Department of Environmental Conservation

Division of Environmental Remediation

Site Name: Fumex Sanitation Site
Site Number: 1-30-041
Contract Number: D007692
Location: Garden City Park
County: Nassau, New York

Contract Documents

Dvirka and Bartilucci Consulting Engineers
330 Crossways Park Drive
Woodbury, New York 11797

OCTOBER 2009

New York State Department of Environmental Conservation
DAVID A. PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

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SECTION I

Advertisement and Notice to Bidders

New York State Department of Environmental Conservation

Project Name: Fumex Sanitation Site, NYS Site Number 1-30-041

Sealed bids for the Fumex Sanitation 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 12:45 P.M. EST and on the date of December 10, 2009 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 Fumex Sanitation Site located at 131 Herricks Road in Garden City Park, New York. These include, but are not necessarily limited to, the following: Prepare, obtain approval and implement the specified and requested submittals; Install temporary facilities and utilities; Furnish and install sediment and erosion control measures; Excavation, grading, backfill, compaction and landscaping; Close existing dry well and remove underground piping; Install new storm water drainage facilities and associated connection to storm sewer; Install asphalt cover; Abate asbestos floor tiles in garage; Decontaminate and seal concrete floor in garage; Conduct endpoint soil sampling and testing; Transport and dispose of waste materials; Remove temporary utilities and facilities, and site restoration.

The estimated range for this work is: $500,000 to $1,000,000.

Contract document drawings, specifications and proposal forms may be purchased for a non-refundable fee of $49.00 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. Individual checks for each set shall be made payable to the New York State Department of Environmental Conservation. An electronic version of the contract documents is available at the Department web site link http://www.dec.ny.gov/59233.html. However, addenda to the contract documents will only be issued to holders of purchased contract documents.

PROPOSALS WILL BE ACCEPTED ONLY FROM BIDDERS WHO PURCHASE CONTRACT DOCUMENTS. All proposals must be made on the official proposal form and enclosed in the envelope furnished with the contract documents. Each proposal must be accompanied by a deposit or a bid bond in the amount of 5% of bid amount.

Prospective Bidders are cautioned concerning the use of the Post Office Box address as telegraphic and overnight delivery cannot be sent to Post Office Boxes.

All Bidders must attend a Pre-Bid Conference to discuss special requirements for the contract, to be held on November 17, 2009 at Fumex Sanitation Site starting at 1:00 P.M. prevailing local time. **ATTENDANCE IS MANDATORY AS A CONDITION OF BIDDING.**

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

The Contractor shall adhere to the New York State Department of Environmental Conservation Guidelines Regarding Permissible Contacts During a Procurement and the Prohibition of Inappropriate Lobbying Influence.

For the purpose of this Notice to Bidders, the Director of the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7011, shall be the Department's designated Representative. Any questions, however, shall be directed to Gerard Burke, the Department's Project Manager and designated Contact, at (518) 402-9814.

Alexander B. Grannis
Commissioner

SECTION II

Terms and Definitions

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

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

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

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

Application for Payment - The form furnished 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 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.

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

Comptroller - The Comptroller of the New York State Department of Audit and Control.

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

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

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

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

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

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

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

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

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

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

Department - New York State Department of Environmental Conservation.

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 - **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 indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is approved and filed by Comptroller.

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

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

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

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

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

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

Notice of Award - **Department** written notice of bid acceptance and filing by the New York Office of the State Comptroller and stating pertinent information **Contractor** shall comply with.

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.

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.

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

Retainage - A percentage of a progress payment withheld from a contractor as assurance that all the contract requirements will be satisfactorily completed.

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

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

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

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

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

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

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

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

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

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

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

SECTION III

Bidding Information and Requirements

ARTICLE 1 - Address for Notices

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

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

ARTICLE 2 - Interpretation of Bidding Documents

No interpretation of the meaning of the Bidding Documents will be made orally: all questions regarding the intent or meaning of the Bidding Documents shall be submitted in writing to the Project Manager at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements". The reply to the same, when deemed necessary, will be sent by addendum to all persons who have purchased Bidding Documents. 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 which, if issued, will be sent by certified or registered mail with return receipt requested or telegraph, to all purchasers of Bidding Documents at the respective addresses furnished for such purposes. 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 in its plan sales ledger as having purchased Bidding Documents from **Department.** Persons or firms which obtain Bidding Documents from sources other than **Department** bear the sole responsibility for obtaining any Addenda issued for the Project.

