland Planting Zone
   1. Include plant species, type, size, spacing, and quantities as listed in the Contract Drawings.

E. Wetland Planting Zone 1
   1. Plugs to be planted in a 48” triangular grid pattern
   2. Include plant species, type, size, spacing, and quantities as listed in the Contract Drawings.

F. Wetland Planting Zone 2
   1. Plugs to be planted in a 48” triangular grid pattern
   2. Include plant species, type, size, spacing, and quantities as listed in the Contract Drawings.

2.3 SEED MIXES

A. Seed suppliers:
   New England Wetland Plants, Inc 820 West Street, Amherst, MA 01002
   (413) 548-8000
   http://newp.com/ or approved equal.

B. Wetland Planting Zones 1 and 2- Wetland Seed Mix
   1. Products:
      a. New England Wetland Plants, Inc – Wetland Seed Mix (Application rate: 1 lb/2,500 SF or 18 lbs/acre)
      b. Or approved equal.
   2. Include grass, sedge, and rush species and percentages by weight as listed in the Contract Drawings.

C. Upland Planting Zone- New England Erosion Control/Restoration Mix
   1. Products:
   (Application rate: 1 lb/1,250 SF or 35 lbs/acre)
   b. Or approved equal.

2. Include grass and wildflower species and percentages by weight as listed in the Contract
   Drawings.

D. Temporary Seed Mix

1. Products:
   a. Michigan Wildflower Farm – Annual Cover Crop (Application rate: 8 oz./1,000 SF or
      15 lbs/acre)
   b. Or approved equal.

2. Temporary seed mix shall contain a mix of annual rye, wheat, and/or oats.

2.4 ACCESSORIES

A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant
   life, and dry, 4,000 lbs/acre. Chopped cornstalks are not acceptable.

B. Water: Clean, fresh, and free of substances or matter capable of inhibiting vigorous growth.

C. Pesticides: In accordance with Federal, State and Local laws and regulations.

D. Tree Protectors: Metal with galvanized rings.

2.5 SOIL AMENDMENT MATERIALS

A. When soil tests indicate soil amendment is required, apply soil conditioners or fertilizers to
   amend soil to specified conditions.

B. Fertilizer: Commercial grade; recommended for grass; of proportion necessary to eliminate
   deficiencies of topsoil. Fertilizer containing phosphorus shall not be used unless testing
   results indicate phosphorus is required to support the specified vegetation. Organic fertilizers
   (i.e., Milorganite®, compost, etc.) shall be given preference when their application is
   appropriate.

C. Peat Moss: Shredded, loose, sphagnum moss; free of lumps, roots, inorganic material or
   acidic materials; minimum of 85 percent organic material; and pH range of 4 to 5.

D. Lime: Ground limestone, dolomite type, minimum 95 percent carbonates.

PART 3 EXECUTION

3.1 The Contractor is ultimately responsible for the means and methods of installation of the materials
   and structures outlined in this section. All guidance provided is the best recommendation of the
   Engineer. The Contractor shall institute means, and methods as required, to meet the goals and
   performance criteria specifications outlined herein.

3.2 EXAMINATION

A. Comply with all local, State, and Federal regulations.
B. Verify structural ability of unsupported slopes and excavation side-walls to support loads imposed by fill. Contractor is responsible for stability of all temporary slopes, shoring, and unsupported excavation side walls.

C. Verify fill materials have been approved by Owner prior to transporting fill material.

3.3 TOLERANCES

A. Unless specified elsewhere in this section, surface elevations and the slopes of all fill surfaces shall conform to the contours specified on the Contract Drawings or as directed by the Engineer. Tolerances of the finished structure are as follows:

   Surface Elevation: ±0.1
   Slope: ±0.1 %

B. Placed material not conforming to the specified tolerance limits shall be removed and replaced as directed by the Engineer at no additional cost to the Owner.

3.4 SURVEY

A. Contractor shall provide a post-excavation and final surface survey to quantify each fill material for payment and verification that final grade meets the requirements of the Contract Documents and permit requirements. Post-excavation and final surface surveys shall be submitted to Owner and Engineer for approval.

3.5 STOCKPILING

A. Stockpile materials on site at locations in upland areas only within limits of disturbance.

B. Stockpile materials separately or with dividers to prevent mixing. Prevent intermixing of soil types.

C. Direct surface water away from stockpile site to prevent erosion and deterioration of materials.

D. As soon as possible, remove stockpiles and leave area in a clean and neat condition. Grade surface to prevent free standing water.

3.6 BACKFILLING

A. Leaf Mold Material
   1. Place in locations depicted in the Contract Drawings.

B. Topsoil for Upland Planting Zone: See Section 00202 TOPSOIL.

C. Topsoil for Wetland Planting Zones
   1. Place in locations depicted in the Contract Drawings.
3.7 FINISHING

A. Finish the surface of excavations, embankments, and subgrades to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations depicted in the Contract Drawings.

B. Any roots, rocks larger than 3 inches in size, or other undesirable material shall be removed from the surface immediately and the surface shall be prepared for stabilization.

C. Remove all surplus backfill materials from site.

3.8 CONSTRUCTION TESTING

A. Employ a Professional Engineer licensed in the State of New York to perform construction testing.

B. Contractor’s independent Professional Engineer shall test all fill materials as follows before installation:

1. Grain size test (ASTM D6913/D6913M) shall be performed at a minimum frequency of one test per 5,000 cubic yards.
2. Soil classification (ASTM D2487) shall be performed at a minimum frequency of one test per 5,000 cubic yards of material.
3. Maximum dry density and optimum moisture content (ASTM D698) shall be performed for each source material at a minimum frequency of 1,000 cubic yards or if the materials appear to substantially change. Wetland substrate and topsoil is exempt from this requirement.
4. In-place density and moisture content (ASTM D6938) shall be performed at the following frequencies:
   a. Common Fill – one test per lift per 20,000 square feet for each contiguous fill area.
   b. Structural Fill – one test per lift per 500 linear feet for each contiguous fill area.
   c. Aggregate Base Course – one test per lift per 250 linear feet for each contiguous fill area.
   d. In-place testing is not required for wetland substrate or topsoil.
5. Topsoil: Perform tests of stockpiled or placed soils (topsoil originating onsite and imported) to ascertain the percentage of nitrogen, phosphorus, potash, soluble salt, organic matter, and pH. Use these test results to recommend fertilizer and soil amendments to achieve topsoil which is capable of sustaining vigorous plant growth. Fertilizer and soil amendments shall be approved by Owner and Engineer. Perform tests at a minimum frequency of one test per 1,000 cubic yards on each topsoil source.

C. The Contractor shall inform the Engineer at least 24 hours prior to the collection of samples or performing in-place density tests.

D. When tests indicate work does not meet specified requirements, remove work, replace and retest.

3.9 PREPARATION

A. Verify prepared soil base is ready to receive the work of this section. Engineer shall approve soil base prior to planting or seeding.
B. Prepare seeding surface to a smooth and equipment- track-free surface.

C. Seeding and planting operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed times shall be submitted to and approved by the Engineer.

3.10 FERTILIZING

A. Apply fertilizer at application rate recommended by the test results and as required to produce topsoil capable of sustaining vigorous plant growth.

B. Apply after smooth raking of topsoil.

C. Do not apply fertilizer at same time or with same machine used to apply seed. Apply fertilizer before seed.

D. Do not apply fertilizer to Wetland Planting Zones or within 50 feet of the Willetts Creek.

E. Lightly water soil to aid dissipation of fertilizer. Irrigate top level of soil uniformly.

3.11 SEEDING

A. Locations of seeding zones may require adjustments in the field to adapt to on-the-ground conditions, water levels, and other conditions to ensure survivability and long-term health. Owner, Engineer, and Contractor shall evaluate all planting zones prior to performing work to confirm locations. No seeding operations shall proceed without approval from the Owner and Engineer.

B. Date of application: Thaw to June 30; September 1 to freeze/snow.

C. Temporary seed mix shall be applied if final grading is completed outside the date of application.

D. Prior to seeding, any previously prepared seedbed areas compacted or damaged by interim rain, traffic, or other cause, shall be reworked to restore the ground condition previously specified. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

E. Seed shall be uniformly drilled to an average depth of 1/2 inch and at the rates specified using equipment having drills not more than 6-1/2 inches apart. Row markers shall be used with the drill seeder.

F. Do not seed areas in excess of that which can be mulched on same day.

G. Immediately following seeding, apply mulch.
3.12 MULCH

A. The mulch shall be fixed in place with mechanical anchoring by a V-type-wheel land packer, a scalloped-disk land packer designed to force mulch into the soil surface, or other suitable equipment.

B. Straw or hay mulch shall be spread uniformly at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of a steep slope and continued uniformly until the area is covered. The mulch shall not be bunched. All seeded areas shall be mulched on the same day as the seeding.

3.13 PLANTING

A. Locations of planting zones and individual containerized plants may require adjustments in the field to adapt to on-the-ground conditions, water levels, and other conditions to ensure survivability and long-term health. Owner, Engineer, and Contractor shall evaluate all planting zones prior to performing work to confirm locations. No planting operations shall proceed without approval from the Owner and Engineer.

B. Date of application:

1. Plugs and Bare Root: April 10 to October 1
2. Trees and Shrubs: October 1 to April 10

C. Place plants as indicated in the Contract Drawings.

D. Plugs:

1. Wetland Planting Zones 1 and 2 contain bare root and plugs to be installed in the following manner.
2. Plant in a triangle planting pattern at the spacing indicated.
3. Use an auger or other appropriate tool to excavate planting holes. Evenly distribute plant species throughout the designated planting zones. Place plants in informal drifts of 3 to 7 plants of any one species with edges blended into adjacent species to avoid a formal appearance.
4. Plant plugs level with soil grade. Place soil around plugs and firmed into place. Do not fill around plugs with mulch.
5. All plug planting zones shall overlap with adjacent planting zones by 2 horizontal feet. For example, Wetland Planting Zone 1 plugs shall be installed 2 horizontal feet into the Wetland Planting Zone 2, and the Wetland Planting Zone 2 plugs shall be installed 2 horizontal feet into the Upland Planting Zone, resulting in a total overlap of 4 horizontal feet.
   a. Planting grids shall overlap between the Upland Planting Zone and Wetland Planting Zones 1 and 2
6. Thoroughly soak planting area with water until soil is moist to a depth of 4 inches.
7. Care shall be taken during backfilling, soil compressing, and watering to avoid injuring the roots.

E. Trees and Shrubs (Containerized Plants):
1. The Upland Planting Zone and the Wetland Planting Zone 2 contain containerized plants to be installed as depicted in the Contract Drawings. Exact location of individual containerized plants may be adjusted for best appearance with approval of the Engineer.

2. Use an auger or other appropriate tool to excavate planting holes.

3. Containers shall be removed from the root mass and fibrous roots loosened around the perimeter of the ball to eliminate possible root-bound conditions.

4. Place plants into planting holes vertically and lightly compress soil backfill to eliminate major air pockets.

5. Soil shall be saturated with water during the planting process to settle soil, eliminate air pockets, and to provide initial water for the plants.

6. Care shall be taken during backfilling, soil compressing, and watering to avoid injuring the roots.

7. Wrap tree trunks and place tree protectors.

3.14 PROTECTION

A. Immediately after seeding, the area shall be protected against traffic or other disturbance.

3.15 VEGETATION ESTABLISHMENT PERIOD

A. Seeded and planted areas shall be watered during the first growing season (1 May – 15 October) at a minimum as follows:

1. Water twice a day (to apply a minimum of ¼ inch per watering event) for 7 days to promote seed germination, then
2. Water once a day (to apply a minimum of ¼ inch per watering event) for the next 7 days, then
3. Water three times a week to apply a minimum of 1 inch per week for the next 28 days.
4. Skip the next watering event if a rain event occurs that is greater than the amount to be applied during that water event.

B. Areas compacted from equipment during watering events shall be repaired and soil density shall be reduced to approximate surrounding soil density.

C. Control growth of weeds. Apply herbicides to turf grass seeded areas. Remedy damage resulting from improper use of herbicides. Manually or mechanically remove weeds from native and no mow low grow areas or complete weed removal by other methods in these areas as approved by Owner. High-deck mowing may be necessary in areas with excessive weeds.

D. Control pests that may hinder vegetation establishment.

E. Immediately reseed and water areas showing bare spots.

F. Repair washouts or gullies.

G. Vegetation Establishment Period execution shall continue until all of the following conditions are met:

1. Minimum watering events have been completed.
2. Vegetative cover is established over 80 percent of seeded areas.
3. Not more than 10 percent of areas with bare spots larger than 1 square foot.
4. Less than 5 percent invasive species are present within areas vegetated by Contractor.
5. Greater than 75 percent of plants showing sprouting and/or leaf production.
6. Written approval by Engineer.

END OF SECTION
SECTION 33 42 00 – CULVERTS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:
   1. Precast 3-sided concrete box culvert
   2. Excavation
   3. Bedding
   4. Backfill.

The existing Middle School footbridge is constructed with multiple elliptical culverts. The scope of work includes removal and disposal of the existing footbridge and culverts, and replacement with a new precast concrete box culvert. The footbridge cannot be closed for use by the West Islip School District for an extended period. Demolition shall not commence until the replacement structure has been delivered to the site. Demolition and replacement shall be coordinated together with the school district.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM) International:
   2. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 feet [ft] - pounds (lb)/cubic ft [ft³]).
   3. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

A. Culvert Product Data: Submit data on culvert, footing, wingwalls, fittings and accessories. Submit design for precast structure stamped by precaster’s Structural Professional Engineer (P.E.) licensed in New York State. Precast member design shall consist of construction drawings with sufficient details of culvert, footing, and wingwall components to allow for an evaluation of the structural stability and load capacity.

B. Subgrade bearing capacity. Contractor shall determine soil bearing capacity for the replacement structure. Bearing capacity shall be calculated by Geotechnical P.E. licensed in New York State.

C. Manufacturer's Installation Instructions: Submit special procedures required to install Products specified.

D. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

E. Qualifications Statement:
   1. Submit qualifications for manufacturer.

F. Permit: Contractor shall obtain any required permits for footbridge replacement. Permit applications and final permit shall be submitted to the Engineer.
1.4 HANDLING AND STORAGE

A. Culvert materials shall be delivered to the job site and handled by means that provide adequate support to the culvert and do not subject it to undue stresses or damage. When handling and placing culvert materials, care shall be taken to prevent impact blows, abrasion damage, and gouging or cutting (by metal edges and/or surface or rocks). The manufacturer's special handling requirements shall be strictly observed.

B. Culvert materials shall be stored on a relatively flat surface.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum 5 years’ documented experience.

PART 2 – PRODUCTS

2.1 PRECAST 3-SIDED CONCRETE BOX CULVERT

A. Manufacturer:
   1. Woodard’s Concrete Products, Inc.
   2. Oldcastle Precast Inc.
   3. Kistner Concrete Products Inc.
   4. Or Engineer-approved equivalent.

B. General Requirements:
   1. Precast, reinforced 3-sided concrete box culvert conforming the interior dimensions shown in the Drawings.
   2. All precast members and subgrade preparation shall be designed by the supplier and stamped by a Structural P.E. licensed in New York State. The Contractor’s stamped design shall meet or exceed product and execution requirements provided herein.
   3. Comply with ASTM – C1504.
   4. The culvert shall be designed for HL-93 vehicle live load and the New York State Department of Transportation Design Permit Vehicle.
   5. Contractor shall verify subgrade bearing capacity with additional geotechnical data collection.
   6. Wing Wall sections and footings shall be from the same supplier that supplies the culvert sections. The leading edges of the end sections shall be beveled or rounded.
   7. Joints shall be tongue and groove type
   8. Concrete Strength: to be determined by precaster
   9. Include a positive drainage slope of 1 percent on top of culvert.

C. Accessories
   1. Seal: 1-inch (in.) diameter rubber rope gasket
   2. Ties: 1-in. diameter adjustable bars or 1-in. diameter U-ties
   3. Joint wrap: polyolefin backed exterior joint wrap, ConSeal CS-212 or Engineer approved equivalent.
2.2 MATERIALS

A. Bedding: bedding material, as specified in Section 31 05 16 AGGREGATES FOR EARTHWORK.
B. Backfill: Select granular fill, as specified in Section 31 05 16 AGGREGATES FOR EARTHWORK.

PART 3 EXECUTION

3.1 GENERAL

A. Demolition of existing footbridge and associated culverts shall not commence until the replacement structure has been delivered to the site and school district approval has been received.
B. Verify site is ready to receive work and excavations, dimensions, and elevations are as indicated on Drawings.
C. Installation of the new precast culvert shall immediately follow demolition of the old footbridge.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum locations.
B. Maintain and protect above and below grade utilities indicated to remain.
C. Remove large stones or other hard matter which could damage culverts or impede consistent backfilling or compaction.

3.3 EXCAVATION

A. Excavate to the bedding material subgrade as shown on the Drawings.
B. Notify Engineer of unexpected subsurface conditions.
C. Slope banks with machine to angle of repose or less until shored.
D. Hand trim excavation for accurate placement of culvert to elevations indicated.
E. Do not interfere with 45 degree bearing splay of foundations.
F. Underpin adjacent structures which may be damaged by excavation work.
G. Repair or replace items indicated to remain if they are damaged by excavation.
H. Manage water during excavation and foundation construction.

3.4 PREPARING SUBGRADE SURFACE

A. Compact subgrade to density requirements for subsequent backfill materials.
B. Unstable or other unsuitable material encountered at or below the lowest excavation limit, as shown in the Drawings, shall be undercut and removed to the extent directed by the Engineer. In rock areas, the limit of measurement for excavation will be at the bottom of the normal plan section. All voids created by the removal of unsuitable material and undercuts, except when rock is encountered at subgrade, shall be backfilled to the lines and grades shown in the Drawings. Backfill material for undercuts shall conform to materials specified and shall be incidental to the excavation.

C. Scarify subgrade surface to depth of 3 in.

D. When material varies from optimum moisture content, it shall be treated in the following manner. When a deficiency in moisture content exists, the material shall be watered and thoroughly mixed until optimum moisture content is attained. When an excess in moisture content exists, the material shall be worked and aerated until optimum moisture content is attained.

E. Any large rocks encountered during the subgrade preparation process, which constitute as a hazard, due to size or protrusion from the finished subgrade, shall be removed and disposed of as directed by the Owner.

F. The finished subgrade surface shall be firm and uniform, true to grade and cross-section, and shall be approved by the Owner before placing subsequent material thereon. Subgrade that does not conform to the requirements as to grade, cross section, moisture content or density shall be reworked until such requirements are met.

3.5 BEDDING

A. Place bedding material at excavation bottom, level fill and compact materials in continuous layers not exceeding 6 in. in depth, and compact.

B. Bedding shall be compacted to a density not less than adjacent undisturbed onsite material.

3.6 INSTALLATION

A. Lay culvert footings and sections to lines and elevations indicated on Drawings.

B. The culvert footings shall be firmly and uniformly placed on compacted bedding to support the culvert. The culvert sections shall be leveled and grouted to the footings.

C. During installation, the culvert shall be firmly and uniformly bedded throughout its entire length, to the depth and in the manner as shown on the Drawings. Blocking or mounding beneath the culvert to bring the culvert to final grade is not permitted.

D. Install culvert sections from downstream to upstream. Lift box culvert sections into place. Do not drop or drag over prepared bedding except during final installation.

E. After box sections are connected, the inside joint shall be filled with non-shrink grout. The grout shall be flush with the culvert floor/wall.

F. Fill lifting holes with concrete plug after the box sections are in place.
G. The interior of the finished culverts shall produce a continuous line sections with a smooth interior, virtually free of irregularities within acceptable tolerances.

H. Wrap exterior of joints in polyolefin backed exterior joint wrap.

I. Fasten culvert sections together using ties, in accordance with manufacturer’s recommendations. Use two ties on each side where barrel sections connect to end sections.

J. Match ends of new culvert to adjoining sidewalks. Install replacement gates and handrails to match those of the existing footbridge.

3.7 BACKFILL

A. Backfill areas to contours and elevations as shown on the Drawings with unfrozen material.

B. Level fill materials in continuous layers not exceeding 6 in. in depth, and compact with a vibratory or sheepfoot-type roller to a minimum 95 percent of maximum density (ASTM D698).

C. During compaction operations, care shall be taken to ensure that the tamping or vibratory equipment does not come in contact with the culvert and the culvert is not deformed or displaced.

D. Maintain optimum moisture content of backfill material to attain required compaction density.

E. Material that is shown to be less than 95 percent of the maximum dry density shall be reworked by the Contractor and retested until the material meets the compaction requirement at no additional cost to the Department.

F. The culvert shall be loaded sufficiently during backfilling and compaction around the sides to prevent displacement of the culvert from its final approved placement.

G. Employ placement method that does not disturb or damage other work.

H. Do not displace or damage culvert while compacting.

I. Backfill material shall be free of debris or rocks larger than 3 in. nominal diameter.

J. Make gradual grade changes. Blend slope into level areas.

K. Remove surplus backfill materials from site.

L. Vehicles or construction equipment shall not be allowed to cross the culvert.

3.8 ERECTION TOLERANCES

A. Lay culvert to alignment and slope gradients noted on Drawings; with maximum variation from indicated slope of 1/8 in. in 10 ft.

B. Maximum variation from intended elevation of culvert invert: ½ in.

C. Maximum offset of culvert from indicated alignment: 5 ft.

D. Maximum variation in profile of structure from intended position: 1 percent.
3.9 FIELD QUALITY CONTROL

A. Request inspection from Engineer prior to and immediately after placing backfill.

B. Compaction Testing:
   2. Backfill testing frequency, two tests per structure.

C. When tests indicate work does not meet specified requirements, remove work, replace and retest.

3.10 PROTECTION OF INSTALLED CONSTRUCTION

A. Protect culvert and bedding from damage or displacement until backfilling operation is in progress.

END OF SECTION
SECTION 35 00 00
WATERWAY AND MARINE CONSTRUCTION

PART 1 – GENERAL

1.1 DESCRIPTION
CONTRACTOR shall maintain vessels and provide safety equipment per United States Coast Guard (USCG) regulations and to the satisfaction of the ENGINEER.

1.2 REFERENCED SECTIONS
A. Section 01 76 00 – Protecting Installed Construction
B. Section 35 20 23 – Dredging

1.3 REFERENCES
A. USCG Code of Federal Regulations (CFR), Title 33, Chapter 1, Parts 64 and 66 – PATON
B. American National Standards Institute (ANSI) 535.1 standard for Safety Colors

1.4 SUBMITTALS
A. CONTRACTOR shall submit qualifications of person(s) responsible for performing inspections of dredges and related equipment before they are entered into service to make sure they are in safe operating condition.

PART 2 – MATERIALS
NOT USED.

PART 3 – EXECUTION

3.1 VESSEL REQUIREMENTS
A. CONTRACTOR shall inspect, certify, license, and number all vessels and equipment according to applicable regulations of USCG and other jurisdictional entities before placing them in service.

B. CONTRACTOR shall plainly mark on all vessels the maximum occupancy and carrying capacity allowed onboard for safe passage (i.e., USCG maximum capacities). CONTRACTOR shall not exceed this maximum occupancy or carrying capacity.

C. CONTRACTOR shall make sure each vessel has enough room, freeboard, and stability to safely carry the maximum cargo and passengers under various weather and water conditions.
D. CONTRACTOR shall equip gasoline engines, except for outboard types, with a USCG-approved backfire flame arrestor. The arrestor must be attached to the air intake with a flame-tight connection, or per manufacturer specifications. It must be kept clean and in serviceable condition.

E. CONTRACTOR shall comply with USCG regulations for fire extinguishers.

F. Vessels with permanently installed gasoline engines must have powered ventilation systems to remove gasoline vapors from the vessel.

G. CONTRACTOR shall store fuel in approved containers suitable for marine use. Fuel lines must be equipped with a valve to cut off fuel flow. In addition, if the vessel will not be in use for 8 hours or longer, the valve must be closed.

H. CONTRACTOR shall equip vessels with approved personal flotation devices (PFDs) and approved throwable devices in accordance with applicable rules and regulations. A PFD shall be worn at all times when personnel are on board a vessel or work platform or working within 10 feet of water where a drowning hazard exists.

I. CONTRACTOR shall equip all vessels and work platforms with adequate safety equipment to meet USCG requirements and any hazards that may be encountered during normal operations.

J. Personnel shall not directly enter the water from waterfront structures, vessels, or any floating equipment unless he/she is a certified diver whose duties require such entrance and are approved by the ENGINEER.

K. All vessels and barges shall be properly identified for both daytime and nighttime operations in accordance with USCG Navigation Rules.

L. CONTRACTOR shall operate all marine equipment so as to maintain a draft suitable to avoid running aground.

3.2 MARINE EQUIPMENT OPERATIONS

A. A qualified person must inspect dredges, cranes, support barges, or other support equipment before they are entered into service to ensure they are in safe operating condition. The qualified person must have a recognized degree, certificate, or license or professional standing, as well as extensive knowledge, training, and experience in solving problems related to the Work. Inspections must be documented and submitted to the ENGINEER.

B. A qualified person must directly supervise any mobilization, demobilization, or relocation of dredges, support barges, or other support equipment.

3.3 LIGHTING AND SIGNAGE

A. Vessels, barges, containment booms, and other equipment must be able to display navigation and marker lights required by USCG. Lights shall be displayed between sunset and sunrise and any other time visibility is reduced.
B. Lights shall conform to the requirements specified in USCG requirements for visibility and color.