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

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

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

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

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

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

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

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

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

Bids will only be accepted from Bidders who have purchased Contract Documents from **Department**.

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 copies of the new lobbying law, can be found at http://www.ogs.state.ny.us/aboutOgs/regulations/defaultAdvisoryCouncil.html.

ARTICLE 4 - Modification or Withdrawal of Bid

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

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

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

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

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

ARTICLE 5 - Required Bid Submittals

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

a) The following items are to accompany Contractor's Bid to **Department**:

- Form of Bid filled out
- Bid Bond or Certified Check
- Non-Collusion Certificate
- MacBride Fair Employment Principles (signed)
- Offerer's Affirmation of Understanding of and 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)

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

- Off-site permitted facility to receive material along with a copy of the facilities permit
- Plan of Operations (Work Plan) and Progress Schedule, Health and Safety Plan, Sampling Plan, and QA/QC Plan
- Statement of Surety's intent, complete and signed by 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 $1 million of Pollution Liability insurance and the additional $4 million (for a total of $5 million) of Pollution Liability insurance if required by the **Department** on a specific project basis. If the Bidder is unable to obtain the $4 million of site specific Pollution Liability insurance, Department requires letters from three (3) sureties stating that the additional Pollution Liability insurance is unavailable.
- A description of projects completed by Bidder documenting its experience in this type of work
- Proof of Availability of insurance or Certificate of insurance with endorsements including written verification that the insurance carrier(s) are licensed in New York State. Licensed insurance carriers can be verified at http://www.ins.state.ny.us/. If the Contractor proposes to use non-admitted carrier(s) for pollution or professional liability insurance, then three declinations on forms required by New York State Insurance Regulation 41 (i.e., Part A - Affidavit by Excess Line Broker or Part C - Affidavit by Producing Broker) must be submitted. Pollution or professional liability insurance provided by excess line carriers shall be from a carrier who is a member of the Excess Line Association of New York (ELANY). All other insurance must be through carriers licensed to do business in New York State. All carriers must be properly identified by complete name, address, National Association of Insurance Commissioners (NAIC) number and whether or not they are a member of ELANY (if applicable) in the submittal. Refer to Article 4, Bonds and Insurance, of the General Conditions for additional information.

- NYS Uniform Contracting Questionnaire (completed) or affidavit of no change (if appropriate)
- Policy Statement and M/WBE Workplan
- 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 by the apparent low Bidder within **14 days** from the date of the Notice of Intent to Award letter from **Department**:

- Executed Agreement (six copies with original signatures)
- Performance Bond with Power of Attorney & Surety Financial Statement (original and five copies)
- Labor & Materials Bond with Power of Attorney & Surety Financial Statement (original & five copies)
- Bid Breakdown of Items (original)
- Certificates of Insurance (original and five copies)
- Consultant/Contractor Detailed M/WBE-EEO Utilization Plan (original and five copies)

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 **New York State Uniform Contracting Questionnaire,** which is included in Section V, "Bid Forms and Attachments " must be completed and submitted to **Department** by the apparent low Bidder within five (5) days after the apparent low Bidder has been so notified. The completed questionnaire or the affidavit of no change (if appropriate) must be addressed to:

NYS Department of Environmental Conservation
Division of Management and Budget Services
Minority and Women's Business Programs Unit
625 Broadway, 10th Floor
Albany, NY 12233-5027

The envelope should be clearly marked "NYS Uniform Contracting Questionnaire." 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 Uniform Contracting Questionnaire" through **Contractor.** Any delay in the progression of work caused by the failure of a subcontractor to comply with these requirements will be attributable to **Contractor** and any additional costs will be **Contractor's** responsibility.

The low Bidder shall demonstrate its responsibility to perform and complete Work by submitting a statement of its experience and the experience of any Subcontractor which the low Bidder intends to use to perform the Work.

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

ARTICLE 11 - Preliminary Progress Schedule

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

ARTICLE 12 - Bid Breakdown

The Bid breakdown shall be submitted by the apparent low Bidder within fourteen (14) days after the date of the Notice of Intent to Award letter. Discrepancies, ambiguities or conflicts in the Bid breakdown shall be resolved in accordance with the terms and conditions set forth in Article 15 of 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 7 of Section IV, "Supplementary Bidding Information and Requirements". Procedures for approval of Subcontractors, Suppliers or other persons or organizations, after execution of the Agreement, are set forth in the General Conditions and the Supplementary Conditions.

ARTICLE 17 - Award of Contract

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

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

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

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

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

It is the intention of **Department** that the work will be awarded within 45 calendar days after the opening of bids to the lowest responsive, responsible Bidder whose bid conforms to the requirements of the Contract Documents. Bids may not be withdrawn, altered or revoked during this 45 day period except as provided by law and specified within Article 4. Even after the expiration of such 45 day period, **Department** may accept a Bid and award the work to any Bidder whose bid has not been unequivocally withdrawn or revoked prior to the mailing of written Notice of the Award to the successful Bidder. For purposes of the preceding sentence, withdrawal or revocation of a Bid shall not occur until **Department** receives an unequivocable 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 selected Bidder shall be required to make good-faith efforts to subcontract at least the percentage stipulated in Section IV, "Supplementary Bidding Information and Requirements", of the contract price to NYS Certified Minority Business Enterprise(s) (MBE) and Women Business Enterprise(s) (WBE), respectively.

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."

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.**

The new system will be available seven (7) days a week, 7:00 a.m. to 10:00 p.m. and the information will be updated daily. 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 Thomas Christian of 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 IV, "Supplementary Bidding Information and Requirements" 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"

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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 written 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).

means any oral, written, or electronic communication under circumstances where a reasonable person would infer that the communication was intended to influence a procurement. Exceptions to this rule include:

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

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

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

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.

SECTION IV

Supplementary Bidding Information and Requirements

ARTICLE 1 - Location and Description of Project

The Site Number of this project is 1-30-041. The Project is located in Nassau County. Access to the site is from Bedford Avenue via Herricks Road in Garden City Park, New York. Directions from Long Island Expressway, heading east - Take exit #35/Shelter Rock Rd/Manhasset onto S Service Rd. turn right onto Shelter Rock Rd. Turn right onto Herricks Rd.

This Project includes the excavation of pesticide contaminated soil, closure of a dry well, backfill and compaction with clean fill, construction of an asphalt cover system, installation of new storm water drainage facilities and associated connection to storm sewer, abatement of asbestos floor tiles, decontamination of concrete floor, sealing of concrete floor with epoxy coating and site restoration.

ARTICLE 2 - Department Representatives

NAME	ADDRESS
Mr. Dale Desnoyers, Designated Representative,	625 Broadway, 12th Floor, Albany, NY 12233
Mr. Joseph Yavonditte, Section Chief,	625 Broadway, 12th Floor, Albany, NY 12233
Mr. Gerard Burke, P.E., Project Manager,	625 Broadway, 12th Floor, Albany, NY 12233
To Be Determined, Project Field Representative,	To Be Determined

ARTICLE 3 - Pre-Bid Conference

A pre-bid conference will be held on November 17, 2009 at the Fumex Sanitation Site at 1:00 P.M. EST to view the Project area. The pre bid conference is held to discuss the requirements of the Bidding Documents, the protocols for performing the work and the conditions existing at the work site, and to provide for visual inspection of the Site by Bidders. Bidders will be required to sign an attendance sheet to document their presence at the mandatory pre-bid conference. **Department will accept Bids only from those bidders who attend this conference.**

ARTICLE 4 - Additional Bid Submittals

NONE

ARTICLE 5 - Other Available Documents

The following items are available for contractor's review in preparing the Bid:

1. Final Phase II Remedial Investigation Report, Fumex Sanitation Site, CDM Camp Dresser & McKee, January 2000

2. Amendment to Phase II Remedial Investigation and Focused Feasibility Study, Fumex Sanitation Site, CDM Camp Dresser & McKee, January 2000

3. Final Feasibility Study Report, Fumex Sanitation Site, CDM Camp Dresser & McKee, January 2000

4. Proposed Remedial Action Plan, Fumex Sanitation, New York State Department of Environmental Conservation, February 2001

5. Record of Decision, Fumex Sanitation Site, New York State Department of Environmental Conservation, March 2001

6. Explanation of Significant Difference, Fumex Sanitation Site, New York State Department of Environmental Conservation, April 2007

7. Limited Site Date Summary Report, Fumex Sanitation Site, Dvirka and Bartilucci Consulting Engineers, October 2009.

8. Groundwater Monitoring Plan, Fumex Sanitation Site, Dvirka and Bartilucci Consulting Engineers, October 2009.

ARTICLE 6 - M/WBE-EEO Utilization Plan

a) The M/WBE-EEO Utilization Plan 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
ATTENTION: Thomas Christian

b) The selected bidder shall be required to make good faith efforts to subcontract at least **21.5** percent and **13.7** percent of the contract price to NYS Certified M/WBEs, respectively.

c) **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 for at least ten (10) percent of, and women for at least ten (10) percent of, the work force hours required for the completion of the project.