C. Signage and/or flags shall be installed to clearly identify Work areas, water vessels, barges, containment booms, silt curtains, and other equipment to provide proper warning to mariners.

3.4 ANCHORING AND MOORING

A. Remove visible sediment and vegetation from all anchors before leaving the location of anchoring.

B. No anchoring is permitted in areas where Dredge Backfill materials have been placed.

C. All anchoring systems for Work-related vessels must be kept in proper working order. All anchoring chains and winches shall be inspected prior to deployment each day to ensure proper working order. Repairs and preventive maintenance to equipment shall be made in a timely manner to minimize downtime and loss of production. Repairs shall also be made to ensure the safety of the operation, as well as continue the efficiency of all operating equipment. Inspections of equipment shall be allowed at any time.

D. Anchor vessels and equipment in a safe and secure manner during storm conditions and extreme wave conditions.

END OF SECTION
SECTION 35 20 23 – DREDGING

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes the Contractor requirements for dredging contaminated sediment and debris, through mechanical excavation or hydraulic dredging, from Willetts Creek and Lake Capri. Other means of removal may be employed as necessary. The Contractor’s Dredge Work Plan shall describe the selected means and methods for contaminated sediment and debris removal.

1.2 PERFORMANCE REQUIREMENTS

A. Contractor shall be responsible for the selection, design, furnishing, testing, operation, and maintenance of dredging equipment required for the Work specified herein.

B. The Contractor is responsible for selecting the dredging means including, but not limited to hydraulic and/or mechanical means.

C. Other means of dredging may be proposed in the Contractor’s Dredge Work Plan, but not executed until work plan approval. If other means of dredging in the Contractor’s Dredge Work Plan are approved by the Engineer, the requirements of this specification will apply.

D. Contractor shall provide a Dredge Work Plan, which details a sequence of dredge activities that provide for optimal removal, handling, and disposal operations.

E. Contractor’s selected approach and sequence for contaminated sediment dredging shall be developed to meet federal, state, and local requirements, address project space constraints and presence of nearby residential areas, provide protection of public health and the environment, and proactively control affects impacting the public such as nuisance odors, dust, and noise levels.

F. Dredged material removed from Willetts creek shall be transported via haul truck, or via hydraulic pipeline. Dredged material transportation via hydraulic pipeline is specified in Section 35 20 26 HYDRAULIC PIPELINE. The Contractor may propose alternative transportation methods if proposed and approved in the Dredge Work Plan.

G. Contractor is responsible for separate removal, management, and disposal of debris that will interfere with dredging operations and is responsible for separation of debris from dredged material that will interfere with dewatering for disposal in accordance with Section 02 73 00 SOLIDS PROCESSING.

1.3 DEFINITIONS

A. Contaminated sediment:
   1. Sediment (including debris within contaminated sediment) within the edge of water that has been delineated as exceeding the lower level of the Class B New York State Department of Environmental Conservation (NYSDEC) Sediment Guidance Value for cadmium of 1 ppm. For purposes of the cleanup, this will
constitute all material, both soft sediment and sandy/gravelly native sediments, to the limits identified on the Drawings or identified in the field with approval by the Engineer.

B. Characteristically hazardous waste:
   1. Contaminated sediment or other material meeting the definition of characteristically hazardous characteristic waste as provided in 40 Code of Federal Regulations (CFR) Part 261 Subpart C. This includes both soil and sediment as determined by Resource Conservation and Recovery Act (RCRA) waste characterization testing, and debris within the contaminated area that cannot be washed to remove adhered sediment as approved by the Engineer.

C. Debris:
   1. A general term referring to items removed during dredging operations such as logs, large rocks, tires, trash (shopping carts, sports balls, white goods, concrete) which are too large to be removed with the sediment. Debris may be removed from the sediment prior to dredging or screened out of sediment prior to hydraulic transport. The Contractor shall dispose of all debris offsite in accordance with regulations.

D. Dredged material:
   1. Dredged material includes all sediment and debris removed from within the edge of water by mechanical or hydraulic dredging methods. This includes contaminated sediment dredged within project boundaries, non-contaminated sediment overdredge, solids collected from dredging equipment decontamination, debris, and any additional material resulting from dredging work. Side scan survey results providing available information about the size and extent of below water debris is provided with these Contract Documents.

E. Non-characteristically hazardous waste:
   1. Contaminated sediment or other material that is not characteristically hazardous but requires disposal as a non-hazardous waste in a Subtitle D or equivalent non-municipal solid waste landfill. This includes debris within non-characteristically hazardous waste areas. The Contractor is not relieved of testing as required for disposal to meet RCRA waste characterization and landfill facility permit and other requirements.

F. Overdredge Allowance:
   1. The amount of dredging material that will be paid for under this Contract in excess of the dredge design elevation.

1.4 SUBMITTALS

A. Submit the following in accordance with NYSDEC Standard Specification Section 00021 SUBMITTALS and Section 01 33 01 PROJECT SUBMITTALS AND PROCEDURES.

B. Dredge Work Plan: The Contractor shall prepare and submit a Dredge Work Plan. The Dredge Work Plan must be approved prior to initiation of dredging activities and shall include, but not be limited to, the following (items listed shall apply to work in both Willets Creek and Capri Lake, unless otherwise noted):
1. Contractor’s (and any subcontractor’s) business name, address, telephone number, dredging site representatives, and emergency contact phone numbers. If subcontractors are employed, describe role(s) of each subcontractor. Subcontractors must be approved by the Engineer prior to performing project related work onsite.

2. Contractor’s experience working with same or similar equipment as presented in the Contractor’s Dredge Work Plan. The Contractor shall have a minimum of 5 years of experience using presented equipment for contaminated sediment remediation projects.

3. Names and years of environmental dredging projects completed and detailed project experience for those projects, such as location, size, required dredge accuracy, methods of verification, and references. Qualified representative projects should include a minimum of 25,000 cy of sediment management/processing.

4. Means and methods to achieve the dredging design (including slope dredging and dredging near structures) providing sufficient detail to demonstrate procedures have incorporated environmental protection, debris removal operations, containment of turbidity plumes and sheens, protection of existing structures, spill prevention and containment, and all other requirements of the Drawings and Technical Specifications. Work plan shall describe in detail, Contractor’s approach to manage shallow water depth, irregular shoreline, protection of existing structures, and debris. Process flow for removal through disposal, describing each activity is required. Descriptions of means and methods shall be organized by each of the two primary dredge areas separately, Willetts Creek and Lake Capri, given each area has unique physical site characteristics for the Contractor to address.

5. Contractor shall provide details of proposed turbidity controls. It is anticipated that the hydraulic dredging of Lake Capri would be performed in manageable sub-sections where areas are isolated from the rest of the lake with turbidity curtains. The contractor is expected to contain dredging within the protected subsection.

6. Description of logistics of the operation and schedule such as downtimes assumptions, sequence of the Work, schedule for dredging related submittals during construction, and assumed work days and hours of operation.

7. Identification of local ordinances that may limit work hours, noise, and truck traffic.

8. Delineation and demarcation of the work areas within the limits of disturbance to be used by the Contractor.

9. Description of anticipated dredging equipment to be utilized, including manufacturer, number, type, and size of dredge(s); excavator, pumps, barges, tow/tug boats, support vessels, containers, and other support equipment. If hydraulic transport or dredging is to be used, provide the anticipated percent solids of the slurry and dewatered dredged material solids from Contractor’s dewatering methods. Anticipated dredge production rates and work sequence must be included.

10. Description, dimensions, capacity, and drawings or photographs of the bucket, hydraulic dredging system, or equivalent equipment, to be used for dredging.

11. Means and methods for maintenance of equipment used for activities associated with dredging for the duration of the Work, and proposed solutions if equipment used to complete the Work malfunctions or has operational problems that could result in project delays.
12. Selected bucket positioning system and a demonstration of the ability to achieve, monitor, and report the accuracies specified herein.

13. Unloaded and loaded draft requirement for all barges and vessels supporting dredging activities in Lake Capri.

14. Proposed approach for deployment and inspection of equipment, including mobilization of dredges, barges, scows, and other ancillary equipment to Lake Capri, and verification of soundness, water tightness, and whether it is fit for duty. U.S. Coast Guard inspection reports shall be submitted for all proposed barges, scows, or vessels.

15. Proposed approach for deployment of personnel and personnel requirements for each vessel and/or operation.

16. Proposed procedures to remove sediment adjacent to the outfall structures and bridges without causing a downstream release of resuspended sediments and to prevent damage to structures.

17. Plans for waste characterization sampling to determine hazardous versus non-hazardous waste classification prior to offsite disposal. The Contractors sampling schedule must meet landfill requirements for disposal.

18. The Dredge Work Plan shall include the following additional information which is not specified in the Section, but is included in other sections of the Technical Specifications:

   a. Proposed procedure for dredging to the dredge limits and within dredge tolerances in Willetts Creek in accordance with Section 00004 – SURVEYING and in Lake Capri in accordance with Section 02 21 19 HYDROGRAPHIC SURVEYS and Section 00004 – SURVEYING (pertaining to topographic portion of survey as applicable).

   b. Proposed methods for dredging adjacent to shorelines and structures that may be disturbed by dredging activities and avoiding or protecting utilities identified during utility-locating procedures in accordance with Section 01 76 00 PROTECTING INSTALLED CONSTRUCTION. This should include completing a pre-construction conditions survey for all structures in and adjacent to the project area, with assessment and documentation of each structure and periodical monitoring during dredging activities.

   c. Groundwater/Surface Water Management Plan including proposed cofferdam and diversion piping configurations for relatively in-dry excavation in Willetts Creek, including design drawing for stream diversion, specifications for pump bypass, maintenance of cofferdams during storms, and water management and discharge management approaches in accordance with Section 35 60 00 TEMPORARY WATER DIVERSION AND FLOOD CONTINGENCY PLANNING. This should include a Flood Contingency Plan.

   d. Pipeline Construction Work Plan including drawings of pipeline routes for hydraulic material transport of dredged material from Lake Capri to the solids and water processing area and materials to be used for installation in accordance with Section 35 20 26 HYDRAULIC PIPELINE.

   e. Solids Processing Plan detailing proposed processing area utilization, with emphasis on maintaining compact use of space for all solids processing, debris management, and wastewater treatment operations as specified in Section 02 73 00 SOLIDS PROCESSING and Section 02 72 00 WATER TREATMENT. This should include a description of
the solids processing operation and maintenance to manage space constraints.

f. Transportation Plan identifying haul roads, access routes, and plans for safe transport on public roads in accordance with Section 00015 OFFSITE TRANSPORTATION AND DISPOSAL.

g. Proposed methods for measuring and addressing odors generated during dredging activities in accordance with Section 00003 MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY. This should include proposed monitoring equipment, frequency of measurements, and mitigation plan.

C. Daily Construction Quality Control (CQC) Report
1. The Daily CQC Report shall include, but not be limited to, the following information related to dredging activities (items listed shall apply to work in both Willetts Creek and Capri Lake, unless otherwise noted):
   a. Weather conditions.
   b. Description of general work activities.
   c. Location of dredging operations, hours of dredge time, total area dredged, actual daily production rate, and name of dredge operator(s).
   d. Equipment performance, maintenance, hours of downtime, and cause(s) of downtime.
   e. Description and details of the daily QC checks of all dredging equipment and positioning system sensors.
   f. Daily output from dredging software to show the progress of dredging activities in Lake Capri including cumulative area, volume, and weight dredged to date. Daily output shall be used to track daily activities and production but are not an acceptable substitute for post-dredge survey verification. Daily output shall include the following:
      1) Daily export of dredge interim survey XYZ files from the Hypack System (or equivalent) and processed drawings in AutoCAD Civil 3D (2017) format or compatible Digital Terrain Model (DTM) of the survey to show the dredge progress for the day.
      2) Calculations of the day’s dredging volume calculated to the nearest cubic yard.
      3) Documentation that the system is operating within allowable tolerances.
   g. The Hydraulic Pipeline Daily Operations Report in accordance with Section 35 20 26 HYDRAULIC PIPELINE.
   h. Delays encountered and relevant details of the delay, such as the cause, resolution, and measures implemented to avoid similar delays in the future and to make up lost time if necessary. The Engineer reserves the right to require a recovery schedule from the Contractor in accordance with Section 00001 PROGRESS SCHEDULE.
   i. Representative photos of construction activities for the day.

D. Surveys
1. Provide topographic surveys to document dredge progress in Willetts Creek in accordance with Section 00004 SURVEYING.
2. Provide hydrographic and topographic surveys to document dredge progress in Lake Capri in accordance with Section 02 21 19 HYDROGRAPHIC.
SURVEYS and Section 00004 – SURVEYING (pertaining to topographic portion of survey as applicable).

3. Surveys shall be submitted with applications for payment for dredging and excavation bid items

E. Fish Management Plan for management of fish in Lake Capri during dredging operations.

F. Winterization Plan for protection from freezing to allow for continuous operation.

1.5 PERMITS

A. The Contractor shall comply with all state, federal, and local permits obtained by or applied for by the Government. The Contractor shall also comply with all permits obtained directly by the Contractor as required during construction and as necessary to complete the work.

B. The Contractor shall comply with work restrictions as outlined in the permits. If discrepancies exist between these Technical Specifications and applicable permits, the conditions of the permit shall apply.

1.6 JOB SITE AND SUBSURFACE CONDITIONS

A. Available data from previously conducted site sampling events, including representative sediment core logs, utility mapping, debris, and associated information, are included in the Basis of Design Report, for informational purposes only.

B. The Contractor shall field verify the locations of utilities within the work areas including, but not limited to, those shown on the Drawings. The Contractor shall coordinate a utility locate service and coordinate utility identification and location with the Government to check all dredge areas in accordance with the Technical Specifications.

1.7 CHARACTERISTICALLY HAZARDOUS WASTE

A. Prior to dredging, the Contractor will collect samples of the material to be removed and perform analyses to determine if it is characteristically hazardous as defined by RCRA federal regulations. The Contractors sampling schedule must meet landfill requirements for disposal. Characteristically hazardous waste shall be disposed of at a Subtitle C Landfill approved by Engineer. These materials shall be removed and handled separately.

1.8 NON-CHARACTERISTICALLY HAZARDOUS WASTE

A. Non-characteristically hazardous waste shall be disposed of at a Subtitle D Landfill approved by the Engineer.

PART 2 – PRODUCTS

2.1 MECHANICAL DREDGING EQUIPMENT

A. Relatively in-dry mechanical dredging work in Willetts Creek or the shoreline of Lake Capri shall be completed using a hydraulic excavator with a standard bucket attachment.
2.2 MECHANICAL DREDGING EQUIPMENT (LAKE CAPRI)

A. If selected by the Contractor, in-water dredging work at Lake Capri shall be completed with mechanical dredging equipment with an environmental (i.e., closed/sealed) clamshell bucket system. Mechanical clamshell dredge buckets must include monitoring capabilities to inform the dredge operator if the bucket is not completely closed. The bucket shall be designed to maintain enclosure of sediments when the bucket is being raised through the water column and to minimize the generation of suspended sediments during bucket lowering, closing, and raising in the water column.

B. The Contractor shall be prepared to use an alternate bucket if difficult dredging conditions are encountered, prohibiting effective use of the environmental clamshell bucket. An alternate bucket is only usable following the Engineer’s approval during dredging operations. A conventional clamshell bucket shall be available onsite for use to supplement the environmental clamshell bucket as required to meet design elevations.

2.3 HYDRAULIC DREDGING EQUIPMENT (LAKE CAPRI)

A. If selected by the Contractor, in-water dredging work at Lake Capri shall be completed by the Contractor with hydraulic dredging equipment of suitable size and power to complete the work detailed in the Drawings and Technical Specifications, and as approved in the Contractor’s Dredge Work Plan.

B. A hydraulic submersible dredge pump equipped with cutterhead and attached to position control equipment, or a conventional hydraulic dredge with cutterhead, shall be used for hydraulic dredging. An equivalent dredge can be proposed to the Engineer; however, the Contractor may not utilize an alternative dredge unless approved by the Engineer.

2.4 DREDGE POSITIONING EQUIPMENT

A. Mechanical or hydraulic dredging equipment for Lake Capri shall be equipped with RTK DGPS and the necessary sensors, to enable accurate positioning of the dredge bucket or cutterhead and for the Contractor to continuously monitor the location of the dredge bucket or cutterhead. The dredge bucket or cutterhead shall have a vertical positioning accuracy of plus or minus 0.1 foot and a horizontal accuracy of plus or minus 0.2 feet.

B. The dredge positioning software shall be capable of:
   1. Inputting a dredge prism template (an x, y, z file on a gridded interval of 1 foot by 1 foot).
   2. Producing plots showing the location of each dredge bucket or cutterhead cut in the dredge area as part of the Daily CQC Reports.
   3. Providing a view of the barge and clamshell bucket or cutterhead, in real time.
   4. Providing the current depth, final project depth, target depth, and current bucket or cutterhead depth, in real time.
   5. Recording sensor information so that playback/review of past dredge activities is possible.
   6. XYZ file export.

C. The Contractor will have qualified positioning equipment technical support personnel at the Site whenever dredging activities take place.
D. The Contractor shall show that the error budget of the dredge positioning system allows it to work within the stated overdredge tolerances specified in Section 35 20 23 DREDGING. The error budget shall include all errors associated with measuring the positioning of the bucket or cutterhead.

E. The Contractor must verify that the system is operating within allowable tolerances (i.e., quality control check of positioning sensors to verify that individually and together they operate within a range that satisfies the tolerance requirement) at least once per day against site benchmarks and included in the Daily CQC Report. If, during any verification activities, the Contractor determines that the RTK-DGPS system is out of the stated positioning tolerance, dredging will be halted until the system is brought back into tolerance and is verified.

F. If, at any time during the Work, the Contractor determines that the RTK-DGPS system is malfunctioning or has failed, dredging will be halted until the system has been restored to proper operating condition.

2.5 SPILL RESPONSE MATERIALS

A. Provide appropriate spill response materials including, but not limited to; containers, adsorbents, adsorbent booms and pads, shovels, and personal protective equipment. The Contractor will be responsible for deploying an oil containment boom upon Engineer request to supplement adsorbent booms depending on circumstances of a spill. Spill response materials shall be available at all times when contaminated materials/wastes are being handled or transported. Spill response materials shall be compatible with the type of materials and contaminants being handled.

PART 3 – EXECUTION

3.1 PREPARATION

A. Verify work hours are acceptable to the West Islip School District and the Town of Islip and comply with city ordinances.

B. Call New York 811 at least 48 hours but no more than 10 working days before performing work.
   1. Request underground utilities to be located and marked within and surrounding construction areas.
   2. Contractor is responsible to locate and mark all utilities.

C. Protect utilities from damage that are indicated to remain. Contractor is responsible for all repairs to damaged utilities and all associated reparations at no cost to the Department. Contractor is responsible for removal and disposal of abandoned utilities encountered during dredging, and protection of encountered utilities that are not to be abandoned.

D. The Contractor is responsible for utility locates and markings on bridges and surrounding Willett’s Creek and Lake Capri. The Contractor shall use a third-party locate service and not rely on one-call services for these structures.

E. Utilities encountered that were not previously shown or otherwise located shall not be disturbed without approval from the Engineer.
F. Protect plant life, and other features remaining as portion of final landscaping along Willetts Creek and around staging areas.

G. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic except as proposed by Contractor and approved by Engineer.

H. Identify required lines, levels, contours, and datum.

I. The Contractor will provide the Engineer with details regarding the location and times the Engineer will be able to access the dredging equipment prior to mobilization. In general, the Contractor will facilitate access for Engineer representatives to the Work vessels upon request.

3.2 REMOVAL LIMITS

A. Contaminated sediments shall be removed to the depth and extent as determined by Contract Documents.

B. Embedded debris shall be removed to the limits necessary to remove the contaminated sediments. If the debris requires specialized equipment for removal, notify the Engineer before proceeding.

C. Overdredge allowance within the dredge area is 3 inches below (i.e., deeper than) the required dredge design elevations shown on the Drawings for Willetts Creek and 6 inches below the required dredge design elevations shown on Lake Capri. The Contractor shall minimize overdredge. Overdredge performed by the Contractor outside of the overdredge tolerances shall be at the Contractor’s expense.

D. The Department may direct Contractor to perform excess dredging beyond the dredge area limits as shown on the Drawings, or deeper than the required dredge design elevations plus overdredge allowance, to remove additional material based on observations in the field or confirmation sampling. Measurement of excess dredging directed by the Department shall be in accordance with Section XI Measurement for Payment. Requirements for confirmation sampling are included in Section 01 45 25.

3.3 GENERAL

A. The Contractor shall provide all supervision, labor, tools, materials, equipment, services, and appurtenances necessary for, or incidental to, dredging and related Work shown on the Drawings and described herein.

B. The Contractor shall excavate the dredge area to the lines, grades, slopes, and elevations as described in these Technical Specifications and shown on the Drawings. Significant changes, as determined by Engineer, to operating procedures or equipment presented in the Contractor’s Dredge Work Plan, such as proposed dredge production rates or changes to the duration of work, must be approved in advance by the Engineer.

C. Dredge equipment shall be selected, and methods of removal shall be implemented, in compliance with permits and such that dispersion of resuspended sediments, losses from spillage, vapor/odor emissions, and entrainment of surface water in dredged material are
minimized. The Contractor’s activities shall not cause water column conditions to exceed the water quality criteria presented in the permits at monitoring locations.

D. If confirmation sampling in accordance with 01 42 25 Testing indicates that contaminated sediment extends past the horizontal or vertical extent of dredging shown on the Contract Documents, the Contractor shall perform additional dredging as described in 01 42 25 Testing or as directed by the Engineer. In addition, if the Contractor believes that contaminated sediment extends past the horizontal or vertical extent of dredging shown on the Contract Documents, the Contractor will notify the Engineer. The Department may authorize additional dredging volume. The Contractor’s means and methods shall in no way impede additional removal which may be required/directed by the Engineer.

E. Notify Engineer of unexpected subsurface conditions.

F. Dredge in an upstream to downstream fashion.

G. The Contractor shall employ turbidity controls to minimize the movement of contaminated sediment outside the dredge area.

H. The Contractor shall be responsible for constructing stable internal and external side slopes and meet all internal and external side slope grades per the Drawings and Technical Specifications.

I. The Contractor shall perform dredging work in a manner to maintain the stability of existing shoreline, residential structures, utility structures, and all other structures adjacent to work, insofar as shoreline and structures may be jeopardized by dredging or associated Contractor operations, in accordance with Section 01 76 00 PROTECTING INSTALLED CONSTRUCTION. The Contractor shall repair damage resulting from dredging operations or other Contractor construction activities in support of the Work to the original condition prior to damage, and repair to a condition approved by the Engineer. The pre-dredge activities structure surveys shall be used as a baseline. The Department shall bear no costs associated with damage to shoreline areas or structures.

J. In the event that characteristically hazardous material is identified by waste characterization sampling that affects the ongoing dredging operations, all dredging equipment shall be flushed between dredging activities for characteristically hazardous contaminated sediments and characteristically non-hazardous contaminated sediments and the materials shall be managed separately. Flushing water shall be treated and discharged in accordance with Contract Documents and permits.

3.4 DEBRIS AND CONSTRUCTION WASTE

A. Debris will be encountered during dredging activities. The Contractor shall remove all debris that interfere with dredging and solids processing operations. Debris will be classified in the same manner as the sediment from which it was separated. Debris screened out of sediment shall bypass the solids processing system and shall not be washed. Debris shall be stockpiled in the same manner as the dewatered contaminated sediment. Debris shall be loaded onto trucks and transported and disposed offsite in accordance with Section 00015 OFFSITE TRANSPORTATION AND DISPOSAL.
B. Access road surfacing, Decontamination, Dewatering, and Wastewater Treatment Pad, asphalt milling waste, and other construction waste shall be disposed at the approved solid waste disposal facility.

C. Temporary materials used during construction may be reused onsite by the Contractor if they are decontaminated and Engineer approves of the reuse in writing.

3.5 FISH MANAGEMENT

A. Lake Capri has an existing fish population. The Contractor shall manage the fish to allow for the selected dredging method. Contractor shall provide a Fish Management Plan, which details the Contractor’s means and methods for managing the fish in Lake Capri during dredging activities.

B. If the Contractor’s Fish Management Plan must include a fish kill, including with fish toxicant such as Rotenone, electrofishing, or other, the Contractor shall submit an explanation for the necessity of a fish kill, which shall be approved by the Engineer and Department. The Contractor shall:
   1. Provide a detailed description of the means and methods of the fish kill, including manufacturer’s instructions on the use of Rotenone, electrofishing equipment, or other.
   2. Adhere to Title 6 New York Codes Rules and Regulations Part 328 regulations governing the use of chemicals for the control or extermination of undesirable fish.
   3. Immediately remove all fish carcasses from the lake, lake shoreline and lagoon area, and any other area where fish carcasses appear and dispose of in an approved landfill. Collection and disposal shall continue until all carcasses are removed. Storage of dead fish on or near the project site is strictly prohibited.

3.6 RESUSPENSION CONTROLS

A. The contractor shall provide, maintain, and deploy re-suspension control systems to minimize sediment transport downstream in accordance with Section 35 80 00 TURBIDITY BARRIERS.

B. Place resuspension controls and turbidity monitoring as shown on the Contractor’s approved Work Plan.

C. Contractor’s dredging shall minimize disturbance of sediment to reduce, to the extent practical, sediment resuspension or mud-waving that would create movement of contaminated sediment outside the dredge area or exceed water quality requirements specified in the permits. Contractor shall implement operational controls and best management practices (BMPs) to minimize sediment resuspension and maintain compliance with the water quality requirements.

D. Contractor shall clean and decontaminate any and all equipment that has become exposed to contaminated materials or oily fluids prior to using this equipment to conduct any other construction activities in accordance with Section 00003 MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY. Cleaning shall be conducted in a designated location approved by the Engineer and all decontamination water shall be collected and treated per Section 02 73 00 SOLIDS PROCESSING.
3.7 MECHANICAL DREDGING

A. Mechanical dredging in Willets Creek or the shoreline of Lake Capri shall be completed via relatively in-dry excavation with an excavator bucket.

B. Willets Creek water shall be diverted as shown on the Drawings and as described in Section 35 60 00 TEMPORARY WATER DIVERSION AND FLOOD CONTINGENCY PLANNING.

C. The water surface elevation of Lake Capri may be temporarily lowered to allow for backyard access for soil excavations and mechanical dredging in relatively in-dry conditions along the shoreline of Lake Capri. The water surface elevation of Lake Capri shall be returned to existing conditions upon completion of mechanical dredging work. This work shall be completed in a manner to maintain the stability of existing shoreline, residential structures, utility structures, and all other structures adjacent to work, insofar as shoreline and structures may be jeopardized by dredging or changes to the water surface elevation, in accordance with Section 01 76 00 PROTECTING INSTALLED CONSTRUCTION. Mechanical dredging in Lake Capri is optional and the water surface elevation shall only be lowered with Engineer approval.

D. The Contractor shall not stockpile dredged material outside of the sediment transport container. No dredged material stockpiling in the water, creek bed, or lake shoreline areas is permitted.

E. Leveling of the completed dredging surface by dragging a beam or the bucket is not permitted.

F. The Contractor shall place mechanically dredged material in water-tight sediment container for transport to the solids and water processing area.

3.8 MECHANICAL DREDGING (LAKE CAPRI)

A. Mechanically dredging in Lake Capri shall be completed in-water with an environmental (i.e., closed) bucket or an enclosing bucket attachment and excavator combination.

B. Maintain the plant, scows, coamings, barges, pipelines, and associated equipment to meet the requirements of the work.

C. The Contractor shall operate all marine equipment to maintain a draft suitable to work within the shallow waters and avoid running aground. The Contractor is permitted to dredge ahead of the plant to access shallow areas but is not permitted to ground the plant or support barges against the lake bed.

D. The Contractor shall maintain floating platforms, material scows, and associated equipment to meet the requirements of the Work and all applicable marine regulations, including the prompt repair of equipment failures.

E. Furnish, set, and maintain ranges, buoys, and markers needed to define work areas. Establish and maintain gages in location observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be
seen or followed. The Contractor shall determine the survey lines, points, and elevations for the setting of ranges, gages, and buoys.

F. The Contractor shall not use the environmental bucket to smooth the bottom surface; areas not meeting the required dredge design elevation shall be re-dredged.

G. The Contractor shall place dredged material in the sediment transport hopper after each dredge attempt regardless of volume of dredged material in the environmental bucket; multiple attempts to re-fill the environmental bucket is not permitted.

H. Mechanically dredged material shall be fed to a hydraulic pipeline, which shall convey the dredged sediment to the solids and water processing area, as required in Section 35 20 26 HYDRAULIC PIPELINE.

I. Remove and separately manage debris as needed for maintaining a pumpable slurry.

3.9 HYDRAULIC DREDGING (LAKE CAPRI)

A. Hydraulic Dredging in Lake Capri shall be completed in-water with a hydraulic dredge pump equipped with a cutterhead.

B. Maintain the plant, scows, coamings, barges, pipelines, and associated equipment to meet the requirements of the work.

C. The Contractor shall operate all marine equipment to maintain a draft suitable to work within the shallow waters and avoid running aground. The Contractor is permitted to dredge ahead of the plant to access shallow areas but is not permitted to ground the plant or support barges against the lake bed.

D. The Contractor shall maintain floating platforms, material scows, and associated equipment to meet the requirements of the Work and all applicable marine regulations, including the prompt repair of equipment failures.

E. Furnish, set, and maintain ranges, buoys, and markers needed to define work areas. Establish and maintain gages in location observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be seen or followed. The Contractor shall determine the survey lines, points, and elevations for the setting of ranges, gages, and buoys.

F. Provide agitation to loosen and dislodge materials for removal at the intake. Water jetting to dislodge materials for removal is not permitted, unless pre-approved by Engineer in writing.

G. Remove and separately manage debris as needed for maintaining a pumpable slurry compatible with the selected hydraulic dredging method. Debris that can readily be incorporated into the hydraulic dredge intake and not clog the cutterhead does not need to be removed. Debris that would clog the cutterhead or is too large to be removed should be removed separately using a bucket, or if large enough, a grapple.

H. If percent solids in the dredge slurry is less than anticipated, corrective actions shall be discussed with the Engineer.
3.10 DREDGE VERIFICATION SURVEY

A. Dredge verification completed in Willetts Creek shall be completed using traditional RTK DGPS topographic survey and grade control methods as described in Section 00004 SURVEYING.

B. Dredge verification completed in Lake Capri shall be completed using hydrographic survey and topographic survey methods, where appropriate for the current water depth, as described in Section 02 21 19 HYDROGRAPHIC SURVEYS and Section 00004 – SURVEYING (pertaining to topographic portion of survey as applicable).

C. The Contractor shall confirm surveys that the extent of dredging activities is in accordance with the limits shown on the Drawings. Surveys must be reviewed and approved by the Government before Work will be considered complete. The Government will determine if required dredge design elevations have been met. Dredging shall be completed to the required depth shown on the Drawings, there will be no areas of under-dredging.

D. If post-dredge surveying indicates that dredging operations failed to achieve the required dredge design elevation, the Contractor will re-dredge the area to the required dredge design elevation. Any re-dredging and/or re-surveying required to obtain the required dredge design elevation will be at no additional cost to the Department.

3.11 HIGH SUBGRADE

A. When a shoreline or other area is encountered with high subgrade or undredgeable bank (stiff clay, dense sand/gravel, or rock) that prevents the Contractor from achieving the design elevations required by the Drawings, the Contractor shall notify the Engineer to determine if dredging should continue to the design elevations or be stopped at this location.

B. The Contractor shall perform poling and coring surveys, and bathymetric survey, as necessary to determine the extent of this high subgrade area. After the high subgrade area is delineated, a summary figure shall be created for review and approval by the Engineer.

3.12 SEDIMENT HANDLING

A. All sediment handling and processing shall be completed in the designated areas shown on the Drawings unless expressly permitted by the Engineer.

B. The Contractor shall be responsible for proper onsite management of dredged material and wastes generated in compliance with all federal, state and local regulations. Management shall include handling, segregating, processing, and storing all dredged material and wastes generated during the Contractor’s work.

C. All material transfer activities must utilize berms and liners, spill plates, or other lined systems to prevent drips and spills outside of contained management areas. Where dredged material filling or storage is within 25 feet (ft) of surface water, rigid containment such as ecology blocks, combined with silt fence or other suitable temporary erosion control is required.
D. At no time shall the dredged material be handled by methods other than those in accordance with the Drawings and Technical Specifications and as described in the approved Dredge Work Plan.

3.13 SPILLS

A. In the event of a spill or release of a hazardous substance (as designated in 40 CFR 302), pollutant, contaminant, or oil (as governed by the Oil Pollution Act, 33 U.S.C. 2701 et seq.), notify the Engineer immediately. If the spill exceeds the reporting threshold, follow the pre-established procedures as described in the Dredge Work Plan for immediate reporting and containment. Immediate containment actions shall be taken to minimize the effect of any spill or leak. Cleanup shall be in accordance with but not limited to applicable federal, state, and local regulations. As directed by the Engineer, additional sampling and testing shall be performed to verify spills have been cleaned up. Spill cleanup and testing shall be done at no additional cost to the Department. The Contractor shall be prepared to undertake measures to control and contain spills to minimize affected areas, and expediently undertake actions to address spills and provide necessary site restoration, in coordination with the Engineer.

B. Contractor shall comply with the Engineer immediately if the discharge that is not exempted. The Spill Hotline telephone number is 1-800-457-7362.

C. Should the Contractor, during the execution of the Work, lose, dump, throw overboard, sink, or misplace any material, dredge, scow, machinery, equipment, or appliance, the Contractor shall promptly recover and remove same to the satisfaction of the Government at no additional cost to the Government.

3.14 WINTERIZATION

A. If Contractor selects to work in winter months, dredging operations and all supporting areas shall be winterized to protect from freezing to allow for continuous operation. Submit a Winterization Plan for Engineer approval prior to winterization. Winterization shall include protecting the dredging operation dredge(s); excavator, pumps, barges, tow/tug boats, support vessels, containers, and all other supporting equipment from freezing and ice accumulation with enclosures, insulation, conductive heating, or other approved equivalent. Include a description for how ice will be managed within the excavation area. Winterization is optional and shall only be implemented with Engineer approval.

3.15 CONDITIONS

A. The Contractor should anticipate adverse dredging conditions. Saturated soils with low shear strength, woody vegetation and roots, dredge areas contaminated with metals, soils with, and potential for sheen generation, contact with groundwater and surface water, woody debris, manmade debris, organic muck, and ice are anticipated. No additional payment shall be made for adverse conditions of dredging or delay or work associated with those conditions. Ice shall not be transported to the staging area but shall be managed within the dredge area.

END OF SECTION
SECTION 35 20 26 – HYDRAULIC PIPELINE

PART 1 – GENERAL

1.1 SUMMARY

A. This section describes Contractor requirements to provide and install a hydraulic pipeline that may be installed as part of the dredging operations.

B. The Contractor’s selected approach and sequence for hydraulic transport of dredged material shall be developed to meet federal, state, and local requirements, address project space constraints and presence of nearby residential areas, provide protection of public health and the environment, and proactively control affects impacting the public such as nuisance odors, dust, and noise levels.

C. The hydraulic pipeline may also be used for placement of sand backfill in accordance with Section 31 05 16 AGGREGATES in Lake Capri following two failed confirmation samples per Section 01 45 25 TESTING attachment 3.

D. The Contractor is responsible for separate removal, management, and disposal of debris that will interfere with hydraulic transport of materials in accordance with Section 35 20 23 – DREDGING.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 33 01 SUBMITTALS.

B. Pipeline Construction and Operations Work Plan: The Contractor shall prepare a Pipeline Construction and Operations Work Plan. The Pipeline Construction and Operations Work Plan must be approved prior to initiation of hydraulic transport of dredged materials and shall include, but not be limited to, the following:

1. Sequence and schedule of hydraulic pipeline installation.
2. Proposed plan drawings of any pipeline routes for hydraulic pipeline.
3. Detailed descriptions and drawings of the Contractor’s means and methods of installing and constructing the hydraulic pipeline (e.g., connections, floats, materials of construction, welding, pumps).
4. Manufacturer’s technical specifications of pipeline and pump materials.
5. Methods to be used for welding the hydraulic pipeline sections, including a description of the equipment to be used and test methods to verify the strength of the welds.
6. Details of testing and inspection of the hydraulic pipeline.
7. Length of the manufactured hydraulic pipeline sections.
8. Length of the hydraulic pipeline sections after welding, before in-water installation.
9. Connection of the hydraulic pipeline to the solids processing system.
10. An overview of equipment that may be used for installation works (e.g., vessels, cranes).
11. Details related to the operation of hydraulic pipeline including expected operating pressures and velocities, water supply and management, dredged
material screening and preparation for conveyance, pump operation, expected abrasion and wear of lines from transport sand, and anticipated routine maintenance.

12. Contingency planning to address losses of dredged material or damage to the pipeline.

C. Hydraulic Pipeline Daily Operations Report: The following information shall be submitted to the Engineer in a Hydraulic Pipeline Daily Operations Report:
   1. Weather conditions.
   2. Results of daily inspections, including observations made during visual inspection of flanges, tanks, valves, piping, pumps, motors, and moving parts.
   3. Record of any adjustments made to the hydraulic pipeline alignment or pontoons.
   4. Record of any pump refueling activities, including quantities of fuel used.
   5. Hydraulic pipeline pressure, density, and velocity visualizations used to adjust hydraulic pipeline operations or offloading as needed.
   6. Record of any hydraulic pipeline flushing activities, including time and duration of hydraulic pipeline flushing and quantity of water used to flush the line.
   7. Any unusual or unexpected conditions encountered during hydraulic pipeline operations.

D. Winterization Plan for protection from freezing to allow for continuous operation

PART 2 – PRODUCTS

2.1 FEED PUMP
   A. A centrifugal slurry pump, or equivalent pump suitable for conveyance of dense slurry, shall be used to transport dredged material from the Lake Capri dredging area, through the hydraulic pipeline, to the solids and water processing area.

   B. Provide dredge pump or supplemental feed pumps as needed to achieve required head to efficiently convey dredged materials to site locations shown on the Drawings. Provide additional head capacity in selected pumps to overcome heavy slurry conditions from in situ material high percent solids content, in addition to other standard factors for pipeline conveyance of heavy fluids.

2.2 HYDRAULIC PIPELINE
   A. The contractor shall provide and install a hydraulic pipeline suitably rated for the working pressure of the feed pump and is resistant to erosion by flowing slurry.

   B. If selected by the Contractor, high density polyethylene (HDPE) pipeline shall meet the following requirements:
      1. Rated for the working pressures of the selected pump.
      2. Resistant to wear by flowing slurry.
      3. Installed in butt-welded sections and flanged together. The length of these sections should be as long as reasonably possible, to minimize the number of flanges necessary.
      4. Diameter suitable for transporting expected sediment and debris and compatible with the chosen pump.
C. Prior to use of the hydraulic pipeline to transport dredged material, a hydrostatic test shall be performed to confirm the integrity of the pipe joints. Hydrostatic testing shall be performed at the working pressure of the pump and in accordance with the pipe manufacturer’s requirements.

2.3 APPURTEANCES

A. The Contractor will provide any necessary appurtenances, required for the protection, support, and operation of the hydraulic pipeline.

B. The Contractor will provide necessary valves, meters, and gauges required for proper operation of the hydraulic pipeline.

C. Debris is expected to be encountered during dredging. The Contractor is responsible for managing debris conditions, either by removing debris ahead of dredging operations, or incorporating permissible debris as part of dredged material, followed by removal of larger debris that remains after dredging. If necessary, the Contractor shall provide for debris removal using a grizzly screen and other suitable separation at the dredging site, prior to conveyance of dredged material through the pipeline. All visible adhered sediment shall be removed from debris as a part of the contractor’s selected debris separation system.

PART 3 – EXECUTION

3.1 ROUTING

A. The Contractor shall install the hydraulic pipeline along routes shown in the Contractor’s approved Pipeline Construction Work Plan, and within the limits of disturbance shown on the Drawings.

B. The hydraulic pipeline alignment shall be positioned to avoid erosion or resuspension of sediment in Lake Capri and anchored along slopes or supported with floats. The Contractor will be responsible for restoring disturbances created by the pipeline with no additional cost the Department.

C. The pipeline alignment shall be a linear feature with minimum bends. 90-degree joints or tight bends along the alignment are not allowed unless approved by Engineer.

D. Avoid unsupported segments of pipeline. Provide pipeline supports as required to uniformly distribute weight and avoid stress concentrations.

E. Provide floats for pipeline to allow inspection at any time. Submerging pipeline will be avoided except for special cases and requires written approval from the Engineer.

3.2 START-UP AND COMMISSIONING

A. After installation of the hydraulic pipeline, each flange connection, pontoon, anchors, floats, pipeline section, temporary dock, and other main components shall be thoroughly inspected by the Engineer to ensure that all is delivered and installed according to the Specifications.
B. After installation of the hydraulic pipeline, the Contractor will perform start-up, testing, and troubleshooting activities prior to initiating full-scale operations.

C. Start-up and testing shall be performed in accordance with the manufacturer’s recommendations and as indicated in the prepared Pipeline Construction Work Plan.

D. General start-up and testing will consist of:
   1. Hydrostatic testing of the hydraulic pipeline to check for possible leaks.
   2. Running the hydraulic pipeline with Lake Capri water to further check for possible leaks in the hydraulic pipeline sections, valves, vacuum breaker, and connection points and to check pump functionality.
   3. Running the hydraulic pipeline with an initial low slurry concentration, to perform a step-by-step check of the functionality of different monitoring systems.

3.3 OPERATION

A. Proper scour protection for the pipeline anchors must be identified by the Contractor and approved by the Engineer.

B. Water for operation of the hydraulic pipeline may be drawn directly from Lake Capri. All water used for the hydraulic pipeline shall be recirculated for reuse or treated before discharge. Treated water shall be discharged to Lake Capri.

C. Flush pipelines as needed and at the end of each day’s operation to prevent accumulation of sediment and debris within pipeline.

D. Maintain the hydraulic pipeline and associated equipment to meet the requirements of the work. Perform two inspections per day of pipeline for leaks and log results in the Hydraulic Pipeline Daily Operations Report.

E. If leaks or breaks along pipelines are identified, Contractors shall cease operations and repair or replace damaged sections as needed. Spills from leaks, damaged pipeline, or any losses of dredged material to the surrounding environment shall be removed and affected area restored at Contractor’s expense. The Contractor is responsible for additional removal and disposal of materials resulting from pipeline leaks and breaks, at no cost to the Department.

3.4 WINTERIZATION

A. If Contractor selects to work in winter months, hydraulic pipelines, all associated equipment, and all supporting areas shall be winterized to protect from freezing to allow for continuous operation. Submit a Winterization Plan for Engineer approval prior to winterization. Winterization shall include but is not limited to protecting the hydraulic pipelines, feed pumps, valves, tanks, generators, meters, gauges, and all other necessary equipment from freezing and ice accumulation with enclosures, insulation, conductive heating, or other approved equivalent. Include a description for how ice will be managed near the hydraulic pipeline anchorages. Winterization is optional and shall only be implemented with Engineer approval.
3.5 REVERSING OPERATIONS

A. If Contractor selects to use hydraulic pipeline for conveyance of clean backfill material into Lake Capri following confirmation sampling per Section 01 45 25 TESTING attachment 3, the pipeline shall be flushed with 2 pipeline volumes of lake water prior to reversing operations.

END OF SECTION
SECTION 35 60 00 - TEMPORARY WATER DIVERSION AND FLOOD CONTINGENCY PLANNING

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

A. Work under this specification includes temporary facilities to manage surface water including creek bypass flow, minimize the quantity of surface water flow entering the work area, planning for flood events, and recovery after flood events.

1.2 SURFACE WATER DIVERSION

A. To reduce the quantity of surface water to be managed and increase the efficiency and productivity of sediment removal activities and restoration, a temporary surface water diversion structure(s) shall be installed. These diversion structures shall be installed as to form cells for dredging activities while bypassing normal flows around the active work areas.

1.3 SURFACE WATER MANAGEMENT

A. Contractor is responsible to manage all surface water in the project area to facilitate construction. This may require measures such as diverting stormwater drain discharges, pumping surface water around work areas, turbidity monitoring, and temporarily suspending work.

1.4 FLOOD CONTINGENCY PLANNING

A. Rainfall and/or rapid snow melt will cause the water level in the creek to rise. Consequences of elevated creek water level potentially affecting remedial construction activities range from additional groundwater seepage into open excavations to complete flooding of the majority of the site and temporary work stoppage (during extreme flood events). The Contractor shall prepare a Flood Contingency Plan (FCP) for use in planning for and responding to potential flood situations to maintain site and project personnel safety, to prevent flood-related loss of equipment and materials, and to mitigate the potential for release of contamination from exposed impacted soils during remedial construction.

1.5 REFERENCES

A. Not Used

1.6 SUBMITTALS

A. The following preconstruction submittals shall be submitted: No groundwater/surface water management shall occur until the submittals have been received and approved.
1. Groundwater/Surface Water Management Plan (included as part of Dredge Work Plan per Section 35 20 23 DREDGING); at a minimum this plan shall include:
   a. Drawings showing internal diversion berms to form cells for excavation work (upstream and downstream cofferdams) and access roads required to complete the Contractor’s proposed construction sequence.
b. Methods for removing the water prior to disturbing creek sediments.
c. Capacity of the water management system (Temporary Water Diversion Structure[s]) and methodology for bypassing 1-year, 2-year, and 5-year storm events (2.97, 3.63, and 4.72 inches (in.) of rainfall respectively for West Islip, New York per National Oceanic and Atmospheric (NOAA) Atlas 14, Volume 10, Version 2).
d. Bypass structure(s) sizing, location, materials, and methods of installation and removal.
e. Methods of surface water management, including waters within the creek and waters entering the creek.
f. Products to be used in performance of this work.

B. Flood Contingency Plan (included as part of Dredge Work Plan per Section 35 20 23 DREDGING); at a minimum the FCP shall include:

1. Creek stage monitoring: The FCP shall include detail related to the Contractor’s plan for creek stage monitoring including the monitoring of weather forecasts and data sources/monitoring frequency during dry and wet conditions.

2. Creek stage action levels: As part of the FCP, the Contractor shall evaluate changes in creek stages caused by precipitation events and evaluate potential construction impacts. A range of site activity action levels shall be identified in the FCP to mitigate the potential for environmental releases and minimize the potential for construction losses, rework and project delays. Site activity action levels such as normal, flood watch, flood warning or Action Level 1, Action Level 2, and Action Level 3 may be considered.

3. Methods for management of water following inundation of the work area by a flood.

4. Soil disturbance in the watercourse must be temporarily ceased in the event of a forecasted 10 year or greater storm event, corresponding to a cumulative rainfall event of 5.62 in. (NOAA Atlas 14, Volume 10, Version 2). The Contractor shall be expected to control flow around the site.

5. Plan documentation: Contractor Daily Field Reports shall include all creek stage and weather monitoring data as well as Contractor actions taken to address potential flooding conditions.

6. Flood warning sources: Official flood warnings are issued by the NOAA National Weather Service (NWS). The FCP shall include contact information related to the NWS Forecast Office that serves the project area.

7. Local flood agencies: The FCP shall include contact information for the local emergency management agencies such as Lake County Emergency Management and the Islip Fire Department.

8. Asset location: The FCP shall include consideration of project temporary facilities such as office trailers, sediment and cap material staging areas, equipment, etc. as it pertains to creek stage rise during flood events.

9. Flood insurance: The Contractor is not required to obtain flood insurance for this project but may wish to evaluate the need for flood insurance as a construction risk management tool.

10. Cleanup/spill equipment: The FCP shall include detail related to Contractor’s onsite hazardous material spill response equipment such as oil absorbent booms.

11. Plan training: The Contractor will be responsible for FC training of site staff including subcontractors. Creek stage data and contingency planning shall be discussed at Daily Safety Meetings to inform all onsite staff of roles and responsibilities.
12. Utility considerations: Temporary utilities may need to be protected, moved or de-energized during flood conditions. The FCP shall include detail related to utility planning.

13. Equipment securing: The FCP shall include detail related to storing active and inactive equipment during flood events including a plan showing a flood event equipment storage area above the 100-year flood zone.

14. Additional water management provisions: In the event of a flood, modification of water management may be necessary to address the flood waters and prevent damage to restored areas.

C. Drawings and product data for temporary piping of outfalls within the work area.

1.7 PRODUCTS

A. Temporary water diversion structure(s):
   1. To be determined by the Contractor and included in the Water Management Plan. The temporary water diversion structure shall be removed at the completion of the project.

B. Temporary dewatering piping:
   1. To be determined by the Contractor and included in the Dewatering Work Plan. Piping shall be removed from the site at the completion of the project.

C. Temporary piping of minor outfalls:
   1. To be determined by the Contractor.

1.8 EXECUTION

A. Temporary Water Diversion:
   1. Surface water controls shall be installed, at a minimum, to control surface water during construction. Upon approval of the Owner or Engineer, the Contractor may elect to install additional surface water controls to further compartmentalize sediment removal and phase construction.
      a. Internal diversion berms to form cells for excavation work (e.g., upstream and downstream cofferdams) and access roads required to complete the Contractor’s proposed construction sequence. Number of total cells to be determined by the Contractor. Two cells shall be active at any one point – the first set of cells beginning at Stations 3+00 and 18+00. Internal diversion berm at the upstream side of cell is not to be removed until work within the cell is complete. Next internal diversion berm is to be installed downstream of the first cell’s original downstream internal diversion berm to create a new cell.
   2. Install measures to ensure that the downstream end of any temporary water diversion structure(s) does not cause erosion or excess turbidity.

B. Dewatering:
   1. Initial dewatering of work areas – for work to be performed in the dry, dewatered work areas prior to the disturbance of sediments. Pumps and piping shall be provided as required. Water removed prior to sediment disturbance does not require treatment and shall be pumped out of the work area to an adjacent segment of the creek. The bottom 6 in. of water that comes into contact with the
top of the sediment or the subgrade surface shall not be discharged to an adjacent segment of the creek, this water shall be pumped to the onsite water treatment system, treated and discharged.