ARTICLE 7 - Subcontracting

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

ARTICLE 8 - Type of Schedule

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

ARTICLE 9 - Wage Rates

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

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

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

SECTION V

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

Soil Excavation and Asphalt Cover Installation

Contract Number D007692, NYS Site Number 1-30-041

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:

_____

_____

_____

_____

_____

Fax Number ( )_____ - _____

Bid

New York State Department of Environmental Conservation

Fumex Sanitation Site; Project Number: D007692, NYS Site Number: 1-30-041

UNIT PRICE ITEMS

Payment Item Number	*Description*	*Unit*	*Estimated Quantity*	*Unit or Lump Sum Price*		*Total Amount ($)*
				Words	*Figures*	
3	Excavation of Hazardous Materials – Soil	C.Y.	310			
4A	Transportation and Disposal of Hazardous Waste	C.Y.	285			
4B	Transportation and Disposal of Non-Hazardous Waste	C.Y.	25			
5	Post Excavation Sample Collection and Analysis	Each	25			
6	General Fill	C.Y.	220			
7	Topsoil	C.Y.	12			
8	Sod	S.Y.	110			
9	Trees	Each	6			
10	Bollards	Each	4			
11	Trench Drain	Each	1			

UNIT PRICE ITEMS

Payment Item Number	*Description*	*Unit*	*Estimated Quantity*	*Unit or Lump Sum Price*		*Total Amount ($)*
				Words	*Figures*	
12	HDPE Drainage Piping	L.F.	95			
13	Ductile Iron Drainage Piping	L.F.	20			
14	Drainage Manhole	Each	3			
15	Asphalt Cover	S.Y.	580			
16	On-Site Asphalt Restoration	S.Y.	115			
17A	Sidewalk Restoration	S.Y.	35			
17B	Concrete Handicap Ramp	Each	1			
17C	Concrete Curb Restoration	L.F.	15			
18	Public Roadway Restoration – Herricks Road	S.Y.	20			
19A	Garage Decontamination	S.Y.	265			

UNIT PRICE ITEMS

Payment Item Number	*Description*	*Unit*	*Estimated Quantity*	*Unit or Lump Sum Price*		*Total Amount ($)*
				Words	*Figures*	
19B	Epoxy Coating	S.Y.	265			
20A	Groundwater Monitoring Well Installation	L.F.	100			
20B	On-Site Groundwater Monitoring Well Restoration	Each	6			

LUMP SUM ITEMS

Payment Item Number	*Description*	*Unit*	*Estimated Quantity*	*Unit or Lump Sum Price*		*Total Amount ($)*
				Words	*Figures*	
1	Submittals, Mobilization, Site Preparation, Temporary Facilities and Utilities, Restoration and Demobilization	LS	1			
2A	Demolition and Removals	LS	1			
2B	Asbestos Abatement	LS	1			
2C	Underground Storage Tank Removal	LS	1			
2D	Dry Well Closure	LS	1			
Grand Total Bid: $_____ ***(Price in figures)***						

Item No.	*Item Description*	*Unit*	*Estimated Quantity*	*Unit or Lump Sum Price*		*Total Amount ($)*
				Words	*Figures*	
	Pollution Liability Insurance	LS	1			
	This item is not to be calculated in the base Bid for the project. **Contractor** is referred to Article 4 of the General Conditions in the Contract Documents. The limits for Pollution Liability Insurance will be the same as defined in Article 4 of the General Conditions. After opening of bids, **Department** will determine if it is in **Department's** best interest to have **Contractor** obtain an additional $4,000,000 Pollution Liability Insurance on a site specific basis, and if so, **Contractor** will be paid separately at the actual documented cost to obtain this additional insurance. The Bidder is required to fill in the above price if it can obtain site-specific Pollution Liability Insurance. This Bid amount will be the upper limit for payment of this item. The **Department** is to be listed on the Bidder=s Company Policy as an additional insured at no additional cost to the **Department**. _____ _____ _____ **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.