2. Continuous dewatering for work in the dry in non-flooding conditions – once sediment removal begins, all water due to rainfall, snowmelt, creek flow, groundwater seepage, sediment dewatering and other sources shall be removed to keep work areas dry. Any water removed from the work areas after sediment removal has commenced (except as described in paragraph detailing dewatering after a flooding event) shall be considered impacted and must be managed in compliance with Section 02 73 00 SOILDS AND WATER PROCESSING.

   a. Dewatering after flood events – in the event of a flood, which inundates work areas, allow the suspended solids to settle until turbidity is below the water quality criteria, per Section 35 80 00 TURBIDITY BARRIERS. This water may then be considered suitable for discharge to the creek using a floating pump intake until the water surface elevation is within 6 in. of the excavation bottom. The Contractor shall take measures to prevent suspension of sediment both at the intake and discharge ends of the pump. Install rip rap or apply equivalent measures approved by the Department to prevent erosion at the discharge end. The Contractor shall also take measures to control sheens including the deployment of absorbent oil boom as shown in the project drawings and elsewhere, as necessary. Post-flood dewatering is considered incidental to the work.

3. Water quality – any discharges to the creek permitted by this Section shall comply with all federal, state, and local regulations and permits obtained for this work. The Contractor shall ensure that discharges to the creek do not negatively impact downstream water quality.

END OF SECTION
SECTION 35 80 00 – TURBIDITY BARRIERS

PART 1 – GENERAL

1.1 SUMMARY

A. This section describes the Contractor requirements for turbidity barrier at the Montauk Highway outlet and meeting permit requirements during the implementation of the work.

B. The Contractor shall be responsible for the selection of the turbidity barrier and design, meeting the minimum requirements within this section.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 00021 SUBMITTALS.

B. The Contractor shall include in the Work Plan per Section 00014 WORK PLAN a Turbidity Barrier Plan including the following information:
  1. Proposed manufacturer’s material and equipment specification sheets detailing the materials to be used for the turbidity barrier used for the Montauk Highway outlet protection.
  2. Proposed plan for layout, installation, deployment, inspection, and maintenance of the turbidity barrier.
  3. Proposed plan for performing and documenting inspections of the turbidity barrier a minimum of once per day to ensure the system is free from defects and remains effective during the work performed.
  4. Proposed methods and equipment for turbidity barrier reefing, where applicable.
  5. Proposed methods for turbidity barrier anchoring, where applicable.
  6. Proposed methods for turbidity barrier weight attachment, where applicable.
  7. Proposed methods for lifting anchors, if necessary, and moving turbidity barriers. Methods also must include replacing such structures after moving.
  8. Proposed contingency measures to be taken by the Contractor to meet water quality requirements in the event that the turbidity barrier is not adequate.
  9. Proposed maintenance plan (including repair and replacement of barrier sections, if needed) to ensure adequate performance of the turbidity barrier and contingency systems to meet the performance criteria.
 10. Proposed storm management plan to ensure systems and barriers are adequately secured and will not damage the surrounding areas or interfere with normal waterway operations during storm events.
 11. Proposed plan for removal and final decontamination or characterization/disposal of turbidity barrier prior to demobilization from the project per the Technical Specifications.

1.3 SITE CONDITIONS

A. Water current direction within the Lake is generally from the north to the south in the direction of flow from the inlet to the outlet. Currents and wave action will vary based on wind direction, tides, and speed within the work area. Contractor shall make provisions for checking current flow direction daily to determine up current and down current directions.

B. Lake elevation averages approximately 3 feet. Due to the fixed outfall of the Lake at Montauk Highway, lake levels are not anticipated to vary significantly.
1.4 PERFORMANCE CRITERIA

A. The Contractor shall design a turbidity barrier that can maintain turbidity at the Montauk Highway outlet equal to or below the limit of 100 Nephelometric Turbidity Unit greater than the Willetts Creek Background Turbidity Monitoring location as shown on the Drawings.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Turbidity barrier:
   1. Shall be a Type 2 turbidity barrier, constructed of high strength fabric and heavy-duty tension members.
   2. Barrier shall be constructed with flexible, geotextile filter barrier with flotation collar and anchoring system; an example is shown on the Drawings.
   3. Turbidity barrier shall fully capture all water moving from Lake Capri to the outlet. The Contractor shall design the layout and anchoring of turbidity barrier.

B. Sorbent booms:
   1. At a minimum, the Contractor shall have sufficient length of sorbent booms to span the length of the turbidity barrier.
   2. Sorbent boom shall be installed and anchored immediately upstream of the turbidity barrier.
   3. Sorbent booms shall be Parker Systems, Inc., PSI-SB5 Light Oils Sorbent Booms, or equivalent as approved by the Engineer.

PART 3 – EXECUTION

3.1 INSTALLATION

A. The Contractor shall furnish and/or provide all supervision, labor, tools, materials, equipment, services, and appurtenances necessary for the installation, deployment, inspection, movement, and maintenance of the turbidity barrier presented in this Section and shown on the Drawings for the duration of the work to the satisfaction of the Engineer.

B. The Contractor shall not begin work that could result in generation of turbidity or sheens until turbidity barriers are in place per this Section and the Drawings.

C. The Contractor shall install at least three monitoring locations: 1) Background turbidity monitoring; 2) Near field location monitoring 3) Far field location monitoring. These monitoring shall be conducted as follows:
   1. Background Turbidity Monitoring at Location TP-0 shall be used to monitor for “No increase that will cause a substantial visible contrast to natural conditions” for both Willetts Creek and Lake Capri dredging.
   2. Willetts Creek monitoring:
      a. Monitor at near-field location within 300 ft of bypass pump discharge location (where bypass water re-enters creek). This location shall move as work area advances downstream.
      b. Monitor at far-field location located in Willetts Creek north of the confluence with Lake Capri. This location shall stay fixed.
3. Lake Capri monitoring:
   a. Monitor at near-field location within 300 ft of the work area or immediately outside of local turbidity barrier.
   b. Monitor at far-field location downstream of Lake Capri discharge weir.

4. If the water quality criteria are exceeded at the near-field warning monitoring location, the Contractor shall take immediate action to mitigate turbidity generation with engineering controls or best management practices (BMPs), and if necessary stopping Work. The Contractor shall check and maintain engineering controls and employ BMPs until the condition subsides. If a substantial visible contrast to natural conditions are sustained at the near-field monitoring station, Work maybe stopped at the direction of the Engineer to address the issues. Stopping Work shall be conducted at no additional cost to the Department.

5. If the water quality criteria are exceeded at the far-field compliance point, the Contractor shall immediately stop work and the source of the turbidity shall be investigated. If it is determined that observed conditions at the far-field monitoring station is not attributable to Site activities, but rather due to another explainable cause, Work shall continue. If the condition can be reasonably attributed to Site activities, turbidity producing Work shall be halted and all turbidity controls shall be inspected and additional BMPs shall be implemented. Work shall not start again until engineering controls are inspected and maintained, BMPs are employed, and the Contractor demonstrates that Work can continue without elevated turbidity generation. Work activities may resume after the cause of the substantial visible contrast to natural conditions is identified and corrected and if, after a 30-minute period, substantial visible contrast to natural conditions no longer exists.

6. The Engineer shall also be observing general conditions around the Work area. If the Engineer observes an abnormal turbidity plume emanating from the deployed resuspension controls, Work shall be temporary halted at no additional cost to the Department until the Contractor can inspect and address any issues with the resuspension controls.

7. The Engineer shall monitor water quality and shall compare observations to the background monitoring station located upstream of the Work area (TP-0). The Engineer shall communicate the results of this monitoring with the Contractor. The Contractor shall take immediate action to mitigate turbidity generation up to stopping Work as described above.

D. The Contractor shall exercise care in installing turbidity barrier at the outlet to the Lake to avoid increasing turbidity. If total suspended solids (TSS) visibly increase, the Contractor shall cease installation and evaluate alternative methods of installing system. Do not proceed with installation until a method can be devised to minimize the creation of excessive turbidity or approval by the Engineer.

E. Anchor weight spacing shall be selected by the Contractor and approved prior to installation. The Contractor shall move and replace these weights based on communications with neighboring property owners and/or as requested by the Engineer. Any damage to the turbidity barrier or surrounding property due to improper sizing, installation, or moving of the weight anchors shall be the sole responsibility of the Contractor and shall be repaired to the satisfaction of the Engineer at no additional cost to the Department.
F. Install all turbidity barriers in a manner which minimizes disturbance of the sediments. When terminating at shoreline, provide closure with the shore using sand bags or other approved means.

G. The Contractor shall secure sorbent booms to the upstream edge of the turbidity barrier to address sheen during dredging Work.

3.2 OPERATION AND MAINTENANCE

A. Maintain all turbidity barriers in working order. Turbidity barriers shall be inspected daily and repaired if necessary, to the satisfaction of Engineer.

B. The Contractor shall visually inspect the turbidity barrier and associated components from a boat or vessel during installation and during in-water work at a minimum of once per day as specified herein. The inspection shall be noted on Contractor’s Daily Inspection Report.

C. Additional inspections shall be conducted at the Contractor’s discretion and/or at the request of the Engineer, following storm periods, noticeable turbidity increases outside the system, unexpected barrier position/behavior, contact of the barrier by equipment or debris, or other abnormal events.

D. The Contractor shall conduct diver inspections of the turbidity barrier, at no additional cost to the Department if downstream turbidity levels exceed permitted levels and no obvious system malfunctions were identified from the surface.

E. Any torn, damaged, or otherwise ineffectively functioning sections of the systems identified during routine inspections shall be promptly repaired or replaced by the Contractor as necessary to maintain the performance criteria and all applicable permits and approvals, at no additional cost to the Department.

F. The turbidity curtain shall be inspected and in working order prior to backfilling.

G. The Contractor will conduct water quality monitoring in accordance with applicable state and federal permits. The Contractor will communicate the results of this monitoring to the Engineer during site meetings and when issues arise.

H. The Contractor shall conduct all work in accordance with the water quality requirements outlined in the permits. The Contractor shall stop work and modify work methods, procedures, or operation of the turbidity barrier if the water quality criteria are not being met. Any modifications required to meet water quality criteria shall be performed by the Contractor at no additional cost to the Department.

3.3 REMOVAL AND DISPOSAL

A. Prior to removing the turbidity barrier, the Contractor shall ensure that all sheens are removed and that the turbidity within the barrier area reaches an acceptable level such that downstream water quality criteria are not exceeded during the removal process.

B. Contractor shall exercise extreme care in removing turbidity barriers to avoid increasing turbidity. If TSS visibly increases, the Contractor shall cease removal activities and evaluate alternative methods of barrier removal for approval by the Engineer.
C. Turbidity barriers shall not be removed until the water behind the barrier has equal or greater clarity than the waterbody.

D. The Contractor shall be responsible for properly disposing of the turbidity barrier material at an approved landfill, in accordance with Section 00015 OFFSITE TRANSPORTATION AND DISPOSAL.

END OF SECTION
SECTION XII

Measurement for Payment
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 general outline 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 to determine the scope of the work included in each bid task.

B. 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 accepted 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.

C. 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, unless ordered by the Engineer in writing.

D. 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.

E. For lump sum items, the Contractor will be paid on the basis of actual work accepted until the work item is completed. Upon completion of the item, 100% 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 the respective items listed in the Bid as outlined in the approved schedule of values.

F. 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 the work completed.
1.2 ENGINEER'S ESTIMATE OF QUANTITIES

A. The Estimated quantities for unit price items, as listed in the bid schedule, are only approximate and are included solely for the purposes of the comparison of bids. The Engineer does not expressly, or by implication, agree that the nature of the materials encountered or required shall correspond therewith and reserves the right to increase or decrease any such quantity or to eliminate any quantity as the Engineer may deem necessary.

1.3 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.

1.4 QUANTITIES

A. The Estimated quantities indicated in the Bid Schedule are the quantities for the evaluation of bids. The actual quantities of items to be paid for on a unit price basis may vary from the quantities indicated in the Bid Schedule.

1.5 RELATED PROVISIONS SPECIFIED ELSEWHERE

A. Payment to Contractor – refer to General Conditions and Contract Agreement Section 6.


1.6 SUBMITTALS

A. Bid Breakdowns/Schedule of Values – submit in accordance with Section III, Article 12, Section VIII, Articles 1.4, 1.6, and 13, and SPEC 00025.

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 Part 3 – Bid Items shall together include all work set forth in the Contract Documents or required to properly complete the work. Any necessary work that is not 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 restricted to”. Each item includes:

1. All labor, material, equipment, plant services, bonds and insurance, tests, adjustments, warranties, overhead, 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. Where indicated for a Lump Sum Item, the Contractor shall provide a schedule of values per Subpart 1.06 of this section. The schedule of values shall include a breakdown of major cost items included within the lump sum in sufficient detail to document specific costs of all items included in the Lump Sum Item. The schedule of values shall be provided to the Engineer prior to initiation of work.

3. Measurement for Progress Payments of all Lump Sum Items will be on a percent complete basis as established in Section VI, Article 9.

C. **Unit Price Items** – where items are specified to be measured on a unit basis, measurement will be of each particular unit as specified:

1. **Volume Basis** – Where items are specified to be measured on a volume basis, the volume will be determined on an in-place basis (prior to excavation/dredging for excavation/dredging or after placement and compaction for imported fill) between the existing and final ground surfaces or grade lines shown on the drawings. If no tolerance is specified, the tolerance shall be interpreted to be 0.00 foot.

2. **Area Basis** – Where items are specified to be measured on an area basis, the area will be measured as the actual surface area within the specified limits based on a plan view. 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 required overlap of materials nor waste or scrap 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 based on a plan view. No adjustments will be made for the required overlap of materials nor waste or scrap 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 entering the site and exiting the site, using either an onsite or offsite scale. The measured tonnage will be difference between to entering and exiting measured truck weight.
5. **Time Basis** – Where items are specified to be measured on a time basis, the time will be measured by onsite time, of work conducted in accordance with Contract Documents, documented in daily reports and verified by the Engineer.

D. Measurement and payment will be made only for work that has been acceptably performed within the limits shown on the Construction Drawings and in conformance with the Contract Specifications, as specified, or ordered by the Engineer.

**PART 3 – BID ITEMS**

A. **BID ITEM LS-1 – MOBILIZATION/DEMOBILIZATION & SITE PREPARATION**

1. Bid Item I shall be bid lump sum price for site mobilization, demobilization, and site preparation as specified and directed herein. The **CONTRACTOR** shall submit a separate bid breakdown (see Section III, Article 12 and SPEC 000025) for this Bid Item that shows the individual cost of providing items in the scope of work for this Bid Item as described below plus mobilization, demobilization, and miscellaneous items not specified elsewhere:

   a. Mobilization and Demobilization of personnel, equipment and project facilities.
   b. Establish all temporary utilities and services including electric, phone, internet, sanitary facilities, and potable water.
   c. Contractor to provide three field offices, separate offices for the Engineer and Contractor at one of the processing areas and a shared field office at the.
   d. Plan and execution of the project in accordance with DER-10 Section 1.14 Sustainability and Green Remediation.
   e. Furnish and install staging areas.
   f. Project Plans, including but not limited to, Work Plan, Transportation and Disposal Plan, Dredging Plan, Excavation Plan, Health and Safety Plan (HASP), Quality Assurance Project Plan, Sampling Analysis Plan, Community Air Monitoring Plan (CAMP), Water Management Plan, etc.
   g. Obtain all required work and environmental permits not obtained by the Department.
   h. Schedules, submittals, shop drawings, and record drawings.
   i. Bonds and insurance.
   j. Clearing and grubbing of vegetation within the project work area.
   k. Perform initial survey; work progress survey included under Bid Item (UC-1).
   l. Site Control, Layout and As-Built Surveys.
   m. Furnish and install temporary fencing and barricades.
   n. Provide and post project signs.
   o. Provide and install meteorological station.
   p. Furnish and install erosion and sediment controls including, but not limited to, stabilized construction access, silt fence, hay bales, etc.
   q. Furnish and install turbidity controls as necessary along Willetts Creek and within Lake Capri.
   r. Performing an existing conditions assessment of buildings and infrastructure adjacent to the work area.
s. Furnish and install hydraulic controls to necessary to manage flow in Willets Creek and Lake Capri.

t. Furnish labor, equipment, and materials to provide decontamination facilities.

u. Provide onsite truck scale at both sediment processing areas.

v. At each sediment processing area, lease, provide, and construct a temporary fabric structure to house water treatment and sediment processing operations.

w. Design, installation and startup of treatment system(s) necessary for water management associated with dredging.

x. Contractor to furnish all materials and equipment required to construct necessary access roads.

y. Deconstruction and removal of all installed temporary facilities including but not limited to stockpile areas, decontamination pad and temporary access roads; this item includes compensation for characterization, transportation, and disposal of all materials that become waste during the performance of work.

z. Other work not specifically included in other items including compliance with applicable regulatory requirements; preconstruction and construction period planning; scheduling, submittals, reporting, administration and documentation; quality control; environmental protection and spill control.

2. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) that shows the individual cost of mobilization, demobilization, and miscellaneous items not elsewhere specified but necessary for a complete and proper remediation (provide detail).

3. Measurement for payment for Bid Item LS-1 MOBILIZATION/DEMOBILIZATION & SITE PREPARATION shall be paid the lump sum price for the above items completed, installed, and properly functioning as documented and approved by the Engineer. The Contractor may invoice for up to 60% of this item and pollution liability insurance upon commencement of dredging activities and 40% upon demobilization. Payment shall be Lump Sum Bid for each individual item described above, including mobilization, demobilization, and miscellaneous as submitted in the Contractor’s bid breakdown.

B. BID ITEM LS-2 – SITE RESTORATION –WILLETTS CREEK STATIONS 0+00 TO 21+00

1. Bid Item LS-2 SITE RESTORATION –WILLETTS CREEK STATIONS 0+00 TO 21+00 shall be bid lump sum price for restoration of all areas disturbed during the performance of remediation activities per the Contract Documents.

2. Provide all labor, materials, equipment, subcontractors, and incidentals necessary to completely and properly restore the stream, wetlands, shoreline, middle school, and residential properties. Site restoration includes the milling and resurfacing of a portion of the Stop and Shop Plaza parking lot, repair and/or replacement of the access corridors, staging, stockpiling, and processing areas,
lawns, plantings, fences, curbs, paved areas, sheds, pools, and decks that were disturbed on commercial, school, and residential properties during remediation. All work is to be performed in accordance with Construction Drawings and Specification SECTION 01 74 24 SITE RESTORATION.

3. The Engineer estimates that 6,000 CY of clean sand backfill will be required to restore Willetts Creek, Middle School, and residential properties from Station 0+00 to 21+00. Contractor responsible for documenting fill volumes which are to be determined by comparing the post-dredge/excavation and final restored bathymetric and topographic surfaces as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer.

4. The Engineer estimates that 25,000 SF of milling, asphalt paving, and striping will be required to restore the travel path through the Stop and Shop plaza. New asphalt will be placed over this area as described in Section 32 12 16 Asphalt Paving and as approved by Engineer.

5. Contractor to remove and dispose of culverted footbridge at Burling Lane (STA 15+00); furnish and install replacement box culvert, handrails, fencing, and gates as shown on the contract drawings. Contractor shall replace sidewalk to connect new footbridge to existing sidewalks. Contractor shall perform geotechnical evaluation to determine bearing capacity, design foundation for new footbridge, and obtain any permits necessary to perform this work including but not limited to demolition and construction permits.

6. Contractor shall furnish all labor, equipment, and material necessary to install approximately 250 linear feet of 6 feet tall chain link fence (Section 00020 FENCES) at the northern end of the Middle School athletic field as a barrier between the Middle School property and the shopping plaza.

7. As part of site restoration Contractor shall furnish all labor, equipment, and material required to modify existing storm sewer culverts so the discharge point 2 feet beyond new stream bank. This work requires the installation of new flared-end sections and rip rap outlet protection sized in accordance with Figure 3.18 of the New York State Standards and Specifications for Erosion and Sediment Control.

8. Contractor responsible for furnishing labor, equipment, materials, including but not limited to, seed, plants, trees, topsoil, mulch, and fertilizer that is required to restore the site in accordance with Contract Drawings and Specification (SECTIONS 01 74 24 – Site Restoration and 32 93 00 – Wetland Planting)

9. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) that shows the individual costs required to complete this Bid Item.

10. Measurement for Payment for bid item LS-2 SITE RESTORATION – WILLETTS CREEK STATIONS 0+00 TO 21+00 shall be the bid lump sum price for site restoration as documented and approved by the Engineer. Costs associated with surveying are to be fully compensated under bid item UC-1.
C. BID ITEM LS-3 – SITE RESTORATION –WILLETTS CREEK STATIONS 21+00 TO 42+50 AND LAKE CAPRI

1. Bid Item LS-3 shall be bid lump sum price for SITE RESTORATION - WILLETTS CREEK STATIONS 21+00 TO 42+50 AND LAKE CAPRI per the Contract Documents.

2. Provide all labor, materials, equipment, subcontractors, and incidentals necessary to completely and properly restore the lake, stream, wetlands, shoreline, high school, and residential properties including the repair and/or replacement of the access corridors, staging, stockpiling, and processing areas, lawns, plantings, fences, curbs, paved areas, sheds, pools, decks, docks, bulkheads that were disturbed on commercial, school, and residential properties during remediation of Willetts Creek, Lake Capri, and residential properties. Restoration work also includes milling and resurfacing the high school parking lot, Barberry Rd., and Ivy Ct. All work is to be performed in accordance with Construction Drawings and Specification SECTION 01 74 24 SITE RESTORATION.

3. The Engineer estimates that 3,000 CY of clean backfill will be required to restore Willetts Creek, School, and residential properties from Station 21+00 to 42+50.

4. The Engineer estimates that 5,000 CY of clean backfill will be required to be placed in Lake Capri along Montauk Highway and in areas where clean confirmation samples were not achieved.

5. The Engineer estimates that milling and resurfacing will be required for 85,000 SF of High School parking lot, 39,000 SF of Barberry Rd., and 7,500 SF of Ivy Ct. New asphalt will be placed over these locations as described in Section 32 12 16 Asphalt Paving and as approved by Engineer.

6. Contractor responsible for documenting fill volumes which are to be determined by comparing the post-dredge/excavation and final restored bathymetric and topographic surfaces as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer.

7. As part of site restoration Contractor shall furnish all labor, equipment, and material required to modify existing storm sewer culverts so the discharge point 2 feet beyond new stream bank. This work requires the installation of new flared-end sections and rip rap outlet protection sized in accordance with Figure 3.18 of the New York State Standards and Specifications for Erosion and Sediment Control.

8. Contractor responsible for furnishing labor, equipment, materials, including but not limited to, seed, plants, trees, topsoil, mulch, and fertilizer that is required to restore the site in accordance with Contract Drawings and Specification (SECTIONS 01 74 24 – Site Restoration and 32 93 00 – Wetland Planting)

9. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) that shows the individual costs required to complete this Bid Item.
10. Measurement for Payment for bid item LS-3 SITE RESTORATION - WILLETTS CREEK STATIONS 21+00 TO 42+50 AND LAKE CAPRI shall be the bid lump sum price for restoration of Willetts Creek, Lake Capri, School and residential properties as documented by a New York State licensed surveyor and approved by the Engineer. Costs associated with surveying are to be fully compensated under bid item UC-1.

D. **BID ITEM UC-1 – SITE SERVICES**

1. Bid Item UC-1 shall be bid unit cost price per calendar day for SITE SERVICES as specified and directed herein.

2. Provide all labor, materials, equipment and incidentals necessary for each calendar day of site services in accordance with the Technical Specifications and as described below:

   a. Site Security (24 hours per day, 7 days per week).
   b. Controlling onsite access including vehicle and pedestrian traffic.
   c. Traffic management and control (off-site)
   d. Fencing.
   e. Maintain Field Offices and Support Areas.
   f. Erosion and Surface Water Controls.
   g. Disposal of Contractor-Generated Solid Waste.
   h. Meteorological Station.
   i. Site access roadway maintenance.
   j. Maintaining soil/sediment stockpile containment areas and contractor equipment and materials staging areas.
   k. Maintaining all constructed temporary facilities and controls.
   l. Daily cleaning of the project site and disposing of Contractor generated solid waste.
   m. Coordinating with the Town of Islip, School District, and residential property owners/tenants.
   n. Maintain compliance with permits.
   o. Attending project meetings, including weekly meetings with school administration.
   p. Providing full time site superintendence.
   q. Providing quality control management.
   r. Maintaining vehicle decontamination pads including collection and analysis of decontamination verification samples.
   s. Maintenance of temporary utilities and services.
   t. Sanitary facilities and maintenance.
   u. Perform an existing conditions assessment along with monitoring and protection of structures and utilities adjacent to the work area as required during remediation.
   v. Perform noise control and monitoring as required during the execution of the work.
   w. Real-time turbidity monitoring during dredging activities.
   x. Surveying of work progress required for initial field verification, establishing and maintaining horizontal and vertical control, providing construction layout, providing quality control field measurements, and supporting the calculation of measurement for payment.
y. Furnish labor and equipment necessary to operate and maintain hydraulic controls to manage flow in Willets Creek and Lake Capri.

z. Continued operation of water treatment facilities.

aa. Some restoration activities may be completed the following spring, during the winter period the Contractor shall conduct and document weekly inspections to ensure that erosion and sediment control practices are in good condition and the site is stable.

bb. Maintain Temporary Fabric Structures.

3. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) showing the individual cost per day for providing items in the scope of work for this Bid Item.

4. Measurement for payment for Bid Item UC-1 - SITE SERVICES shall be by calendar day beginning upon commencement of dredging activities and shall end at substantial completion or at the end of the Contract Time specified in Section VI Article 6.1, whichever is sooner. Payment shall be unit price bid for each individual item described above as submitted in the Contractor’s bid breakdown. For each calendar day where a sub-item identified in the bid item breakdown is deficient or unsatisfactory as determined by the Engineer that sub-items value will be reduced by one hundred (100) percent.