Addendum Number	*Date of Addendum*
_____	_____
_____	_____
_____	_____
_____	_____

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

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

_____
Legal Name of Person, Partnership or Corporation

By_____
Print Name

_____
Signature

Date _____

Please Complete Information Requested Below:

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

Federal Identification Number is: _____

If a Corporation

Name	*Address*
_____, President	_____
_____, Secretary	_____
_____, Treasurer	_____

If a Partnership

Name	*Address*
_____, President	_____
_____, Secretary	_____
_____, Treasurer	_____

CONTRACT NUMBER D007692

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ *(title)* of _____ *(firm)* the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ *(firm)* ; namely, the _____ *(title)* of _____ *(firm)*; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

(CO-PARTNERSHIP ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known and known to me to be a member of _____, the firm described in and which executed the foregoing instrument, and (s)he acknowledged to me that (s)he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Seal

_____
Notary Public

(INDIVIDUAL ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20____, before me personally came _____ to me personally known, and known to me to be the individual described in, and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same.

Seal

_____
Notary Public

Contract Number D007692

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

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

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

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

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

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

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

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

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

2) Has business operations in Northern Ireland:

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

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

Yes _____ or No _____ (check answer)

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

_____ _____
Date **Print Name and Title**

_____
Signature

Contract Number D007692

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

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

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

Article 1(d) - State Ethics Law Provision

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

Except as follows: (attach information if needed)

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

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

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

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

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

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

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

Date	**Print Name and Title**
	Signature

ARTICLE 1(g) - Page to Attach

Bid Security

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

NYSDEC-DER Site Number 1-30-041

ARTICLE 1(h) - Bid Bond

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

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

_____

_____

_____

Now, Therefore

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

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

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

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

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

(Seal)

_____
Principal

_____
Surety

By _____

CONTRACT NUMBER D007692

(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

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ *(title)* of _____ *(firm)* the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ *(firm)*; namely, the _____ *(title)* of _____ *(firm)*; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

(CO-PARTNERSHIP ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known and known to me to be a member of _____, the firm described in and which executed the foregoing instrument, and (s)he acknowledged to me that (s)he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Seal

_____
Notary Public

(INDIVIDUAL ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20____, before me personally came _____ to me personally known, and known to me to be the individual described in, and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same.

Seal

_____
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):

No Yes

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):

No Yes

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):

No Yes

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

Governmental Entity: _____

Date of Finding of Non-responsibility: _____

Basis of Finding of Non-Responsibility: _____
_____
_____
_____
_____
_____
_____
_____

(Add additional pages as necessary)

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

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

No Yes

6. If yes, please provide details below.

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: _____

_____

_____

_____

_____

_____

_____

_____

(Add additional pages as necessary)

Offerer Certification:

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

By: _____ Date: _____
Signature

ARTICLE 2(a) - Corporate Resolution and Certification

"This Article 2(a) is not applicable"

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

To: *New York State Department of Environmental Conservation*

We have reviewed the Bid of _____ (Contractor)

of _____ (Address)

for _____ (Project)

Contract Number _____

NYS Site Number _____

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

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

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

Attest:

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

_____
Surety's Authorized Signature(s)

_____
Telephone Number for Bonding Company

_____
Telephone Number for Bonding Broker

Attach Power of Attorney

ARTICLE 2(c) - NYS Directory of Certified Minority and Women-Owned Business

The New York State Directory of Certified Minority and Women-Owned Business Enterprises has been developed to assist public and private purchases of goods and services in locating and using bonafide minority and women-owned business as defined in accordance with Article 15-A of the Executive Law and Article 4(a) of the Economic Development Law.

M/WBE Directory on the Internet

Empire State Development has put the Minority and Women's Business Development Directory on the Internet. The Internet address is **www.empire.state.ny.us,** just follow the links to the M/WBE Directory.

The new system will be available seven (7) days a week, 7:00 a.m. to 10:00 p.m. and the information will be updated daily. Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed call (518) 474-1979.

ARTICLE 2(d) - MINORITY AND WOMEN'S BUSINESS-EQUAL EMPLOYMENT OPPORTUNITY PROGRAM WORKPLAN

Policy Statement

The _____ commits to carrying out the intent of the New York State
(Name of Contractor or Municipality)
Executive Law, Article 15-A which assures the meaningful participation of Minority and

Women-Owned Business Enterprises (M/WBE) in contracting and the meaningful participation of

minorities and women in the workforce on activities financed by public funds.

Minority Business Officer

_____ is designated as the Minority Business Enterprise Officer
(Name of Designated Officer)
responsible for administering the Minority and Women's Business-Equal Employment Opportunity (M/WBE-EEO) program.

M/WBE Contract Goals

_____% Minority Business Enterprise Participation

_____% Women's Business Enterprise Participation

EEO Contract Goals

10% Minority Labor Force Participation

10% Female Labor Force Participation

_____
(Authorized Representative)

Title: _____

Date: _____

M/WBE-EEO WORKPLAN
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Contractor or Municipality			Grant/Project Number
Address	City		Zip Code
Authorized Representative		Authorized Signature	
Address	City	Zip Code	Phone No.
Minority Business Enterprise Officer			Fax No.

Project Description (list separate contracts & estimates)

Contract No.	Description	Estimate
_____	_____	_____
_____	_____	_____
_____	_____	_____

PROJECTED EEO AND M/WBE CONTRACT SUMMARY

	%	Amount		%	No./Employees
1. Total Project Dollar Value 2. MBE Project Goal 3. WBE Project Goal 4. M/WBE Totals Combined			5. Total Employees 6. Total Minority Employees/Goal 7. Total Female Employees/Goal 8. EEO Total Combined		

OFFICE OF MINORITY & WOMEN'S BUSINESS PROGRAMS USE ONLY

Proposed Goals		Date Approved	Date Disapproved	Initials
MBE (%)	EEO-Minorities (%)			
WBE (%)	EEO-Women (%)			

Number/Types of Contracts	Contract Breakdown	Amount

SAMPLE

Number/Types of contracts	Contract Breakdown	Amount
General Construct. (Contract No. 1)	Paving	$150,000
	Demolition	30,000
	Paining	200,000
	Masonry	260,000
	Miscellaneous Metals	50,000
	Glazing	3,000
	Excavation and Backfill	210,000
	Fencing	12,000
	Concrete Finishing	20,000
	Reinforcing Steel	240,000
	Roofing	658,000
	Waterproofing	30,000
		$1,273,000
Electrical (Contract No. 2)	Underground Duct Banks	110,000
	Equipment Supply	260,000
	Lightening Protection	20,000
		390,000
H.V.A.C. (Contract No. 3)	Electrical Wiring	10,000
	Ductwork	45,000
	Controls	25,000
	Equipment Supply	60,000
		140,000
Plumbing (Contract No. 4)	Underground Piping	20,000
	Equipment Supply	25,000
		45,000
Sewer Rehab (Contract No. 5)	Cleaning & TV Inspection	35,000
	Joint Testing & Sealing	45,000
	Chemical Root Treatment	4,000
	Manhole Rehabilitation	8,000
	Excavation & Backfill	6,000
	Pavement Replacement	12,000
	Material Supply	5,000
		115,000
Sewer Rehab. (Contract No. 6)	Cleaning & TV Inspection	58,000
	Joint Testing & Sealing	126,000
	Chemical Root Treatment	3,000
	Manhole Rehabilitation	15,000
	Excavation & Backfill	3,000
	Pavement Replacement	2,800
	Material Supply	1,000
		208,800
	Total	$2,171,000

ARTICLE 2(e) - NYS Uniform Contracting Questionnaire Instructions

* Please Read Before Completing Questionnaire

1. Complete all sections of the Questionnaire.

2. Submit this form as required by the contracting agency 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. If you have submitted one within 6 months of the bid date with any contracting agency, as long as the information remains unchanged and accurate, you may submit a complete certified copy of that form, together with an Affidavit of No Change, to the Agency with which you are bidding. A contracting agency may require additional information deemed necessary for its review. Whenever more space is needed to answer any question or you wish to give further explanation, complete by attaching extra pages. All questions must be answered.

3. For question #16, if your firm has OSHA citations, attach copies of each citation. Add additional explanatory material for any other affirmative answers.

4. A certified annual financial disclosure will be acceptable in lieu of completing the financial disclosure in the questionnaire.

5. If you wish material in this disclosure form to be held as confidential and exempt from disclosure under Freedom of Information, be sure to place an asterisk in front of all information you do not want disclosed to outside sources.

6. This questionnaire is generally valid for one calendar year, unless major changes have occurred (firm purchased by another business, bankruptcy, etc.)

The NYS Uniform Contracting Questionnaire, which is included in Section V, "Bid Forms and Attachments," must be completed and submitted to **Department** by the apparent low bidder. The complete questionnaire must be received by **Department** within three (3) business days after the apparent low bidder has been so notified. The completed questionnaire or the affidavit of no change (if appropriate) must be addressed to:

NYS Department of Environmental Conservation
Division of Management and Budget Services
Minority and Women's Business Programs Unit, 10th Floor
625 Broadway
Albany, NY 12233-5027

The envelope should be clearly marked **"NYS Uniform Contracting Questionnaire."** Failure of the apparent low bidder to timely submit the complete, properly executed questionnaire may result in disqualification of the low bidder.