E. BID ITEM UC-2 – HEALTH AND SAFETY

1. Bid Item UC-2 shall be bid unit cost price per calendar day for HEALTH AND SAFETY per the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary for each day for health and safety for execution of the work in accordance with a federal, state, and local safety codes. Section X, the Technical Specifications, and as directed below:
   a. Health and Safety Officer
   b. Decontamination stations (1 per sediment processing area)
   c. Health and Safety equipment
   d. Emergency response
   e. Decontamination trailer and personal hygiene facility
   f. Air monitoring as required by the CAMP. Collection samples up and downwind of the site, testing for the required parameters, and reporting laboratory results
   g. Dust control
   h. Sampling, analyses, handling and disposal of personal protective equipment and decontamination. Wastes not specifically included in other bid items.

3. The Contractor shall submit a bid breakdown showing the capital and daily Operation and Maintenance costs for items included in this Bid Item (Items not included in Bid Item UC-1, Site Services).

4. Measurement for payment for Bid Item UC-2 - HEALTH AND SAFETY shall be paid the bid unit price for each day the HASP has been adhered to in the opinion of the Engineer. Work included in this item shall be by calendar day.
beginning after the satisfactory establishment of an exclusion zone and shall be considered completed when there is no longer an exclusion zone in the project area or at the end of the Contract Time specified in Section VI, Article 6.1, whichever is sooner. All daily maintenance costs for health and safety are part of this Bid Item including everything required in the HASP. A reduction in the payment for this item will occur for each day the Contractor fails to adhere (in the opinion of the Engineer) to the HASP. There will be one hundred (100) percent reduction in this Bid Item for days where no remediation work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays, and holidays specified in Section XIII.

5. Exclusion zone(s) will be established upon the initiation of intrusive activities involving contaminated areas. Exclusion zone(s) will be removed at the completion of intrusive activities involving contamination.

F. **BID ITEM UC-3 – DREDGING WILLETTS CREEK**

1. Bid Item UC-3 shall be bid unit cost price per in-situ cubic yard (CY) for DREDGING WILLETTS CREEK per the Contract Documents. The estimated quantity for UC-3 includes soil outside the wetland boundary that is adjacent to the creek up to the limits of dredging. The Contractor will be compensated for achieving the dredge elevations associated with Willetts Creek under Bid Item UC-3. Any additional removal resulting from failed confirmations samples will be paid under Bid Item UC-7 SOIL EXCAVATION.

2. Provide all labor, materials, equipment and incidentals necessary to completely dredge contaminated sediment and debris from Willetts Creek by hydraulic or mechanical methods to the target dredge elevations presented on the Construction Drawings and to transport dredged materials to the processing area.

3. The Contractor shall be reimbursed at the UC-3 unit cost price per in-situ cubic yard (CY) as measured and certified by a New York State licensed surveyor and approved by the Engineer.

4. The Contractor shall not be reimbursed for dredging of materials resulting from unapproved dredging. Materials from unapproved dredging outside the vertical and lateral limits presented on the Construction Drawings shall be properly handled, characterized, and disposed offsite at the Contractor’s expense.

5. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) that shows the individual costs required to complete this Bid Item.

6. Measurement for Payment for bid item UC-3 shall be paid the bid unit price for EACH in-situ cubic yard of contaminated Willetts Creek sediment and debris dredging that has been completed to within 0.1 foot of the dredge elevations provided in the Construction Drawings. Volume will be determined by comparing the pre-dredge and post-dredge bathymetric and topographic surfaces as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer. Costs associated with surveying are to be fully compensated under bid item UC-1.
G. **BID ITEM UC-4 – PROCESSING WILLETTS CREEK SEDIMENT**

1. Bid Item UC-4 shall be bid unit cost price per in-situ cubic yard (CY) of contaminated sediment and debris dredged from Willetts Creek that is handled, processed, dewatered, amended, and stabilized to conform to all Federal, State, and Local transportation and disposal requirement and the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary to prepare dredged Willetts Creek sediment for transportation and disposal in accordance with Specification **SECTION 02 73 00 SOLIDS PROCESSING**.

3. The Contractor **shall not** be reimbursed for processing of materials resulting from unapproved dredging. Materials from unapproved dredging outside the vertical and lateral limits presented on the Construction Drawings shall be properly handled, characterized, and disposed offsite at the Contractor’s expense.

4. The Contractor **shall not** be reimbursed for additional volume resulting from application of amendments.

5. The Contractor shall submit a separate bid breakdown (Paragraph 1. 6 of this section) that shows the individual costs required to complete this Bid Item.

6. Measurement for Payment for bid item UC-4 shall be paid the bid unit price for EACH in-situ cubic yard (CY) of contaminated sediment and debris dredged from Willetts Creek that is processed using methods proposed by the Contractor and approved by the Engineer. Volume will be determined by comparing the pre-dredge and post-dredge as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer. Costs associated with surveying are to be fully compensated under bid item UC-1; costs associated with dredging are to be fully compensated under bid item UC-5.

H. **BID ITEM UC-5 – DREDGING LAKE CAPRI**

1. Bid Item UC-5 shall be bid unit cost price per in-situ cubic yard (CY) for DREDGING LAKE CAPRI per the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary to completely dredge contaminated sediment and debris in Lake Capri by hydraulic or mechanical methods to the target dredge elevations presented on the Construction Drawings or as required due to failed confirmation sampling and in accordance with Specification **SECTION 35 20 23 DREDGING**.

3. The Contractor **shall not** be reimbursed for dredging of materials resulting from unapproved dredging and for additional dredging required to achieve the design dredged surface elevation. Materials from unapproved dredging outside the vertical and lateral limits presented on the Construction Drawings shall be properly handled, characterized, and disposed offsite at the Contractor’s expense.

4. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this Section) that shows the individual costs required to complete this Bid Item.
5. Measurement for Payment for bid item UC-5 shall be paid the bid unit price for EACH in-situ cubic yard of Lake Capri sediment dredged to within +0.0 feet to -0.25 feet of the dredge elevations provided in the Construction Drawings or as required due to failed confirmation sampling. Volume will be determined by comparing the pre-dredge and post-dredge bathymetric and topographic surfaces as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer.

I. BID ITEM UC-6 – PROCESSING LAKE CAPRI SEDIMENT

1. Bid Item UC-6 shall be bid unit cost price per in-situ cubic yard (CY) of contaminated sediment and debris dredged from Lake Capri that is handled, processed, dewatered, amended, and stabilized to conform to all Federal, State, and Local transportation and disposal requirement and the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary to prepare dredged Lake Capri sediment for transportation and disposal in accordance with Specification SECTION 02 73 00 SOLIDS PROCESSING.

3. The Contractor shall not be reimbursed for processing of materials resulting from unapproved dredging. Materials from unapproved dredging outside the vertical and lateral limits presented on the Construction Drawings shall be properly handled, characterized, and disposed offsite at the Contractor's expense.

4. The Contractor shall not be reimbursed for additional volume resulting from application of amendments.

5. The Contractor shall submit a separate bid breakdown (Paragraph 1.6 of this section) that shows the individual costs required to complete this Bid Item.

6. Measurement for Payment for bid item UC-6 shall be paid the bid unit price for EACH cubic yard (CY) of debris and sediment dredged from Lake Capri that is processed using methods proposed by the Contractor and approved by the Engineer. Volume will be determined by comparing the pre-dredge and post-dredge bathymetric and topographic as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer. Costs associated with surveying are to be fully compensated under bid item UC-1; costs associated with dredging are to be fully compensated under bid item UC-5.

J. BID ITEM UC-7 – SOIL EXCAVATION

1. Bid Item UC-7 shall be bid unit cost price per in-situ cubic yard of soil properly excavated from within excavation limits shown on Contract Drawing per the Contract Documents. Bid Item UC-7 shall also include excavation resulting from failed confirmation sampling and/or visual indication of contamination identified by Engineer.

2. Provide all labor, materials, equipment and incidentals necessary to completely and properly excavate and handle contaminated soils identified on the Contract Drawings in accordance with Specification SECTION 00200 EXCAVATION. This Item shall also include the protection and/or removal of trees, fences, shed,
or other items within the footprint of the excavation are. Restoration of items disturbed during soil excavation to be included and compensated under site restoration Bid Items LS-2 & LS-3. Contractor responsible for all handling and management of the excavated materials necessary prior to characterization, stabilization, transportation and offsite disposal of the material. Item shall also include all shoring and management activities related to the excavation contaminated materials.

3. The Contractor **shall not** be reimbursed for excavation of materials resulting from over excavation by the Contractor in error or for the Contractor's convenience. Unapproved excavations shall be properly backfilled by the Contractor. The Contractor **shall not** be reimbursed for backfilling of unapproved excavations.

4. Measurement for payment for Bid Item UC-7 shall be paid the bid unit price for each in-situ cubic yard of soil and debris which is properly excavated. Volume will be determined by comparing the pre-excavation and post-excavation topographic surfaces as measured, calculated, and certified by a New York State licensed surveyor and approved by the Engineer.

K. **BID ITEM UC-8 –TRANSPORTATION & DISPOSAL OF NON-HAZARDOUS MATERIAL**

1. Bid Item UC-8 shall be bid unit cost price per TON of material properly characterized, loaded, transported, and disposed offsite as non-hazardous waste per the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary to characterize, load, transport, and dispose of non-hazardous materials in a permitted facility in accordance with all applicable laws, rules and regulations for proper execution of the Contract and in accordance with **SECTION 00015 OFFSITE TRANSPORTATION AND DISPOSAL**. The bid price shall also include the sampling, characterization, transportation and disposal of contaminated material generated during the excavation activities and classified as non-hazardous waste.

3. The Contractor **shall not** be reimbursed for the supply or disposal of sediment/soil amendment products beyond 10% of the wet weight of sediment as calculated by the Engineer unless approved in writing by the Engineer.

4. Measurement for payment for Bid Item UC-8 shall be paid the bid unit price for each ton of non-hazardous material that is properly sampled, transported and disposed as measured by certified weight tickets, documented by fully executed manifests returned from the disposal facility, and approved by the Engineer.

L. **BID ITEM UC-9 –TRANSPORTATION & DISPOSAL OF HAZARDOUS MATERIAL**

1. Bid Item UC-9 shall be bid unit cost price per TON of material properly characterized, loaded, transported, and disposed offsite as hazardous waste per the Contract Documents.
2. Provide all labor, materials, equipment and incidentals necessary to properly transport and dispose of materials determined to be hazardous waste in a permitted facility in accordance with all applicable laws, rules and regulations for proper execution of the Contract and in accordance with Specification SECTION 00015 OFFSITE TRANSPORTATION AND DISPOSAL. The bid price shall also include the sampling, characterization, transportation and disposal of contaminated material generated during the excavation activities and classified as hazardous waste.

3. The Contractor shall not be reimbursed for the supply or disposal of additive sediment/soil amendment products beyond 10% of the wet weight of sediment as calculated by the Engineer unless approved in writing by the Engineer.

4. Measurement for payment of Bid Item UC-6 shall be paid the bid unit price for each ton of hazardous material that is properly sampled, transported and disposed as measured by certified weight tickets, documented by fully executed manifests returned from the disposal facility, and approved by the Engineer.

M. BID ITEM UC-10 – POST REMEDIATION CONFIRMATION SAMPLING AND ANALYSIS

1. Bid Item UC-10 shall be bid unit cost price per Each (EA) CONFIRMATION SAMPLE collected and analyzed as directed by the Engineer per the Contract Documents.

2. Provide all labor, materials, equipment and incidentals necessary to completely and properly collect, analyze and validate soil confirmation samples as directed by the Engineer for proper execution of the Contract and in accordance with Specification SECTION 01 45 25 TESTING.

3. Costs in this pay item include sample collection, labeling, preservatives, shipping and analysis. Costs in this payment also include quality assurance/quality control samples such as field blanks, matrix spikes, matrix spike duplicates, and data reduction, validation and reporting.

4. Contractor shall submit a Data Usability Study Report for all confirmation sample data.

5. Measurement for Payment for bid item(s) UC-10 shall be paid the bid unit price for EACH (EA) CONFIRMATION SAMPLE collected, surveyed (paid under Site Services UC-1), analyzed as documented and approved by the Engineer.

END OF SECTION
SECTION XIII

Wage Rates and Associated Contract Requirements
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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 2018 through June 2019. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.state.ny.us. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and/or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail OR fax this form to the office shown at the bottom of this notice, OR fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: ___________________________ Date Cancelled: ___________________________
Name & Title of Representative: _______________________________________________________

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

www.labor.state.ny.us.
General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission: a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion online.

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project. There are very few exceptions to this rule. Complete information regarding these exceptions is available on the "4 Day / 10 Hour Work Schedule" form (PW 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

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records. 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 original payrolls or transcripts must be maintained for a period of at least (5) years, by the Department of Jurisdiction (Contracting Agency), from the project's date of completion. 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, by 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).

Determining Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "Public Work Project" notice must be posted at the beginning of the performance of every public work contract, on each job site.
Every employer providing workers’ compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers’ Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

**Apprentices**

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above, 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.
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: | ____/____/______ | [ ] (01) General Construction |
| Approximate Completion Date: | ____/____/______ | [ ] (02) Heating/Ventilation |
| | | [ ] (03) Electrical |
| | | [ ] (04) Plumbing |
| | | [ ] (05) Other: | ________________ |
IMPORTANT NOTICE

FOR

CONTRACTORS & CONTRACTING AGENCIES

Social Security Numbers on Certified Payrolls

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors’ concerns with regard to inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor.

NOTE: This change does not affect the Department’s ability to request and receive the entire social security number from employers during the course of its public work / prevailing wage investigations.
To all State Departments, Agency Heads and Public Benefit Corporations

IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.


3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.
To all State Departments, Agency Heads and Public Benefit Corporations

IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12240

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.
Construction Industry Fair Play Act

Required Posting For Labor Law
Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site.

Failure to post the notice can result in penalties of up to $1,500 for a first offense and up to $5,000 for a second offense.

The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, www.labor.ny.gov.

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.state.ny.us.
ATTENTION ALL EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS:
YOU ARE COVERED BY THE
CONSTRUCTION INDUSTRY FAIR PLAY ACT

The law says that you are an employee unless:
- You are free from direction and control in performing your job AND
- You perform work that is not part of the usual work done by the business that hired you AND
- You have an independently established business

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

IT IS AGAINST THE LAW FOR AN EMPLOYER TO MISCLASSIFY EMPLOYEES AS INDEPENDENT CONTRACTORS OR PAY EMPLOYEES OFF-THE-BOOKS.

Employee rights. If you are an employee:
- You are entitled to state and federal worker protections such as
  - unemployment benefits, if unemployed through no fault of your own, able to work, and otherwise qualified
  - workers’ compensation benefits for on-the-job injuries
  - payment for wages earned, minimum wage, and overtime (under certain conditions)
  - prevailing wages on public work projects
  - the provisions of the National Labor Relations Act and
  - a safe work environment
- It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor:
- You must pay all taxes required by New York State and Federal Law.

Penalties for paying off-the-books or improperly treating employees as independent contractors:
- **Civil Penalty**
  First Offense: up to $2,500 per employee.
  Subsequent Offense(s): up to $5,000 per employee.

- **Criminal Penalty**
  First Offense: Misdemeanor - up to 30 days in jail, up to a $25,000 fine and debarment from performing Public Work for up to one year.
  Subsequent Offense(s): Misdemeanor - up to 60 days in jail, up to a $50,000 fine and debarment from performing Public Work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at 1(866)435-1499 or send an email to dol.misclassified@labor.state.ny.us. All complaints of fraud and violations are taken seriously and you can remain anonymous.

Employer Name:
WORKER NOTIFICATION

(Labor Law §220, paragraph a of subdivision 3-a)

Effective February 24, 2008

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the prevailing wage rate for their particular job classification on each pay stub*. It also requires contractors and subcontractors to post a notice at the beginning of the performance of every public work contract on each job site that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her particular job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.state.ny.us or made available upon request by contacting the Bureau of Public Work at 518-457-5589.

* In the event that the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.
THIS IS A: PUBLIC WORK PROJECT

If you are employed on this project as a worker, laborer, or mechanic you are entitled to receive the prevailing wage and supplements rate for the classification at which you are working.

Chapter 629 of the Labor Laws of 2007:

These wages are set by law and must be posted at the work site. They can also be found at: www.labor.ny.gov

If you feel that you have not received proper wages or benefits, please call our nearest office.*

Albany (518) 457-2744 Patchogue (631) 687-4882
Binghamton (607) 721-8005 Rochester (585) 258-4505
Buffalo (716) 847-7159 Syracuse (315) 428-4056
Garden City (516) 228-3915 Utica (315) 793-2314
New York City (212) 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: _____________________________________________

PW 101 (4.15)
This provision is an addition to the existing prevailing wage rate law, Labor Law §220, section 220-h. It requires that on all public work projects of at least $250,000.00, all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course. It further requires that the advertised bids and contracts for every public work contract of at least $250,000.00, contain a provision of this requirement.

NOTE: The OSHA 10 Legislation only applies to workers on a public work project that are required, under Article 8, to receive the prevailing wage.
Where to find OSHA 10-hour Construction Course

1. NYS Department of Labor website for scheduled outreach training at:
   www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_ONSITE_CONSULTATION.shtm

2. OSHA Training Institute Education Centers:

   **Rochester Institute of Technology OSHA Education Center**
   Rochester, NY
   Donna Winter
   Fax (585) 475-6292
e-mail: dlwtpo@rit.edu
   (866) 385-7470 Ext. 2919
   www.rit.edu/~outreach/course.php3?CourseID=54

   **Atlantic OSHA Training Center**
   UMDNJ – School of Public Health
   Piscataway, NJ
   Janet Crooks
   Fax (732) 235-9460
e-mail: crooksje@umdnj.edu
   (732) 235-9455
   https://ophp.umdnj.edu/wconnect/ShowSchedule.awp?~~GROUP~AOTCON~10~

   **Atlantic OSHA Training Center**
   University at Buffalo
   Buffalo, New York
   Joe Syracuse
   Fax (716) 829-2806
e-mail: japs@buffalo.edu
   (716) 829-2125
   http://www.smbs.buffalo.edu/CENTERS/trc/schedule_OSHA.php

   **Keene State College**
   Manchester, NH
   Leslie Singleton
   e-mail: lsingleton@keene.edu
   (800) 449-6742
   www.keene.edu/courses/print/courses_osha.cfm

3. List of trainers and training schedules for OSHA outreach training at:
   www.OutreachTrainers.org
Requirements for OSHA 10 Compliance

Chapter 282 of the Laws of 2007, codified as Labor Law 220-h took effect on July 18, 2008. The statute provides as follows:

The advertised specifications for every contract for public work of $250,000.00 or more must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training “prior to the performing any work on the project.”

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (Note: Completion cards do not have an expiration date.)
- Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

**A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-485-5696.
WICKS Reform 2008

(For all contracts advertised or solicited for bid on or after 7/1/08)

- Raises the threshold for public work projects subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work. The total project's threshold would increase from $50,000 to: $3 million in Bronx, Kings, New York, Queens and Richmond counties; $1.5 million in Nassau, Suffolk and Westchester counties; and $500,000 in all other counties.

- For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical work and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or use of a Project Labor Agreement (PLA), and must be open to public inspection.

- Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA’s would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

- The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.

- Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

- Reduces from 15 to 7 days the period in which contractors must pay subcontractors.
IMPORTANT INFORMATION
Regarding Use of Form PW30.1
(Previously 30R)
“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

To use the ‘4 Day / 10 Hour Work Schedule’:

There MUST be a Dispensation of Hours (PW30) in place on the project

AND

You MUST register your intent to work 4 / 10 hour days, by completing the PW30.1 Form.

REMEMBER...

The ‘4 Day / 10 Hour Work Schedule’ applies ONLY to Job Classifications and Counties listed on the PW30.1 Form.

Do not write in any additional Classifications or Counties.

(Please note: For each Job Classification check the individual wage schedule for specific details regarding their 4/10 hour day posting.)
Instructions for Completing Form PW30.1
(Previously 30R)
“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

Before completing Form PW30.1 check to be sure …

• There is a Dispensation of Hours in place on the project.
• The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
• The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Instructions (Type or Print legibly):

Contractor Information:
• Enter the Legal Name of the business, FEIN, Street Address, City, State, Zip Code; the Company’s Phone and Fax numbers; and the Company’s email address (if applicable)

• Enter the Name of a Contact Person for the Company along with their Phone and Fax numbers, and the personal email address (if applicable)

Project Information:
• Enter the Prevailing Rate Case number (PRC#) assigned to this project

• Enter the Project Name / Type (i.e. Smithtown CSD – Replacement of HS Roof)

• Enter the Exact Location of Project (i.e. Smithtown HS, 143 County Route #2, Smithtown,NY; Bldgs. 1 & 2)

• If you are a Subcontractor, enter the name of the Prime Contractor for which you work

• On the Checklist of Job Classifications -
  o Go to pages 2 and 3 of the form
  o Place a checkmark in the box to the right of the Job Classification you are choosing
  o Mark all Job Classifications that apply

  ***Do not write in any additional Classifications or Counties.***

Requestor Information:
• Enter the name of the person submitting the registration, their title with the company, and the date the registration is filled out

Return Completed Form:
• Mail the completed PW30.1 form to: NYSDOL Bureau of Public Work, SOBC – Bldg.12 – Rm.130, Albany, NY 12240 -OR-

• Fax the completed PW30.1 form to: NYSDOL Bureau of Public Work at (518)485-1870
Employer Registration for Use of 4 Day / 10 Hour Work Schedule

Before completing this form, make sure that:

- There is a Dispensation of Hours in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Please type or print the requested information and then mail or fax to the address above.

Contractor Information

Company Name: ________________________________ FEIN: ____________
Address: ____________________________________________
City: __________________ State: _______ Zip Code: _______
Phone No: ______________ Fax N.: ______________ Email: __________________
Contact Person: __________________________
Phone No: ______________ Fax No: ______________ Email: __________________

Project Information

Project PRC#: __________________ Project Name/Type: __________________
Exact Location of Project: ___________________________ County: __________________
(If you are Subcontractor) Prime Contractor Name: ____________________________
Job Classification(s) to Work 4/10 Schedule: (Choose all that apply on Job Classification Checklist - Pages 3-8) ** Do not write in any additional Classifications or Counties**

Requestor Information

Name: __________________________
Title: __________________________ Date: __________________
Please use the list below with the number assigned to each county as a reference to the corresponding numbers listed in the following pages under **Entire Counties & Partial Counties**.

1. Albany County
2. Allegany County
3. Bronx County
4. Broome County
5. Cattaraugus County
6. Cayuga County
7. Chautauqua County
8. Chemung County
9. Chenango County
10. Clinton County
11. Columbia County
12. Cortland County
13. Delaware County
14. Dutchess County
15. Erie County
16. Essex County
17. Franklin County
18. Fulton County
19. Genesee County
20. Greene County
21. Hamilton County
22. Herkimer County
23. Jefferson County
24. Kings County (Brooklyn)
25. Lewis County
26. Livingston County
27. Madison County
28. Monroe County
29. Montgomery County
30. Nassau County
31. New York County (Manhattan)
32. Niagara County
33. Oneida County
34. Onondaga County
35. Ontario County
36. Orange County
37. Orleans County
38. Oswego County
39. Otsego County
40. Putnam County
41. Queens County
42. Rensselaer County
43. Richmond County (Staten Island)
44. Rockland County
45. Saint Lawrence County
46. Saratoga County
47. Schenectady County
48. Schoharie County
49. Schuyler County
50. Seneca County
51. Steuben County
52. Suffolk County
53. Sullivan County
54. Tioga County
55. Tompkins County
56. Ulster County
57. Warren County
58. Washington County
59. Wayne County
60. Westchester County
61. Wyoming County
62. Yates County
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<th>Job Classification</th>
<th>Tag #</th>
<th>Entire Counties</th>
<th>Partial Counties</th>
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<td>276B-All</td>
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<td>276B-Cat</td>
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<td>276-B-LIV</td>
<td>26, 28, 35, 59</td>
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<td>Carpenter – Building</td>
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<td>19, 32, 37</td>
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<td>276HH-All</td>
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<td>291B-Alb</td>
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<td>291B-Ham</td>
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<td>Carpenter – Heavy &amp; Highway</td>
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<td>25m</td>
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<td>Electrician – Teledata Cable Splicer</td>
<td>43</td>
<td>12, 22, 27, 33, 38</td>
<td>6, 9, 34, 39, 55, 59</td>
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</tbody>
</table>
# Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

<table>
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<th>Entire Counties</th>
<th>Partial Counties</th>
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<td>Electrical Lineman</td>
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<td>621b</td>
<td>2, 7</td>
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<tr>
<td>Laborer – Building</td>
<td>633 bON</td>
<td>34</td>
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## Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

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<th>Tag #</th>
<th>Entire Counties</th>
<th>Partial Counties</th>
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<td>633b Cay</td>
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<td>8, 51</td>
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**Job Classification Checklist**  
*(Place a checkmark by all classifications that will be using the 4/10 schedule)*  
***Do not write in any additional Classifications or Counties***

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<td>40, 60</td>
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</table>
**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 that 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.state.ny.us) for current wage rate information.