Before **Department** will consent to any subcontracts over $10,000, the proposed subcontractor must submit a complete, properly executed 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.

CCA-1 (10/2005) FEDERAL ID NO. _____

ARTICLE 2(f) - NEW YORK STATE UNIFORM CONTRACTING QUESTIONNAIRE

INSTRUCTIONS

Submit this form as required by the contracting agency 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. If you have submitted one within 6 months of the bid date with any contracting agency, as long as the information remains unchanged and accurate, you may submit a complete certified copy of that form, together with an Affidavit of No Change, to the agency with which you are bidding. A contracting agency may require additional information deemed necessary for its review. **Whenever more space is needed to answer any question, or you wish to give further explanation, complete by attaching extra pages. All questions must be answered.**

NOTE: Please indicate whether you believe that any of the information supplied herein is confidential and should be exempt from disclosure under the Freedom of Information Law: ___yes, ___no. If you checked "yes" you must identify the information you feel is confidential by placing an asterisk in front of the appropriate question number(s) and you are requested to attach an additional sheet(s) upon which the basis for such claim(s) is explained.

GENERAL INFORMATION

1. NAME OF FIRM _____

DBA NAME, IF ANY _____

MAILING ADDRESS _____ PHONE NO.(____) _____

CITY _____ COUNTY _____ STATE _____ ZIP _____ FAX NO. (____) _____

ACTUAL LOCATION _____

E-MAIL ADDRESS _____

2. TYPE OF FIRM (check only one) ___CORPORATION ___PARTNERSHIP ___PROPRIETORSHIP ___JOINT VENTURE ___LLC ___LLP

3. HOW MANY YEARS HAS THE FIRM BEEN IN BUSINESS? _____ UNDER THE SAME NAME? _____ FORMER NAME: _____

4. WHAT IS THE FIRM'S BONDING RANGE? $_____ SINGLE PROJECT $_____ AGGREGATE (ALL PROJECTS)

5. ARE YOU CERTIFIED AS A DBE ____ MBE ____ WBE ____ IF SO, WITH WHOM? _____

OWNERSHIP, MANAGEMENT, AFFILIATION

6. Identify each person who is, or has been within the past five years, an owner of 5.0% or more of the firm's shares, or one of the five largest shareholders or a director, an officer, a partner or a proprietor. Joint ventures: provide information for all firms involved. Fill in name, % owned, office held; indicate by Y or N whether director, officer or partner:

FIRST NAME	MI	LAST NAME	DATE OF BIRTH	% OWNED	DIRECTOR (Y or N)	OFFICER (Y or N)	TITLE	PARTNER (Y or N)

FEDERAL ID NO. _____

7. Identify any other firms in which, now or in the past five years, the firm or any of the individuals listed in question six above, either owned or owns 5.0% or more of the shares of, or was or is one of the five largest shareholders or as a director, officer, partner or proprietor of said other firm:

FEDERAL ID NO.	% OWNED	FIRM/COMPANY NAME	FIRM/COMPANY ADDRESS

8. Identify any affiliate not listed in your answers to questions 6 and 7. For purposes of this question your firm and another are affiliates when, either directly or indirectly, one controls or has the power to control the other, or a third party or parties controls, or has the power to control both:

FEDERAL ID NO.	COMPANY NAME	ADDRESS

9. Identify any and all shareholders, directors, officers, owners, partners, or proprietors in common between your firm and any firm listed in response to questions 6,7 or 8:

FEDERAL ID NO.	FIRST NAME, MI & LAST NAME	POSITION	OTHER FIRM

FEDERAL ID NO. _____

10. List the ten most recent contracts the firm has completed. If less than ten, include most recent subcontracts on projects up to that number:

AGENCY/OWNER, CONTACT PERSON & TELEPHONE NO.	CONTRACT NO.	PRIME OR SUB	DESIGN ARCHITECT AND/OR DESIGN ENGINEER	AWARD DATE	AMOUNT	DATE COMPLETED
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