**Apprentice Training Ratios**

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.
<table>
<thead>
<tr>
<th>Title (Trade)</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>Boilermaker (Construction)</td>
<td>1:1,1:4</td>
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<tr>
<td>Boilermaker (Shop)</td>
<td>1:1,1:3</td>
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<tr>
<td>Carpenter (Bldg., H&amp;H, Pile Driver/Dockbuilder)</td>
<td>1:1,1:4</td>
</tr>
<tr>
<td>Carpenter (Residential)</td>
<td>1:1,1:3</td>
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<tr>
<td>Electrical (Outside) Lineman</td>
<td>1:1,1:2</td>
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<tr>
<td>Electrician (Inside)</td>
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<tr>
<td>Elevator/Escalator Construction &amp; Modernizer</td>
<td>1:1,1:2</td>
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<tr>
<td>Glazier</td>
<td>1:1,1:3</td>
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<tr>
<td>Insulation &amp; Asbestos Worker</td>
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<td>Iron Worker</td>
<td>1:1,1:4</td>
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<td>Laborer</td>
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<td>Mason</td>
<td>1:1,1:4</td>
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<tr>
<td>Millwright</td>
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<td>Op Engineer</td>
<td>1:1,1:5</td>
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<td>Painter</td>
<td>1:1,1:3</td>
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<tr>
<td>Plumber &amp; Steamfitter</td>
<td>1:1,1:3</td>
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<td>Roofer</td>
<td>1:1,1:2</td>
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<td>Sheet Metal Worker</td>
<td>1:1,1:3</td>
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<tr>
<td>Sprinkler Fitter</td>
<td>1:1,1:2</td>
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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 - 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
Asbestos Worker

JOB DESCRIPTION  Asbestos Worker

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2018

Abestos Worker  $ 44.00
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS
Per Hour:

Abestos Worker  $ 8.70
Removal & Abatement Only

OVERTIME PAY
See (B, B2, *E, J) on OVERTIME PAGE
Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY
See (1) on HOLIDAY PAGE

REGISTERED APPRENTICES
Apprentice Removal & Abatement Only:
1000 hour terms at the following percentage of Journeyman's rates.
1st 2nd 3rd 4th
78% 80% 83% 89%

SUPPLEMENTAL BENEFIT
Per Hour:

Apprentice
Removal & Abatement  $ 8.70

Boilermaker

JOB DESCRIPTION  Boilermaker

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES
Per Hour: 07/01/2018 01/01/2019

Boilermaker  $ 57.17 $ 59.17
Repairs & Renovations  $ 57.17 $ 59.17

SUPPLEMENTAL BENEFITS
Per Hour:

Boilermaker 32% of hourly 32% of hourly
Repair $ Renovations Wage Paid Wage Paid
+ $ 25.32 + $ 25.35

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY
See (D, O) on OVERTIME PAGE
Repairs & Renovation see (B,E,Q)

HOLIDAY
REGISTERED APPRENTICES
Wage per hour:
(1/2) Year Terms at the following percentage of Boilermaker's Wage

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<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
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<tr>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
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Supplemental Benefits Per Hour:

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<td>32% of Hourly Wage Paid Plus</td>
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<td>$19.37</td>
<td>$19.38</td>
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<td>2nd Term</td>
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<td>3rd Term</td>
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<td>4th Term</td>
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<td>7th Term</td>
<td>24.46</td>
<td>24.49</td>
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NOTE: "Hourly Wage Paid" shall include any and all premium(s)
Carpenter 11/01/2018

JOB DESCRIPTION  Carpenter  
DISTRICT  8

ENTIRE COUNTIES  
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES  
Per hour:  07/01/2018

Carpet/Resilient  
Floor Coverer  $ 50.50

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS  
Per hour:  
$ 45.85

OVERTIME PAY  
See (B, E, Q) on OVERTIME PAGE

HOLIDAY  
Paid:  See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.  
Apprentices  See (5,6,11,13,16,18,19,25)  
Overtime:  See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES  
Wage per hour - (1) year terms:

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<tbody>
<tr>
<td>1st</td>
<td>$20.20</td>
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<tr>
<td>2nd</td>
<td>$25.25</td>
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<tr>
<td>3rd</td>
<td>$32.83</td>
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<tr>
<td>4th</td>
<td>$40.40</td>
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</tbody>
</table>

Supplemental benefits per hour - all apprentice terms:

$ 31.11

8-2287

Carpenter 11/01/2018

JOB DESCRIPTION  Carpenter  
DISTRICT  8

ENTIRE COUNTIES  
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES  
Per Hour:  07/01/2018

Marine Construction:  
Marine Diver  $ 67.94  
Marine Tender  48.24

SUPPLEMENTAL BENEFITS  
Per Hour:  
Journeyman  $ 50.62

OVERTIME PAY  
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY  
Paid:  See (18, 19) on HOLIDAY PAGE  
Overtime:  See (5, 6, 10, 11, 13, 16, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES  
Wages per hour:  
One (1) year terms:

<table>
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<th>Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>$21.45</td>
</tr>
<tr>
<td>2nd year</td>
<td>26.82</td>
</tr>
<tr>
<td>3rd year</td>
<td>34.86</td>
</tr>
<tr>
<td>4th year</td>
<td>42.90</td>
</tr>
</tbody>
</table>
Supplemental Benefits
Per Hour:

All terms $ 33.49

Carpenter 11/01/2018

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2018

Building
Millwright $ 52.70

SUPPLEMENTAL BENEFITS
Per hour:

Millwright $ 53.16

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour:

One (1) year terms:

<table>
<thead>
<tr>
<th>1st.</th>
<th>2nd.</th>
<th>3rd.</th>
<th>4th.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$28.33</td>
<td>$33.48</td>
<td>$38.63</td>
<td>$48.93</td>
</tr>
</tbody>
</table>

Supplemental benefits per hour:

One (1) year terms:

<table>
<thead>
<tr>
<th>1st.</th>
<th>2nd.</th>
<th>3rd.</th>
<th>4th.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$34.23</td>
<td>$37.83</td>
<td>$42.08</td>
<td>$48.64</td>
</tr>
</tbody>
</table>

Carpenter 11/01/2018

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per Hour:

07/01/2018

Timberman $ 49.10

SUPPLEMENTAL BENEFITS
Per Hour:

07/01/2018

$ 49.92

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE.
Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour:
One (1) year terms:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$19.64</td>
<td>$24.55</td>
<td>$31.92</td>
<td>$39.28</td>
</tr>
</tbody>
</table>

Supplemental benefits per hour:
All terms $ 33.14

Note: Hazardous Waste Pay Differential:
For Level C, an additional 10% above wage rate per hour
For Level B, an additional 10% above wage rate per hour
For Level A, an additional 10% above wage rate per hour
Note: When required to work on water: an additional $ 0.50 per hour.

SUPPLEMENTAL BENEFITS
Per hour: 07/01/2018

Driller and Helper $ 25.45

OVERTIME PAY
OVERTIME: See (B,E,K*,P,R**) on OVERTIME PAGE.

HOLIDAY
Paid: See (5,6) on HOLIDAY PAGE.
Overtime: * See (5,6) on HOLIDAY PAGE.
** See (8,10,11,13) on HOLIDAY PAGE.

Carpenter - Building / Heavy&Highway

JOB DESCRIPTION Carpenter - Building / Heavy&Highway
DISTRICT 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2018
Carpenter (Building) $ 49.38
Carpenter (Heavy Highway) $ 49.38

"NOTE" ADD 15% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERMENTAL MANDATED Off-Shift Work.
Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday, with one-half (1/2) hour allowed for a lunch period.

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:
Both Carpenter Categories $ 32.11

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms at the following:
Per Hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$23.73</td>
<td>$27.86</td>
<td>$29.93</td>
<td>$34.06</td>
</tr>
</tbody>
</table>

Supplemental Benefits
Per Hour:
All Terms: $18.10

4-Reg.Council Nass/Suff

Electrician 11/01/2018

JOB DESCRIPTION Electrician
ENTIRE COUNTIES Nassau, Suffolk

WAGES
Per Hour: 07/01/2018 04/27/2019
Telephone and Intergrated Tele-Data System Electrician $37.48 $37.83

This rate classification applies to ALL Voice, Data & Video work.: Excluding Fire Alarm Systems and Energy Managment Systems (HVAC Controls), in those cases the regular Electrician rate applies. To ensure proper use of this rate please call Nassau Offices at (516)228-3912 or Suffolk Offices at (631)687-4882.

SUPPLEMENTAL BENEFITS
Per Hour:

Tele-Data Electrician 16% of 16% of Hourly Wage Hourly Wage Paid + $18.49 Paid + $19.01

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

Electrician 11/01/2018

JOB DESCRIPTION Electrician
ENTIRE COUNTIES Nassau, Suffolk

WAGES

4-25tel
Per Hour: 07/01/2018 03/30/2019

Electrician
Electrical Maintenance $ 43.20 $ 43.70
Traffic Signal $ 44.10 $ 44.60

"PLEASE NOTE"
Applicable to "EXISTING ELECTRICAL SYSTEMS" including, but not limited to TRAFFIC SIGNALS & STREET LIGHTING. Not used for addons.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday, with one-half (1/2) hour allowed for a lunch period.

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:

Electrician 12% of Hourly Wage Paid + $17.61
12% of Hourly Wage Paid + $18.37

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY
See (B, E2, K, P) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Term(s) at the following Percentage of Journeyman(s) Wage:

1st 2nd 3rd 4th 5th 6th
40% 50% 60% 70% 80% 90%

Supplemental Benefits:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>03/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3% + $3.50</td>
<td>3% + $3.50</td>
</tr>
<tr>
<td>2nd</td>
<td>8% + $4.04</td>
<td>8% + $4.04</td>
</tr>
<tr>
<td>3rd</td>
<td>9% + $5.05</td>
<td>9% + $5.05</td>
</tr>
<tr>
<td>4th</td>
<td>10% + $6.81</td>
<td>10% + $6.81</td>
</tr>
<tr>
<td>5th</td>
<td>11% + $10.76</td>
<td>11% + $10.76</td>
</tr>
<tr>
<td>6th</td>
<td>12% + $13.86</td>
<td>12% + $13.86</td>
</tr>
</tbody>
</table>

NOTE: Percentages are on "Hourly Wage Paid"
NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Electrician

JOB DESCRIPTION Electrician
ENTIRE COUNTIES Nassau, Suffolk
WAGES
Per Hour: 07/01/2018
Electrician Pump & Tank $ 41.65

SUPPLEMENTAL BENEFITS
Per Hour:

Electrician Pump & Tank 65.25%
of *Wage Paid
*Wage Paid includes any and all Premiums

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 Year Terms at the Following:

Per Hour:

1st Term $12.50
2nd Term $14.58
3rd Term $16.66
4th Term $18.74
5th Term $24.99
6th Term $29.16

SUPPLEMENTAL BENEFITS
Per Hour:

All Terms 65.25% of *Wage Paid

*Wage Paid includes any and all Premiums

4-25 Pump & Tank

Electrician

11/01/2018

JOB DESCRIPTION Electrician

ENTIRE COUNTIES Nassau, Suffolk

WAGES
Per Hour: 07/01/2018 10/27/2018

Electrician/Wireman $51.75 $52.00
HVAC Controls 51.75 52.00
Fire Alarms 51.75 52.00

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2018 10/27/2018

Electrician/Wireman 16% of Hourly Wage Paid + $25.26 16% of Hourly Wage Paid + $25.83

NOTE: "Hourly Wage Paid" shall include any and all premium[s]

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms at the following Percentage of Journeyman(s) Wage:

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
<td>35%</td>
<td>40%</td>
<td>45%</td>
<td>60%</td>
<td>75%</td>
</tr>
</tbody>
</table>

Supplemental Benefits Per Hour:

07/01/2018 10/27/2018
<table>
<thead>
<tr>
<th>Rank</th>
<th>Percentage</th>
<th>Hourly Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3% + $2.71</td>
<td>3% + $2.71</td>
</tr>
<tr>
<td>2nd</td>
<td>8% + $4.68</td>
<td>8% + $4.68</td>
</tr>
<tr>
<td>3rd</td>
<td>9% + $5.85</td>
<td>9% + $5.85</td>
</tr>
<tr>
<td>4th</td>
<td>10% + $7.99</td>
<td>10% + $7.99</td>
</tr>
<tr>
<td>5th</td>
<td>13% + $10.82</td>
<td>13% + $10.82</td>
</tr>
<tr>
<td>6th</td>
<td>14% + $17.08</td>
<td>14% + $17.08</td>
</tr>
</tbody>
</table>

NOTE: Percentages are on "Hourly Wage Paid"
NOTE: "Hourly Wage Paid" shall include any and all premium(s).
Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work schedule', 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:
Utility Distribution & Transmission Line Construction:

<table>
<thead>
<tr>
<th>Date</th>
<th>Per Hour</th>
<th>Natural Gasline Construction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$12.43</td>
<td>07/01/2018 04/01/2019</td>
</tr>
<tr>
<td>04/01/2019</td>
<td>$13.09</td>
<td></td>
</tr>
<tr>
<td>All Classifications</td>
<td>32% of Hourly</td>
<td>32% of Hourly</td>
</tr>
<tr>
<td>Wage Paid</td>
<td>Wage Paid</td>
<td></td>
</tr>
<tr>
<td>$12.43</td>
<td>$13.09</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Natural Gasline Construction:
Per Hour:

<table>
<thead>
<tr>
<th>Date</th>
<th>Per Hour</th>
<th>Natural Gasline Construction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$12.62</td>
<td>07/01/2018 06/01/2019</td>
</tr>
<tr>
<td>06/01/2019</td>
<td>$13.28</td>
<td></td>
</tr>
<tr>
<td>26.0% of Hourly</td>
<td>27% of Hourly</td>
<td></td>
</tr>
<tr>
<td>Wage Paid</td>
<td>Wage Paid</td>
<td></td>
</tr>
<tr>
<td>$12.62</td>
<td>$13.28</td>
<td></td>
</tr>
</tbody>
</table>

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
OVERTIME for Natural Gas Mechanic:(B,G,P)

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE
Same as Above for Natural Gas Mechanic.

REGISTERED APPRENTICES
1000 hour Terms at the following Percentage of Journeyman's Wage.
(Lineman Only)

1st 2nd 3rd 4th 5th 6th 7th
60% 65% 70% 75% 80% 85% 90%

SUPPLEMENTAL BENEFIT:
<table>
<thead>
<tr>
<th>Date</th>
<th>Per Hour</th>
<th>Natural Gasline Construction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$12.43</td>
<td>07/01/2018 04/01/2019</td>
</tr>
<tr>
<td>04/01/2019</td>
<td>$13.09</td>
<td></td>
</tr>
<tr>
<td>All Terms</td>
<td>31% of Hourly</td>
<td>31% of Hourly</td>
</tr>
<tr>
<td>Wage Paid</td>
<td>Wage Paid</td>
<td></td>
</tr>
<tr>
<td>$12.43</td>
<td>$13.09</td>
<td></td>
</tr>
</tbody>
</table>

Elevator Constructor

JOB DESCRIPTION Elevator Constructor
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk
PARTIAL COUNTIES Rockland: Entire County except for the Township of Stony Point
WAGES
Per hour:

<table>
<thead>
<tr>
<th>Date</th>
<th>Per Hour</th>
<th>Natural Gasline Construction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$64.48</td>
<td></td>
</tr>
<tr>
<td>Elevator Constructor</td>
<td>4-1049 Line/Gas</td>
<td></td>
</tr>
</tbody>
</table>

Modernization & Service/Repair
SUPPLEMENTAL BENEFITS
Per Hour:
Elevator Constructor $ 39.922
Modernization & Service/Repair $ 38.966

**OVERTIME PAY**
Constructor. See (D, M, T) on OVERTIME PAGE.
Modern./Service See (B, F, S) on OVERTIME PAGE.

**HOLIDAY**
Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**
WAGES PER HOUR:
*Note: 1st Term is based on Average wage of Constructor & Modernization. Terms 2 thru 4 Based on Journeyman's wage of classification Working in.

1 YEAR TERMS:

<table>
<thead>
<tr>
<th>1st Term*</th>
<th>2nd Term</th>
<th>3rd Term</th>
<th>4th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>55%</td>
<td>65%</td>
<td>75%</td>
</tr>
</tbody>
</table>

**SUPPLEMENTAL BENEFITS**
Elevator Constructor
1st Term $ 32.04
2nd Term 32.80
3rd Term 34.038
4th Term 35.277

Modernization & Service/Repair
1st Term $ 31.965
2nd Term 32.406
3rd Term 33.578
4th Term 34.745

**Glazier**

**JOB DESCRIPTION** Glazier

**DISTRICT** 8

**ENTIRE COUNTIES**
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

**WAGES**
Per hour: 07/01/2018 11/01/2018

<table>
<thead>
<tr>
<th>Glazier</th>
<th>07/01/2018</th>
<th>11/01/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 54.75</td>
<td>+ additional</td>
<td></td>
</tr>
<tr>
<td><em>Scaffolding</em></td>
<td>55.75</td>
<td>$ 1.25</td>
</tr>
<tr>
<td>Glass Tinting &amp; Window Film</td>
<td>28.16</td>
<td>28.16</td>
</tr>
</tbody>
</table>

**Repair & Maintenance**
28.16

*Scaffolding includes swing scaffold, mechanical equipment, scissor jacks, man lifts, booms & buckets 24' or more, but not pipe scaffolding.

**Repair & Maintenance**- All repair & maintenance work on a particular building, whenever performed, where the total cumulative contract value is under $100,000. All Glass tinting, window film, regardless of material or intended use, and all affixing of decals to windows or glass.

**SUPPLEMENTAL BENEFITS**
Per hour:

| Journeyworker | $ 32.39 |
| Glass tinting & Window Film | 18.64 |
| Repair & Maintenance | 18.64 |

**OVERTIME PAY**
See (C*, D* E2, O) on OVERTIME PAGE. (Premium is applied to the respective base wage only.)
If an optional 8th hour is required to complete the entire project, the same shall be paid at the regular rate of pay. If a 9th hour is worked, then both hours or more (8th & 9th or more) will be paid at double time rate of pay.

For 'Repair & Maintenance' see (B, B2, F, P) on overtime page.

**HOLIDAY**
Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6, 16, 25) on HOLIDAY PAGE
For 'Repair & Maintenance' see (5, 6, 16, 25)

**REGISTERED APPRENTICES**
Wage per hour:
(1) year terms at the following wage rates:

<table>
<thead>
<tr>
<th>Term</th>
<th>07/01/2018</th>
<th>11/01/2018</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st term</td>
<td>$ 18.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd term</td>
<td>26.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd term</td>
<td>32.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th term</td>
<td>43.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Benefits:
(Per hour)
<table>
<thead>
<tr>
<th>Term</th>
<th>07/01/2018</th>
<th>11/01/2018</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st term</td>
<td>$ 15.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd term</td>
<td>21.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd term</td>
<td>23.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th term</td>
<td>27.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8-1281 (DC9 NYC)

**Insulator - Heat & Frost** 11/01/2018

**JOB DESCRIPTION** Insulator - Heat & Frost

**ENTIRE COUNTIES**
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

**WAGES**
Per Hour:
07/01/2018 01/01/2019

<table>
<thead>
<tr>
<th>Insulators Heat &amp; Frost</th>
<th>$ 67.11</th>
<th>Additional $1.25 to be allocated</th>
</tr>
</thead>
</table>

**SUPPLEMENTAL BENEFITS**
Per Hour:

Insulators $ 33.56
Heat & Frost

**OVERTIME PAY**
See (*C, **O, V) on OVERTIME PAGE
* 8th Hour paid at time and one half
** Triple time for Labor Day (if worked)

**HOLIDAY**
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**
Wages:
1 year terms Per Hour:
Hired prior to 08/21/2017

<table>
<thead>
<tr>
<th>Term</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$26.84</td>
<td>$33.55</td>
<td>$40.27</td>
<td>$50.33</td>
</tr>
</tbody>
</table>

Hired after 8/21/2017

<table>
<thead>
<tr>
<th>Term</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$23.49</td>
<td>$30.20</td>
<td>$36.91</td>
<td>$43.62</td>
</tr>
</tbody>
</table>

Supplemental Benefits:
Hired prior to 08/21/2017

<table>
<thead>
<tr>
<th>Term</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$13.42</td>
<td>$16.78</td>
<td>$20.14</td>
<td>$25.17</td>
</tr>
</tbody>
</table>

Hired after 08/21/2017
JOB DESCRIPTION  Ironworker

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES
Per hour: 07/01/2018 07/01/2019
Reinforcing & $ 2.00/Hr.
Metal Lathing $ 56.28 to be Allocated

"Basic" Wage $ 54.65**

**Overtime to be calculated on "Basic" wage

SUPPLEMENTAL BENEFITS
Per hour:
Reinforcing & $ 35.30
Metal Lathing

OVERTIME PAY
See (B, E, Q, *X) on OVERTIME PAGE

*Only $22.00 per Hour for non worked hours

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1) year terms at the following wage rates:
Wages Per Hour:

<table>
<thead>
<tr>
<th>1st term</th>
<th>2nd term</th>
<th>3rd term</th>
<th>4th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 26.38</td>
<td>$ 30.38</td>
<td>$ 35.38</td>
<td>$ 37.38</td>
</tr>
</tbody>
</table>

SUPPLEMENTAL BENEFITS
Per Hour:

<table>
<thead>
<tr>
<th>1st term</th>
<th>2nd term</th>
<th>3rd term</th>
<th>4th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 15.37</td>
<td>$ 17.37</td>
<td>$ 19.33</td>
<td>$ 20.33</td>
</tr>
</tbody>
</table>

11/01/2018 4-46
REGISTERED APPRENTICES

Wage per hour:

1/2 year terms at the following hourly wage rate:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$31.42</td>
<td>$31.42</td>
<td>$44.54</td>
<td>$43.07</td>
<td>$54.41</td>
<td>$54.41</td>
</tr>
</tbody>
</table>

Supplemental benefits:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per hour</td>
<td>$19.97</td>
<td>$19.97</td>
<td>$30.02</td>
<td>$30.02</td>
<td>$30.02</td>
<td>$30.02</td>
</tr>
</tbody>
</table>

JOB DESCRIPTION  Ironworker

DISTRIBUTION  4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>01/01/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ornamental</td>
<td>$44.65</td>
<td>$1.25/hr.</td>
</tr>
<tr>
<td>Chain Link Fence</td>
<td>44.65</td>
<td>to be allocated</td>
</tr>
<tr>
<td>Guide Rail</td>
<td>44.65</td>
<td></td>
</tr>
</tbody>
</table>

SUPPLEMENTAL BENEFITS

Per Hour:

|       | Journeyworker: $54.05 |

OVERTIME PAY

See (B, B1, E2, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1st term represents first 1-10 months, thereafter (1/2) year terms at the following percentage of Journeyman's wage.

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Benefits per hour:

<table>
<thead>
<tr>
<th></th>
<th>1st Term</th>
<th>2nd Term</th>
<th>3rd Term</th>
<th>4th Term</th>
<th>5th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Term</td>
<td>$41.37</td>
<td>$42.67</td>
<td>$43.91</td>
<td>$46.44</td>
<td>$48.98</td>
</tr>
</tbody>
</table>

JOB DESCRIPTION  Ironworker

DISTRIBUTION  4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

PER HOUR:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>01/01/2019</th>
<th>07/01/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ironworker: Structural</td>
<td>$50.70</td>
<td>Additional  $1.82/Hr.</td>
<td>Additional  $1.93/Hr.</td>
</tr>
<tr>
<td>Bridges Machinery</td>
<td></td>
<td>to be allocated</td>
<td>to be allocated</td>
</tr>
</tbody>
</table>

SUPPLEMENTAL BENEFITS

PER HOUR:

|       | Journeyman: $73.93 |

Page 45
OVERTIME PAY
See (B, B1, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES PER HOUR:

6 month terms at the following rate:

1st $26.44
2nd 27.04
3rd - 6th 27.65

Supplemental Benefits
PER HOUR:
All Terms 52.68

LABORER - BUILDING
11/01/2018

JOB DESCRIPTION Laborer - Building

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2018

Building Laborer $39.40

Asbestos Abatement Workers 36.00
(Re-Roofing Removal see Roofer)

SUPPLEMENTAL BENEFITS
Per Hour:

Building Laborer $29.56
Asbestos Abatement Worker 16.45

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
See also (H) for Fire Watch on OVERTIME PAGE
Asbestos Worker See (B, H)

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE
Asbestos Worker see (5, 6, 8 & 28)

REGISTERED APPRENTICES
Regular Hours Work Terms
Term #1 1 hr to 1000hrs
Term #2 1001hrs to 2000hrs
Term #3 2001hrs to 3000hrs
Term #4 3001hrs to 4000hrs

Wages per hour:
1st Term $17.46
2nd Term 20.55
3rd Term 25.43
4th Term 30.41

Benefits per hour
1st Term $19.65
2nd Term 22.44
3rd Term 22.44
4th Term 22.44
**JOB DESCRIPTION**  Laborer - Heavy&Highway  

**ENTIRE COUNTIES**  
Nassau, Suffolk  

**WAGES**  
Laborer (Heavy/Highway):
- **GROUP # 1**: Asphalt Rakers, Concrete Curb Formsetters.  
- **GROUP # 2**: Asphalt Shovelers, Roller Boys and Tampers.  
- **GROUP # 3**: Basic Laborer, Power Tool(Jackhammer), Landscape Construction, Traffic Control Personnel(flaggers)  

**WAGES PER HOUR:**  

<table>
<thead>
<tr>
<th>GROUP</th>
<th>07/01/2018</th>
<th>06/01/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUP # 1</strong></td>
<td>Total Wage Paid: $51.43</td>
<td>Additional: $2.45</td>
</tr>
<tr>
<td></td>
<td>&quot;Base Wage&quot;: 44.68</td>
<td></td>
</tr>
<tr>
<td><strong>GROUP # 2</strong></td>
<td>Total Wage Paid: $50.11</td>
<td>Additional: $2.45</td>
</tr>
<tr>
<td></td>
<td>&quot;Base Wage&quot;: 43.36</td>
<td></td>
</tr>
<tr>
<td><strong>GROUP # 3</strong></td>
<td>Total Wage Paid: $46.10</td>
<td>Additional: $2.29</td>
</tr>
<tr>
<td></td>
<td>&quot;Base Wage&quot;: 39.35</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** "Base Wage" for Premium/Overtime calculation Only. $6.75 is difference between "Base" and "Total"  

**SUPPLEMENTAL BENEFITS**  
Per Hour:  
ALL GROUPS: $29.87  

After Forty (40) paid hours in a work week  
OVERTIME PAY: $18.74  

**OVERTIME PAY**  
See (B, E2, F) on OVERTIME PAGE  

NOTES: Premium/Overtime Pay to be calculated on "Base Wage" ONLY  
Example Group 3: $39.35 X Time and One Half = $59.02 + $6.75 = $65.77  

Premium Pay of 30% of base wage for all Straight time hours on all New York State, D.O.T. and other Government Mandated Off-Shift Work.  
Hazardous Material Work add an Additional 10% of base wage  

**HOLIDAY**  
Paid: See (1) on HOLIDAY PAGE  
Overtime: See (1) on HOLIDAY PAGE  

**REGISTERED APPRENTICES**  
1000 hour(s) Terms at the following Percentage of the "Base Wage" except  
4th Term calculate at Total Wage Paid.  

| 1st 0-1000/Hrs. | 60% |
| 2nd 1001-2000/Hrs. | 70% |
| 3rd 2001-3000/Hrs. | 80% |
| 4th 3001-4000/Hrs. | 90% |

Supplemental Benefits per hour:  

| All APPRENTICES | $29.87 |  
| After Forty(40) paid hours in a work Week | $18.74 |  

---  

**Mason**  

**JOB DESCRIPTION**  Mason  

**ENTIRE COUNTIES**  
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk  

---  

Page 47
WAGES
Per Hour: 07/01/2018

Brick/Blocklayer $ 61.12

SUPPLEMENTAL BENEFITS

Per Hour:

Brick/Block Layer $ 27.30

OVERTIME PAY
See (A, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(800 hour) Terms at the following Percentage of Journeyworkers Wage:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Benefits per hour:

All Apprentices $ 16.90

Mason - Building

11/01/2018

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES Nassau, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2018

Tile Finisher $ 43.36

SUPPLEMENTAL BENEFITS

Per hour: $ 28.99

OVERTIME PAY
See (B, E, Q, *V) on OVERTIME PAGE

Work beyond 10 hours on a Saturday shall be paid at double the hourly wage rate.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

Mason - Building

11/01/2018

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building: 07/01/2018

Wages per hour:

Mosaic & Terrazzo Mechanic $ 52.46
Mosaic & Terrazzo Finisher $ 50.86

SUPPLEMENTAL BENEFITS

Per hour:

Mosaic & Terrazzo Mechanic $ 34.06
Mosaic & Terrazzo Finisher $ 34.04

OVERTIME PAY
See (A, *E, Q) on OVERTIME PAGE
HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES
Wages per hour:
(750 Hour) terms at the following wage rate.

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td>$26.23</td>
<td>$28.85</td>
<td>$31.48</td>
<td>$34.10</td>
<td>$36.72</td>
<td>$39.35</td>
<td>$44.59</td>
<td>$49.84</td>
</tr>
</tbody>
</table>

Supplemental benefits per hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td>$17.05</td>
<td>$18.74</td>
<td>$20.43</td>
<td>$22.15</td>
<td>$23.85</td>
<td>$25.55</td>
<td>$28.96</td>
<td>$32.37</td>
</tr>
</tbody>
</table>

Mason - Building

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per hour: 07/01/2018

Building-Marble Restoration:

Marble, Stone & Terrazzo Polisher, etc $40.99

SUPPLEMENTAL BENEFITS
Per Hour: Journeyworker:

Building-Marble Restoration:

Marble, Stone & Polisher $26.59

OVERTIME PAY
See (B, *E, Q, V) on OVERTIME PAGE
*ON SATURDAYS, 8TH HOUR AND SUCCESSIVE HOURS PAID AT DOUBLE HOURLY RATE.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1ST TERM APPRENTICE GETS PAID FOR ALL OBSERVED HOLIDAYS.

REGISTERED APPRENTICES
WAGES per hour:

2701 hour term at the following wage:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-th</td>
<td>901-th</td>
<td>1801-th</td>
<td>2701-th</td>
<td></td>
</tr>
<tr>
<td>900</td>
<td>1800</td>
<td>2700</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td>$28.63</td>
<td>$32.75</td>
<td>$36.87</td>
<td>$40.99</td>
</tr>
</tbody>
</table>

Supplemental Benefits Per Hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td>$24.24</td>
<td>$25.02</td>
<td>$25.81</td>
<td>$26.59</td>
</tr>
</tbody>
</table>

Mason - Building

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester
WAGES
Wages: $58.63

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyworker $36.12

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage Per Hour:

7500 hour terms at the following wage.

<table>
<thead>
<tr>
<th>1st term</th>
<th>2nd term</th>
<th>3rd term</th>
<th>4th term</th>
<th>5th term</th>
<th>6th term</th>
<th>7th term</th>
<th>8th term</th>
<th>9th term</th>
<th>10th term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$23.34</td>
<td>$26.29</td>
<td>$29.22</td>
<td>$32.16</td>
<td>$35.11</td>
<td>$38.05</td>
<td>$40.98</td>
<td>$43.93</td>
<td>$49.82</td>
<td>$55.68</td>
</tr>
</tbody>
</table>

Supplemental Benefits per hour:

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>$25.69</td>
<td>$26.65</td>
<td>$27.44</td>
<td>$28.30</td>
<td>$29.16</td>
<td>$30.03</td>
<td>$30.91</td>
<td>$31.77</td>
<td>$33.50</td>
<td>$35.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9-7/4</td>
</tr>
</tbody>
</table>

Mason - Building 11/01/2018

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per hour: $22.77

Note 1: An additional $2.00 per hour for time spent grinding floor using "60 grit" and below.
Note 2: Flaming equipment operator shall be paid an additional $25.00 per day.

SUPPLEMENTAL BENEFITS
Per Hour:

Marble, Stone, etc.
Maintenance Finishers: $13.24

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY
Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES
WAGES per hour:
(750 hour) terms at the following percentage of journeyman's wage
rate:

1st term $15.90
2nd term $16.82
3rd term $17.73
4th term $18.65
5th term $20.02
6th term $21.85
7th term $22.77

Supplemental Benefits:

Per hour:

1st term $13.14
2nd term $13.15
3rd term $13.17
4th term $13.18
5th term $13.20
6th term $13.20
7th term $13.24

JOB DESCRIPTION

Mason - Building

DISTRICT 9

ENTIRE COUNTIES
Nassau, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2018

Tile Setters $56.13

SUPPLEMENTAL BENEFITS
Per Hour: $33.29

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE
* This portion of benefits subject to same premium rate as shown for overtime wages.
Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

Tile Setters:
(750 hour) term at the following wage rate:

Term:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>1st</th>
<th>2nd</th>
<th>2nd</th>
<th>3rd</th>
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<th>4th</th>
<th>4th</th>
<th>5th</th>
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<th>7th</th>
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<tr>
<td></td>
<td>750</td>
<td>1500</td>
<td>2250</td>
<td>3000</td>
<td>3750</td>
<td>4500</td>
<td>5250</td>
<td>6000</td>
<td></td>
<td></td>
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<td>1-</td>
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<tr>
<td>750</td>
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<td></td>
</tr>
<tr>
<td>29.13</td>
<td>33.57</td>
<td>36.69</td>
<td>40.13</td>
<td>43.77</td>
<td>47.22</td>
<td>50.15</td>
<td>53.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supplemental Benefits per hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>1st</th>
<th>2nd</th>
<th>2nd</th>
<th>3rd</th>
<th>3rd</th>
<th>4th</th>
<th>4th</th>
<th>5th</th>
<th>5th</th>
<th>6th</th>
<th>6th</th>
<th>7th</th>
<th>7th</th>
<th>8th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.70</td>
<td>15.75</td>
<td>17.70</td>
<td>18.15</td>
<td>18.98</td>
<td>20.03</td>
<td>21.57</td>
<td>26.76</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk
WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks)Marble and Granite pavers 2’x 2’ or larger.

Per Hour: 07/01/2018

Stone Setter $64.42
Stone Tender $44.89

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter $33.30
Stone Tender $19.40

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.
** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: *Must work first 1/2.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters wage rate per hour:

1st 2nd 3rd 4th 5th 6th
50% 60% 70% 80% 90% 100%

Supplemental Benefits:

All Apprentices $20.44

4-1Stn

Mason - Building / Heavy&Highway 11/01/2018

JOB DESCRIPTION Mason - Building / Heavy&Highway
DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2018

Marble-Finisher $46.76

SUPPLEMENTAL BENEFITS

Journeyworker:

per hour

Marble- Finisher $33.93

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

* Work beyond 8 hours on a Saturday shall be paid at double the rate.
** When an observed holiday falls on a Sunday, it will be observed the next day.

Mason - Building / Heavy&Highway 11/01/2018

JOB DESCRIPTION Mason - Building / Heavy&Highway
DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
**SUPPLEMENTAL BENEFITS**

Per Hour:

Cement Mason $33.71

Overtime Rate* $54.42

**OVERTIME PAY**

See (*B1, Q, V) on OVERTIME PAGE

* Applies to 9th and 10th hours and up to the 10th hour on Saturday

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

(1) year terms at the following Percentage of Journeyworkers Wage.

1st Term 50%

2nd Term 60%

3rd Term 70%

Supplement Benefits per hour paid:

1st Term $16.86  OT Rate $27.22

2nd Term $20.23  OT Rate $32.66

3rd Term $23.60  OT Rate $38.10
ENTIRE COUNTIES
Nassau, Suffolk

WAGES
BUILDING CATEGORIES:

CLASS "AA":
ABI Machine (150,000lbs and over or 149,999lbs and under when driving steel sheet piles), Crane, Truck Crane, Derrick, Dragline, Dredge,
Crawler Crane, Tower Crane & Pile Driver, Vertical Drill Rig (115,000lbs and over and 114,999lbs and under).

CLASS "A":
ABI Machine (149,999 and under used for augering and drilling), Asphalt Spreader, Backhoe Crawler (360 swing), Barrier Machine, CAP (ice
machine), Cherry picker CAP (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, GradAll, Grader, Hydraulic
Cherrypicker/Crane (2seats), Hoist (3drum or multi platform), Laser Screed, Loading Machine (Bucket/CAP 10ydrds or more), Milling Machine
(Large), Pipeline Welder, Plant Engineer, Power Winch (stone setting/structural steel), Powerhouse, Scoop Carry-All Scraper (in tandem),
Sideboom Tractor (includes tank work), Track Alignment Machine, Stone Spreader (self propelled), Striping Machine (long line/truck
mounted), Tree Grapple, Zamboni.

CLASS "B":
Backhoe (other than 360), Belt Scree, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker (under 70 Tons), Conveyor-Multi, Curb
Machine (asphalt or concrete), Dinky Locomotive, Drill Rig (dowels) Fork Lift, Hoist (2 Drum), Loading Machine & Front End Loader,
Mechanical Compactors (machine drawn), Mulch Machine (Machine Fed), Power Wincher (Not Included in Class "A"),
Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall/Scraper, Skid Loader/Skid Steer/Bobcat, Trenching Machine, Vermeer
Cutter, Work Boat, Inspection/Safety Boat.

CLASS "C":
Concrete Finish/Saw/Spreader, Dirt Roller, Hoist (1 drum), Interior Hoist, Milling Machine (small), Oiler Truck Crane (pile work), Power
Broom, Vactor Truck, VacAll.

CLASS "D":
Boiler (thermoplastic), Concrete Breaker, Converyer, Curing Machine, Fork Lift or Walk Behind (power operated), Generator, Hydra Hammer,
Compactors (mechanical or hand operated), Maintenance Engineer (small equipment/well point/welding & burning), Mechanic (field man),
Micro-Trap with Compressor, Oiler (Truck Crane Boom 100ft or more) Power Winch Truck Mounted (Stone Setter/Struct.Steel), Pin Puller,
Portable Heaters, Power Buggies, Pump (double action diaphragm), Pump (4 inch or over), Pump (hydraulic/submersible) Jet Pump, Pulvi-
Mixer, Ridge Cutter, Shot Blaster.

CLASS "E":
Batching Plant, Compressor (structural steel/2 or more battery), Generator (small), Grinder, Ground Heater, Power Grinder, Mixer with Skip,
Mulching Machine (hand fed), Oiler, Pipeline Welder Helper, Power Washer, Pumps (up to 3 inch/single action 1 to 3 inches), Pump
(gypsum), Root Cutter, Stump Chipper, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (pile
work/structural steel), Deckhand on Work/Inspection/Safety Boat.

07/01/2018

Class "AA" $ 75.40
Cranes: Boom length over 100 feet add $ 1.00 per hour
" " 150 " " $ 1.50 " "
" " 250 " " $ 2.00 " "
" " 350 " " $ 3.00 " "

Class "A" $ 62.53
Add $3.50 for Hazardous Waste Work

Class "B" $ 59.27
Add $2.50 for Hazardous Waste Work

Class "C" $ 57.09
Add $1.50 for Hazardous Waste Work

Class "D" $ 42.98
Add $1.00 for Hazardous Waste Work

Class "E" $ 41.03

SUPPLEMENTAL BENEFITS
Per Hour:

All Classes $ 37.80
Overtime Rate 32.35

**OVERTIME PAY**
See (D, O) on OVERTIME PAGE

**HOLIDAY**
Paid: See (5, 6, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

*NOTE* Employee must be Employed day before and day after Holiday to receive Holiday Pay.

**REGISTERED APPRENTICES**
One (1) Year Terms at the following Rate:

<table>
<thead>
<tr>
<th>Term</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Term</td>
<td>$21.94</td>
</tr>
<tr>
<td>2nd Term</td>
<td>22.80</td>
</tr>
<tr>
<td>3rd Term</td>
<td>23.48</td>
</tr>
</tbody>
</table>

Supplemental Benefits per hour:

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Apprentices</td>
<td>$15.64</td>
</tr>
<tr>
<td>Overtime Rate</td>
<td>5.60</td>
</tr>
</tbody>
</table>

---

**Operating Engineer - Building / Heavy&Highway**

**JOB DESCRIPTION** Operating Engineer - Building / Heavy&Highway

**DISTRICT** 4

**ENTIRE COUNTIES**
Nassau, Suffolk

**WAGES**
Per Hour: 07/01/2018 08/01/2018

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Driller Helper</td>
<td>$31.39</td>
<td>$32.49</td>
</tr>
</tbody>
</table>

Hazardous Waste Differential
Added to Hourly Wage:

<table>
<thead>
<tr>
<th>Level</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$3.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>B</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>C</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Monitoring Well Work
Add to Hourly Wage:

<table>
<thead>
<tr>
<th>Level</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$3.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>B</td>
<td>2.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**SUPPLEMENTAL BENEFITS**
Per Hour: 07/01/2018 08/01/2018

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Driller &amp; Helper</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>time rate plus $12.20</td>
<td>time rate plus $12.20</td>
</tr>
</tbody>
</table>

Additional $4.00 for Premium Time

**OVERTIME PAY**
See (B, E, G, P) on OVERTIME PAGE

**HOLIDAY**
Paid: See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 23) on HOLIDAY PAGE

**REGISTERED APPRENTICES**
Apprentices at 12 Month Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Term</td>
<td>$21.94</td>
<td>$21.94</td>
</tr>
<tr>
<td>2nd Term</td>
<td>22.80</td>
<td>22.80</td>
</tr>
<tr>
<td>3rd Term</td>
<td>23.48</td>
<td>23.48</td>
</tr>
</tbody>
</table>
SUPPLEMENTAL BENEFITS
Per Hour:

1st Term  10% of Wage + $ 5.10
2nd Term  10% of Wage + $ 5.60
3rd Term  10% of Wage + $ 6.60

BENEFITS AT PREMIUM TIME
Per Hour:

1st Term  10% of Wage + $ 5.85
2nd Term  10% of Wage + $ 6.60
3rd Term  10% of Wage + $ 8.10

Operating Engineer - Heavy&Highway 11/01/2018

JOB DESCRIPTION  Operating Engineer - Heavy&Highway

ENTIRE COUNTIES  Nassau, Suffolk

WAGES
Party Chief - One who directs a survey party
Instrument Man - One who runs the instrument and assists Party Chief
Rodman - One who holds the rod and in general, assists the survey party
Categories cover GPS & Under Ground Surveying

Per Hour: 07/01/2018

Heavy Highway/Building
Party Chief  $ 67.76
Instrument Man  51.66
Rodman  44.30

SUPPLEMENTAL BENEFITS
Per Hour:

Heavy Highway/Building  $ 34.23

Premium*:
Heavy Highway/Building  $ 43.40

Premium**:
Heavy Highway/Building  $ 52.56

* Applies to instances where 1-1/2 regular rate are paid
** Applies to instances where 2 times the rate are paid.

OVERTIME PAY
See (B, *E, Q) on OVERTIME PAGE
* Doubletime paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 25) on HOLIDAY PAGE

Operating Engineer - Heavy&Highway 11/01/2018

JOB DESCRIPTION  Operating Engineer - Heavy&Highway

ENTIRE COUNTIES  Nassau, Suffolk

WAGES
HEAVY and HIGHWAY CATEGORIES:

CLASS "AA" CRANES:
ABI Machine (150,000lbs and over), ABI Machine (149,000lbs and under driving steel sheets), Crane, Truck Crane, Derrick, Dragline, Dredge, Crawler Crane, Tower Crane, Pile Driver.
CLASS "A":
ABI Machine (149,000lbs and under for Augering or Drilling), Asphalt Spreader, Backhoe Crawler (360 Swing & over 150,000lbs), Backhoe Crawler (360 Swing & under 149,000lbs), Barrier Machine, Cherrypicker Cap (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, Grader, Gradall, Hoist (3 drum or multi-platform), Hydraulic Cherrypicker/crane (2 seats), Loading Machine (bucket 10 yds. or more), Laser Screed, Milling Machine (Large), Pipeline Welder, Plant Engineer. Power Winch-Stone Setting/Structural Steel or Truck Mounted, Powerhouse, Scoop-Carryall-Scaper in Tandem, Side Boom Tractor, Side Boom Tractor (Tank Work), Stone Spreader(self propelled), Stripping Machine (long line/truck mounted), Tree Graple, Tank Work, Track Alignment Machine.

CLASS "B":
Backhoe (other than 360), Belt Scree, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker (under 70 tons), Conveter-Multi, Curb Machine Asphalt/Concrete, Dinky Locomotive, Drill Rig for Dowels, Field Mechanic, Fork Lift, Hoist (2 Drum), Loading Machine, Loading Machine (Front End), Mechanical Compactors (Machine Drawn), Mulching Machine (Machine Fed), Post Hole/Auger, Power Winch (other than structural steel), Pump Hydraulic (with boring machine), Asphalt Roller, Scoop (carry-all, scraper), Skid Loader/Steer, Vermeer Cutter, Work Boat, Inspection & Safety Boat.

CLASS "C":
Concrete Finish/Saw/Spreader Machines, Dirt Roller, Hoist (1 drum), Interior Hoist, Oiler Truck Crane(Pile work), Power Broom, Small Milling Machine, Vactor Truck/VacAll Truck.

CLASS "D":
Boiler (Thermoplastic), Concrete Breaker, Conveyor, Curing Machine, Fireman, Fork lift (walk behind), Generator, Hydra Hammer, Maintenance Engineer (small equipment/Weli Point/Welding & Burning), Compactors (hand operated), Pin Puller, Portable Heaters, Power Buggies, Pulvi Mixer, Pumps (double action/4 inch and over/Hydraulic/Submersible & Jet), Ridge Cutter, Robotic Unit Operator(Trenchless Pipe Rehab-Cleaning & Television of Sewers/CCTV Inspection), Shotblaster.

CLASS "E":
Batching Plant (On Job Site), Compressor (structural steel/2 or more in battery), Generator(small), Grinder, Ground Heater(boilers), Power Grinder, Mixer (with skip), Mulching Machine (hand feed), Oiler, Pipeline Welder Helper, Power Washer, Pump(up to 3 inches/Gypsum/Single action 1 to 3 inches), Root Cutter, Stump Grinder, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (Pile Work/Structural Steel), Deckhand (on Work/Inspection/Safety Boat).

07/01/2018

Class "AA"  $ 74.69
Cranes: Boom Length over 100 feet add $ 1.00 per hour
** ** 150 ** "$ 1.50 **
** ** 250 ** "$ 2.00 **
** ** 350 ** "$ 3.00 **

Class "A"  $ 66.00*  
*Add $3.50 for Hazardous Waste Work.

Class "B"  $ 61.00*  
*Add $2.50 for Hazardous Waste Work.

Class "C"  $ 59.37*  
*Add $1.50 for Hazardous Waste Work

Class "D"  $ 44.88  
*Add $1.00 for Hazardous Waste Work

Class "E"  $ 42.92  

"NOTE": ADD 30% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED off-shift work.

SUPPLEMENTAL BENEFITS
Per Hour:

ALL CLASSES  $ 38.05

Note: OVERTIME AMOUNT  $ 32.35

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid:  See (5, 6, 7, 8) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 8) on HOLIDAY PAGE

"Note" Employee must be employed day before and day after
a holiday to receive holiday pay.

**REGISTERED APPRENTICES**
Wage per hour:

**SUPPLEMENTAL BENEFITS:**

- **APPRENTICES** $15.64
- Note: Overtime Amount $5.60

---

**Operating Engineer - Marine Dredging**

**JOB DESCRIPTION** Operating Engineer - Marine Dredging

**ENTIRE COUNTIES**
Albany, Bronx, Cayuga, Chautauqua, Clinton, Columbia, Dutchess, Erie, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Niagara, Orange, Orleans, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

**WAGES**
These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for barge mounted cranes and other equipment are only for marine dredging work in navigable waters found in the counties listed above.

- **DREDGING OPERATIONS 07/01/2018**
  - **CLASS A**
    - Operator, Leverman, Lead Dredgeman $38.18
  - **CLASS A1**
    - Dozer, Front Loader Operator To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.
  - **CLASS B**
    - Barge Operator $33.02
    - Spider/Spill
    - Tug Operator (over 1000hp), Operator, Fill Placer, Derrick Operator, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer
  - Certified Welder, Boat Operator (licensed) $31.09
  - **CLASS C**
    - Drag Barge Operator, Steward, Mate, Assistant Fill Placer, Welder (please add) $0.06
      - $30.24
  - **CLASS D**
    - Shoreman, Deckhand, Rodman, Scowman, Cook, Messman, Porter, Janitor $24.30
      - $0.09
SUPPLEMENTAL BENEFITS
Per Hour:
THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B
07/01/2018
$11.23 plus 8%
of straight time
wage, Overtime hours
add $ 0.63

All Class C
$10.93 plus 8%
of straight time
wage, Overtime hours
add $ 0.48

All Class D
$10.63 plus 8%
of straight time
wage, Overtime hours
add $ 0.33

OVERTIME PAY
See (B, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

Operating Engineer - Survey Crew - Consulting Engineer 11/01/2018

JOB DESCRIPTION
Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT  9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Dutchess: That part in Duchess County lying South of the North City line of Poughkeepsie.

WAGES
Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2018
Survey Classifications

Party Chief $ 43.10
Instrument Man 36.01
Rodman 31.54

SUPPLEMENTAL BENEFITS
Per Hour:
All Crew Members: $ 18.50

OVERTIME PAY
OVERTIME..... See ( B, E*, Q, V ) ON OVERTIME PAGE.
*Doubletime paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7*, 11, 16) on HOLIDAY PAGE

Operating Engineer - Trenchless Pipe Rehab 11/01/2018

JOB DESCRIPTION
Operating Engineer - Trenchless Pipe Rehab

DISTRICT  4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Page 59
IMPORTANT NOTE: This Category & Classifications are now located in Operating Engineers/Heavy Highway & Laborers/ Heavy Highway.

Per Hour: 07/01/2018
(SEE)

Robotic Unit Operator Operator(class D)
Technician/Boiler, Generator Operator(classes C&D)
AM Liner/Hydra Seal Laborer(Grp#3)
Hobas Pipe, Polyethylene Pipe or Pull and Inflate Liner Laborer(Grp#3)

OVERTIME PAY

HOLIDAY

 Painter 11/01/2018

JOB DESCRIPTION Painter

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES
Per hour: 07/01/2018
Brush $ 46.85*
Abatement/Removal of lead based or lead containing paint on materials to be repainted. 46.85*
Spray & Scaffold $ 49.85*
Fire Escape 49.85*
Decorator 49.85*
Paperhanger/Wall Coverer 50.03*

*Subtract $ 0.10 to calculate premium rate.

SUPPLEMENTAL BENEFITS
Per hour: 07/01/2018
Paperhanger $ 28.19
All others 26.72
Premium 29.22**

**Applies only to "All others" category, not paperhanger journeyman.

OVERTIME PAY
See (A, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One (1) year terms at the following wage rate.

Per hour: 07/01/2018
Appr 1st term... $ 17.85*
Appr 2nd term... 23.26*
Appr 3rd term... 28.14*
Appr 4th term... 37.52*

*Subtract $ 0.10 to calculate premium rate.
Supplemental benefits:
Per Hour: 07/01/2018
Appr 1st term... $ 13.81
Appr 2nd term... 16.82
Appr 3rd term... 19.42
Appr 4th term... 24.56

 JOB DESCRIPTION Painter

ENTIRE COUNTIES
Putnam, Suffolk, Westchester

PARTIAL COUNTIES
Nassau: All of Nassau except the areas described below: Atlantic Beach, Cedarhurst, East Rockaway, Gibson, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on the South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave., Rockville Centre is the boundary line up to Lawson Blvd. turn right going west all the above territory. Starting at Union Turnpike and Lakeville Rd. going north to Northern Blvd, the west side of Lakeville road to Northern Blvd. At Northern Blvd. going east the district north of Northern Blvd. to Port Washington Blvd. West of Port Washington Blvd.to St.Francis Hospital then north of first traffic light to Port Washington and Sands Point, Manor Haven, Harbour Acres.

WAGES
Per hour: 07/01/2018
Drywall Taper $ 46.85*

*Subtract $ 0.10 to calculate premium rate.

SUPPLEMENTAL BENEFITS
Per hour: 07/01/2018
Journeyman $ 26.72

OVERTIME PAY
See (A, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages - Per Hour: 07/01/2018
1500 hour terms at the following wage rate:
1st term $ 17.85*
2nd term $ 23.26*
3rd term $ 28.14*
4th term $ 37.52*

*Subtract $ 0.10 to calculate premium rate.

Suppemental Benefits - Per hour:
One year term (1500 hours) at the following dollar amount.
1st year $ 13.81
2nd year $ 16.82
3rd year $ 19.42
4th year $ 24.56

 Painter - Bridge & Structural Steel

 JOB DESCRIPTION Painter - Bridge & Structural Steel

ENTIRE COUNTIES

WAGES
Per Hour:
STEEL:
BRIDGE PAINTING: 07/01/2018 - 10/01/2018

<table>
<thead>
<tr>
<th>Period</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$49.50</td>
<td>$49.50</td>
</tr>
<tr>
<td></td>
<td>+6.38*</td>
<td>+6.38*</td>
</tr>
</tbody>
</table>

**ADDITIONAL $6.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.**

**NOTE:** All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. **EXCEPTION:** First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

**NOTE:** Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

**SUPPLEMENTAL BENEFITS**

**Per Hour:**

<table>
<thead>
<tr>
<th>Period</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journeyworker</td>
<td>$8.25</td>
<td>$9.50</td>
</tr>
<tr>
<td></td>
<td>+24.35*</td>
<td>+26.05*</td>
</tr>
</tbody>
</table>

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. **EXCEPTION:** First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

**OVERTIME PAY**

See (A, F, R) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

**Wage - Per hour:**

<table>
<thead>
<tr>
<th>Apprentices: (1) year terms</th>
<th>07/01/2018</th>
<th>10/01/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>$22.65</td>
<td>$23.13</td>
</tr>
<tr>
<td>2nd year</td>
<td>33.98</td>
<td>34.73</td>
</tr>
<tr>
<td>3rd year</td>
<td>45.30</td>
<td>46.30</td>
</tr>
</tbody>
</table>

**Supplemental Benefits - Per hour:**

| 1st year | $12.76 | $13.44 |
| 2nd year | 19.14  | 20.16  |
| 3rd year | 25.52  | 26.88  |

**JOB DESCRIPTION** Painter - Line Striping

**DISTRICT** 8

**ENTIRE COUNTIES**


**WAGES**

**Per hour:**

<table>
<thead>
<tr>
<th>Painter (Striping-Highway):</th>
<th>07/01/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stripping-Machine Operator*</td>
<td>$29.93</td>
</tr>
<tr>
<td>Linerman Thermoplastic</td>
<td>$36.06</td>
</tr>
</tbody>
</table>

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

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 paid: 07/01/2018
Journeyworker:

- Stripping-Machine operator: $ 7.44
- Lineman Thermoplastic: $ 7.44

OVERTIME PAY
See (B, B2, E2, F, S) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES
One (1) year terms at the following wage rates:

07/01/2018

- 1st term: $ 11.97
- 2nd term: 17.96
- 3rd term: 23.94

Supplemental Benefits per hour:

- 1st term: $ 7.44
- 2nd term: 7.44
- 3rd term: 7.44

Painter - Metal Polisher

8-1456-LS

JOB DESCRIPTION  Painter - Metal Polisher  DISTRICT  8

ENTIRE COUNTIES

WAGES

07/01/2018
- Metal Polisher: $ 30.58
- Metal Polisher*: 31.53
- Metal Polisher**: 34.08

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2018
Journeyworker:
All classification: $ 7.72

OVERTIME PAY
See (B, E, P, T) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
One (1) year term at the following wage rates:

07/01/2018  01/01/2019

- 1st year: $ 13.00  $ 15.00
- 2nd year: 13.00 15.00
3rd year 15.75 15.75

1st year* $15.39 $17.39
2nd year* 15.44 17.44
3rd year* 16.29 18.29

1st year** $17.50 19.50
2nd year** 17.50 19.50
3rd year** 18.25 20.25

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
Per hour:

1st year $5.52 $5.52
2nd year 5.52 5.52
3rd year 5.52 5.52

8-8A/28A-MP

---

Plasterer 11/01/2018

**JOB DESCRIPTION** Plasterer

**DISTRICT** 9

**ENTIRE COUNTIES**
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

**WAGES**
Per hour:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>08/01/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plasterer/Traditional &amp; Spraying Fireproofing</td>
<td>$45.58</td>
<td>$45.58</td>
</tr>
</tbody>
</table>

**SUPPLEMENTAL BENEFITS**
Per hour:

| Journeyworker | $26.27 | $26.52 |

**OVERTIME PAY**
See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**
Wages:
(per hour)
800 hours term:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>08/1/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st term</td>
<td>$18.33</td>
<td>$18.33</td>
</tr>
<tr>
<td>2nd term</td>
<td>$20.62</td>
<td>$20.62</td>
</tr>
<tr>
<td>3rd term</td>
<td>$25.21</td>
<td>$25.21</td>
</tr>
<tr>
<td>4th term</td>
<td>$27.50</td>
<td>$27.50</td>
</tr>
<tr>
<td>5th term</td>
<td>$32.08</td>
<td>$32.08</td>
</tr>
<tr>
<td>6th term</td>
<td>$34.37</td>
<td>$34.37</td>
</tr>
</tbody>
</table>

Supplemental Benefits:
(per hour):
800 hours term:

<table>
<thead>
<tr>
<th></th>
<th>07/01/2018</th>
<th>08/01/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st term</td>
<td>$13.83</td>
<td>$13.88</td>
</tr>
<tr>
<td>2nd term</td>
<td>$14.31</td>
<td>$14.36</td>
</tr>
<tr>
<td>3rd term</td>
<td>$16.28</td>
<td>$16.44</td>
</tr>
<tr>
<td>4th term</td>
<td>$17.36</td>
<td>$17.53</td>
</tr>
<tr>
<td>5th term</td>
<td>$19.53</td>
<td>$19.72</td>
</tr>
<tr>
<td>6th term</td>
<td>$20.81</td>
<td>$20.81</td>
</tr>
</tbody>
</table>

---

Plumber 11/01/2018
JOB DESCRIPTION  Plumber

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2018

Plumber/PUMP & TANK $ 44.49

SUPPLEMENTAL BENEFITS
Per Hour:

Plumber $ 26.98

OVERTIME PAY
See (B, Q, "V") on OVERTIME PAGE
(V) For Sundays & Holidays if Worked Only

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms at the Following
Percentage of Journeymans wage:

1st Term  30%
2nd Term  40%
3rd Term  50%
4th Term  60%
5th Term  70%
6th Term  85%

Supplemental Benefits Per Hour:

1st Term $15.06
2nd Term $15.70
3rd Term $16.52
4th Term $17.40
5th Term $20.13

4-200 Pump & Tank

Plumber  11/01/2018

JOB DESCRIPTION  Plumber

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2018 11/01/2018 05/01/2019

Plumber $ 52.48 $ 52.48 $52.48

SUPPLEMENTAL BENEFITS
Per Hour:

Plumber $ 41.48 $ 41.98 $ 42.98

OVERTIME PAY
See (A, E, Q, "V") on OVERTIME PAGE
CODE "V" is only for SUNDAYS and HOLIDAYS THAT ARE WORKED

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms at the following percentage of Plumbers Rate:

1st Term  2nd Term  3rd Term  4th Term  5th Term
 30%      40%      50%      60%      70%

Supplemental Benefits per hour:
Plumber

11/01/2018

**JOB DESCRIPTION**
Plumber

**DISTRICT**
4

**ENTIRE COUNTIES**
Nassau, Suffolk

**WAGES**
Per Hour:

07/01/2018

<table>
<thead>
<tr>
<th>Term</th>
<th>07/01/2018</th>
<th>11/01/2018</th>
<th>05/01/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>$27.96</td>
<td>$28.46</td>
<td>$29.46</td>
</tr>
<tr>
<td>2nd</td>
<td>30.27</td>
<td>30.77</td>
<td>31.77</td>
</tr>
<tr>
<td>3rd</td>
<td>31.64</td>
<td>32.14</td>
<td>34.14</td>
</tr>
<tr>
<td>4th</td>
<td>33.13</td>
<td>33.63</td>
<td>34.63</td>
</tr>
<tr>
<td>5th</td>
<td>34.71</td>
<td>35.21</td>
<td>36.21</td>
</tr>
</tbody>
</table>

**MAINTENANCE ONLY**

$30.80

Maintenance: Correction of problem(s) with the existing fixture or group of fixtures, preventive repairs or servicing of said fixtures

**SUPPLEMENTAL BENEFITS**

**Per Hour:**

Plumber

$15.65

**OVERTIME PAY**

See (B, J) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Roofer

11/01/2018

**JOB DESCRIPTION**
Roofer

**DISTRICT**
4

**ENTIRE COUNTIES**
Nassau, Suffolk

**WAGES**
Per Hour:

07/01/2018

ROOFER/Waterproofer

$45.00

$1.50 Per Hour
to be allocated

"Base" Wage

41.00**

**SUPPLEMENTAL BENEFITS**

**Per Hour:**

ROOFER/Waterproofer

$32.12

**OVERTIME PAY**

Per Hour:

NEW ROOF SEE (B, E, Q)
RE-ROOF SEE (B, E, E2, Q)

**NOTE:** Overtime Pay to be calculated on "BASE" Wage then add $4.00. (Example: $41.00 x time and one half = $61.50 + $4.00 = $65.50)

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 13, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

(1) Year terms at the following Percentage of Roofer's/Waterproofer's Wage.
Supplemental Benefits per hour:

<table>
<thead>
<tr>
<th>Term</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1st Term  $ 9.08
2nd Term  11.22
3rd Term  22.69
4th Term  25.85

JOB DESCRIPTION  Sheetmetal Worker

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per Hour: 07/01/2018 08/01/2018

Sign Erector  $ 47.67 Additional $1.95/hr.

NOTE: Structurally Supported Overhead Highway Signs (See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2018 08/01/2018

Sign Erector  $ 44.44 Additional $1.64/hr

OVERTIME PAY
See (A, F, S) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:
6 month Terms at the following percentage of Sign Erectors wage rate:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
<td>$13.11</td>
<td>$14.85</td>
<td>$16.59</td>
<td>$18.34</td>
<td>$25.56</td>
<td>$27.80</td>
<td>$30.76</td>
<td>$33.07</td>
<td>$35.36</td>
<td>$37.65</td>
</tr>
</tbody>
</table>

SUPPLEMENTAL BENEFITS
Per Hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>$13.11</td>
<td>$14.85</td>
<td>$16.59</td>
<td>$18.34</td>
<td>$25.56</td>
<td>$27.80</td>
<td>$30.76</td>
<td>$33.07</td>
<td>$35.36</td>
<td>$37.65</td>
</tr>
</tbody>
</table>

Sheetmetal Worker 11/01/2018

JOB DESCRIPTION  Sheetmetal Worker

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2018

Sheetmetal Worker  $ 53.22
Temporary Operation or Maintenance of Fans  42.58

SUPPLEMENTAL BENEFITS
Per Hour:

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>$13.11</td>
<td>$14.85</td>
<td>$16.59</td>
<td>$18.34</td>
<td>$25.56</td>
<td>$27.80</td>
<td>$30.76</td>
<td>$33.07</td>
<td>$35.36</td>
<td>$37.65</td>
</tr>
</tbody>
</table>
Sheetmetal Worker $ 45.04
Maintenance Worker 45.04

**OVERTIME PAY**
See (B, E, E2, Q, V) on OVERTIME PAGE
For Maintenance See Codes B, E, Q & V

**HOLIDAY**
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**
Per Hour: Wages

Six(6) Month Terms As Follows:

1st & 2nd Term $ 18.67
3rd & 4th Term 23.98
5th & 6th Term 29.29
7th Term 37.28
8th Term 39.83
9th Term 42.59

Per Hour: Supplemental Benefits

1st & 2nd Term $ 16.49
3rd & 4th Term 22.75
5th & 6th Term 26.79
7th Term 32.84
8th Term 34.88
9th Term 36.84

---

**Steamfitter**

**JOB DESCRIPTION** Steamfitter

**DISTRICT** 4

**ENTIRE COUNTIES**
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

**WAGES**
Per Hour: 07/01/2018 12/26/2018

AC Service/Heat Service $ 41.50
Steamfitter Maintenance

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.
Refrigeration Compressor installation.
Air Condition / Heating Compressor installation up to 15hp (combined).

**SUPPLEMENTAL BENEFITS**
Per Hour

AC Service/Heat Service $ 13.50
Steamfitter Maintenance

**OVERTIME PAY**
See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**
Paid: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

---
Sprinkler/Steam $64.06 $0.75/hr.
Fitter to be Allocated

Temporary $48.70
Heat & AC
Fitter

Note: Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS
Per Hour:

Sprinkler/Steam $ 49.18
Fitter

Temporary $ 40.23
Heat & AC
Fitter

Note: Add 15% to Hourly Benefit for "Contracting Agency" Mandated Off Shift Work.

OVERTIME PAY
See (C, *D, O, **V) on OVERTIME PAGE
(D*) Only for Temporary Heat & AC Fitter.

(V**) Benefit Amount to be paid:
Sprinkler/Steam $75.30
Temp Heat/AC $57.60

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year Terms at the Following:

WAGES per hour:

<table>
<thead>
<tr>
<th>1st Term</th>
<th>2nd Term</th>
<th>3rd Term</th>
<th>4th Term</th>
<th>5th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 25.66</td>
<td>$ 32.07</td>
<td>$ 41.66</td>
<td>$ 51.26</td>
<td>$ 54.46</td>
</tr>
</tbody>
</table>

SUPPLEMENTAL BENEFIT per hour:

<table>
<thead>
<tr>
<th>1st Term</th>
<th>2nd Term</th>
<th>3rd Term</th>
<th>4th Term</th>
<th>5th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 20.20</td>
<td>$ 24.04</td>
<td>$ 32.28</td>
<td>$ 39.52</td>
<td>$ 41.94</td>
</tr>
</tbody>
</table>

Premium Time Amounts:
$30.12 $37.66 $48.96 $60.24 $64.02

Teamster - Asphalt Delivery 11/01/2018

JOB DESCRIPTION Teamster - Asphalt Delivery

ENTIRE COUNTIES Nassau, Suffolk

WAGES
Per Hour:

Heavy Construction Work:
Shall include the supply of Asphalt for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER 07/01/2018
Asphalt Delivery $37.545

Light Construction Work:
Shall include the supply of Asphalt for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots, Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

**TRUCK DRIVER**

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$32.16</td>
</tr>
</tbody>
</table>

**SUPPLEMENTAL BENEFITS**

Per Hour:

Heavy Construction Work

**TRUCK DRIVER**

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$46.6825</td>
</tr>
</tbody>
</table>

Light Construction Work

**TRUCK DRIVER**

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$13.05</td>
</tr>
</tbody>
</table>

**OVERTIME PAY**

See (B, *B2, E, **I, P, ****R, *****U) on OVERTIME PAGE

(NEW) PREMIUM PAY of 25% on straight time hours for New York State D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

Note: (B,E,P,T&*U) Apply to Heavy Construction.

Note: (B2,I,T&*U) Apply to Light Construction.

Note: (*U) Only applies after 8 hours worked on holiday.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE


---

**Teamster - Building**

<table>
<thead>
<tr>
<th>Date</th>
<th>11/01/2018</th>
</tr>
</thead>
</table>

**JOB DESCRIPTION** Teamster - Building

**ENTIRE COUNTIES** Nassau, Suffolk

**WAGES**

Per Hour:

Truck Driver (Building Demolition & Debris)

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$33.61*</td>
</tr>
</tbody>
</table>

* Plus an additional $2.14/hr. to be allocated

**SUPPLEMENTAL BENEFITS**

Per Hour:

All Classifications

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/2018</td>
<td>$33.20</td>
</tr>
</tbody>
</table>

**OVERTIME PAY**

See (B, E, S1) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 25, 26) on HOLIDAY PAGE

---

**Teamster - Delivery of Concrete**

<table>
<thead>
<tr>
<th>Date</th>
<th>11/01/2018</th>
</tr>
</thead>
</table>

**JOB DESCRIPTION** Teamster - Delivery of Concrete

**ENTIRE COUNTIES** Nassau, Suffolk

**WAGES**

Per Hour:

---

Page 70
Heavy Construction Work:
Shall include the supply of Ready-Mix Concrete for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools & Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER 07/01/2018
Concrete Delivery $ 39.775

Light Construction Work:
Shall include the supply of Ready-Mix Concrete for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER 07/01/2018
Concrete Delivery $ 35.705

SUPPLEMENTAL BENEFITS Per Hour:

<table>
<thead>
<tr>
<th>Work Type</th>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Construction Work</td>
<td>07/01/2018</td>
<td>$ 42.665</td>
</tr>
<tr>
<td>Light Construction Work</td>
<td>07/01/2018</td>
<td>$ 14.83</td>
</tr>
</tbody>
</table>

OVERTIME PAY
NOTE: Heavy Construction:B2,I
      Light Construction:B,E,P

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE

Teamster - Heavy&Highway 11/01/2018

JOB DESCRIPTION Teamster - Heavy&Highway
ENTIRE COUNTIES Nassau, Suffolk
WAGES Per Hour:

Heavy Construction Work:
Shall include the construction, improvement or modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants.

07/01/2018
Site Excavating (Chauffeurs) $ 38.155

Light Construction Work:
Shall include the construction, improvement and modification of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings.

07/01/2018
Site Excavating (Chauffeurs) $ 33.66

SUPPLEMENTAL BENEFITS Per Hour:

<table>
<thead>
<tr>
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<th>Amount</th>
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<td>$ 46.0725</td>
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<td>Light Construction Work</td>
<td>07/01/2018</td>
<td>$ 11.55</td>
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</table>
OVERTIME PAY
See (B, *B2, E, **I, P, ***R, ****U) on OVERTIME PAGE

(NOTE) PREMIUM PAY of 25% on straight time hours for NEW YORK STATE D.O.T. and or other GOVERMENTAL MANDATED off shift work.

Note: (B,E,P,T & *U) Apply to Heavy Construction.
Note: (B2,I,T & *U) Apply to Light Construction.
Note: (*U) Only applies after 8 hours work on holiday

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE


Welder

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

WAGES
Per hour 07/01/2018

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the ‘Certified Welder’ rate in that trade tag will be paid.

OVERTIME PAY
HOLIDAY

1-As Per Trade
Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

( AA ) Time and one half of the hourly rate after 7 and one half hours per day

( A ) Time and one half of the hourly rate after 7 hours per day

( B ) Time and one half of the hourly rate after 8 hours per day

( B1 ) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday. Double the hourly rate for all additional hours

( B2 ) Time and one half of the hourly rate after 40 hours per week

( C ) Double the hourly rate after 7 hours per day

( C1 ) Double the hourly rate after 7 and one half hours per day

( D ) Double the hourly rate after 8 hours per day

( D1 ) Double the hourly rate after 9 hours per day

( E ) Time and one half of the hourly rate on Saturday

( E1 ) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours

( E2 ) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather

( E3 ) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week

( E4 ) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather

( E5 ) Double time after 8 hours on Saturdays

( F ) Time and one half of the hourly rate on Saturday and Sunday

( G ) Time and one half of the hourly rate on Saturday and Holidays

( H ) Time and one half of the hourly rate on Saturday, Sunday, and Holidays

( I ) Time and one half of the hourly rate on Sunday

( J ) Time and one half of the hourly rate on Sunday and Holidays

( K ) Time and one half of the hourly rate on Holidays

( L ) Double the hourly rate on Saturday

( M ) Double the hourly rate on Saturday and Sunday

( N ) Double the hourly rate on Saturday and Holidays

( O ) Double the hourly rate on Saturday, Sunday, and Holidays

( P ) Double the hourly rate on Sunday

( Q ) Double the hourly rate on Sunday and Holidays

( R ) Double the hourly rate on Holidays

( S ) Two and one half times the hourly rate for Holidays, if worked
(S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays. One and one half times the hourly rate all additional hours.

(T) Triple the hourly rate for Holidays, if worked

(U) Four times the hourly rate for Holidays, if worked

(V) Including benefits at SAME PREMIUM as shown for overtime

(W) Time and one half for benefits on all overtime hours.

(X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)
## Holiday Codes

### PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

### OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

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<tr>
<td>2</td>
<td>Labor Day</td>
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<td>3</td>
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<tr>
<td>4</td>
<td>Memorial Day and July 4th</td>
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<tr>
<td>5</td>
<td>Memorial Day, July 4th, and Labor Day</td>
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<tr>
<td>6</td>
<td>New Year's, Thanksgiving, and Christmas</td>
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<tr>
<td>7</td>
<td>Lincoln's Birthday, Washington's Birthday, and Veterans Day</td>
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<tr>
<td>8</td>
<td>Good Friday</td>
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<td>15</td>
<td>Veterans Day</td>
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<td>17</td>
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<td>18</td>
<td>1/2 Day before Christmas</td>
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<td>19</td>
<td>1/2 Day before New Years</td>
</tr>
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<td>20</td>
<td>Thanksgiving</td>
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<td>21</td>
<td>New Year's Day</td>
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<td>Martin Luther King, Jr. Day</td>
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<td>27</td>
<td>Memorial Day</td>
</tr>
<tr>
<td>28</td>
<td>Easter Sunday</td>
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</table>
**REQUEST FOR WAGE AND SUPPLEMENT INFORMATION**

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

**This Form Must Be Typed**

<table>
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<tr>
<th>Submitted By:</th>
<th>Contracting Agency</th>
<th>Architect or Engineering Firm</th>
<th>Public Work District Office</th>
<th>Date:</th>
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<td>(Check Only)</td>
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</tbody>
</table>

A. **Public Work Contract to be let by:** (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address

   (Check if new or change)

<table>
<thead>
<tr>
<th>Telephone:</th>
<th>Fax:</th>
</tr>
</thead>
</table>

2. NY State Units (see Item 5)
   - 01 DOT
   - 02 OGS
   - 03 Dormitory Authority
   - 04 State University Construction Fund
   - 05 Mental Hygiene Facilities Corp.
   - 06 OTHER N.Y. STATE UNIT

3. SEND REPLY TO

   Name and complete address:

   Telephone: ( ) Fax: ( )

4. SERVICE REQUIRED: Check appropriate box and provide project information.
   - New Schedule of Wages and Supplements.
     APPROXIMATE BID DATE: 
   - Additional Occupation and/or Redetermination

B. **PROJECT PARTICULARS**

5. Project Title

   Description of Work

   Contract Identification Number

   Note: For NYS units, the OSC Contract No.

6. Location of Project:

   Location on Site

   Route No/Street Address

   Village or City

   Town

   County

7. Nature of Project - Check One:
   - 1. New Building
   - 2. Addition to Existing Structure
   - 3. Heavy and Highway Construction (New and Repair)
   - 4. New Sewer or Waterline
   - 5. Other New Construction (Explain)
   - 6. Other Reconstruction, Maintenance, Repair or Alteration
   - 7. Demolition
   - 8. Building Service Contract

8. **OCCUPATION FOR PROJECT:**
   - 9. Has this project been reviewed for compliance with the Wicks Law involving separate bidding? YES ☐ NO ☐

10. Name and Title of Requester

   Signature

---

SEE PAGE TWO FOR LAWS RELATING TO PUBLIC WORK CONTRACTS
Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;

- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading ‘Fiscal Officer’. DOL = New York State Department of Labor; NYC = New York City Comptroller’s Office; AG = New York State Attorney General’s Office; DA = County District Attorney’s Office.

**Debarment Database:** To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers’ Compensation Law Section 141-b, access the database at this link: [https://applications.labor.ny.gov/EDList/searchPage.do](https://applications.labor.ny.gov/EDList/searchPage.do)

For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322
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<th>Fiscal Officer</th>
<th>FEIN</th>
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<th>EMPLOYER DBA NAME</th>
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