11. List all current uncompleted construction contracts:

AGENCY/OWNER, CONTACT PERSON & TELEPHONE NO.	CONTRACT NO.	PRIME OR SUB	DESIGN ARCHITECT AND/OR DESIGN ENGINEER	TOTAL $ AMOUNT OF FIRM'S CONTRACT (OR SUBCONTRACT)	$ AMOUNT SUBLET TO OTHERS	UNCOMPLETED $ AMOUNT OF FIRM'S CONTRACT (OR SUBCONTRACT)

GRAND TOTAL: _____

FEDERAL ID NO. _____

12. Gross Sales for Firm's Previous 3 Fiscal Years:

YEAR	
_____	$_____
_____	$_____
_____	$_____

Average Backlog for Firm's Previous 3 Fiscal Years:
(Estimated total value of uncompleted work on outstanding contracts)

YEAR	
_____	$_____
_____	$_____
_____	$_____

13. Has the firm, or any firm listed in response to questions 6,7 or 8, defaulted or been terminated on, or had its surety called upon to complete, any contract awarded within the past five years? NO { } YES { } If, yes, give date(s), agency(ies)/owner(s), project(s), contract numbers, and describe including the result: _____

_____

14. For all contracts within the past five years: (a) list and describe all liens or claims over $25,000 filed against the firm and remaining undischarged or unsatisfied for more than 90 days; and (b) list and describe all liquidated damages assessed _____

_____

FINANCIAL INFORMATION

15. Complete the attached financial statement or attach a copy of the firm's most recent annual financial statement and accompanying notes.

OTHER INFORMATION

16. Within the past five years has the firm, any affiliate, any predecessor company or entity, or any person identified in question number 6 above been the subject of any of the following: (respond to each question and describe in detail the circumstances of each affirmative answer; attach additional pages if necessary)

(a)	a judgment of conviction for any business-related conduct constituting a crime under local, state or federal law?	no__	yes__
(b)	a criminal investigation or indictment for any business-related conduct constituting a crime under local, state or federal law?	no__	yes__
(c)	a grant of immunity for any business-related conduct constituting a crime under local, state or federal law?	no__	yes__
(d)	a federal, state or local suspension or debarment?	no__	yes__
(e)	a rejection of any bid for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid?	no__	yes__
(f)	a rejection of any proposed subcontract for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid?	no__	yes__
(g)	a denial or revocation of prequalification?	no__	yes__
(h)	a voluntary exclusion from bidding/contracting agreement?	no__	yes__
(i)	any administrative proceeding or civil action seeking specific performance or restitution in connection with any public works contract except any disputed work proceeding?	no__	yes__
(j)	an OSHA Citation and Notification of Penalty containing a violation classified as serious?	no__	yes__
(k)	an OSHA Citation and Notification of Penalty containing a violation classified as willful?	no__	yes__
(l)	a prevailing wage or supplement payment violation?	no__	yes__
(m)	a State Labor Law violation deemed willful?	no__	yes__
(n)	any other federal, state or local citations, Notices, violation orders, pending administrative hearings or proceedings or determinations of a violation of any labor law or regulation?	no__	yes__

FEDERAL ID NO. _____

(o)	any criminal investigation, felony indictment or conviction concerning formation of, or any business association with, an allegedly false or fraudulent women's, minority or disadvantaged business enterprise?	no___	yes___
(p)	any denial, decertification, revocation or forfeiture of Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise status?	no___	yes___
(q)	rejection of a low bid on a State contract for failure to meet statutory affirmative action or M/WBE requirements?	no___	yes___
(r)	a consent order with the NYS Department of Environmental Conservation, or a federal, state or local government enforcement determination involving a violation of federal, state or local environmental laws?	no___	yes___
(s)	any bankruptcy proceeding?	no___	yes___
(t)	any suspension or revocation of any business or professional license?	no___	yes___
(u)	any citations, Notices, violation orders, pending administrative hearings or proceedings or determinations of a violation of:		
	* federal, state or local health laws, rules or regulations	no___	yes___
	* federal, state or local environmental laws, rules or regulations	no___	yes___
	* unemployment insurance or workers compensation coverage or claim requirements	no___	yes___
	* ERISA (Employee Retirement Income Security Act)	no___	yes___
	* federal, state or local human rights laws	no___	yes___
	* federal, state or local security laws?	no___	yes___
(v)	a request to withdraw a bid submitted to a public owner or any claim of an error on a bid submitted to a public owner?	no___	yes___

CERTIFICATION

The undersigned recognizes that this questionnaire is submitted for the express purpose of inducing the State of New York or its agencies and instrumentalities to award a contract, or approve a subcontract; acknowledges that the State or its agencies and instrumentalities may in its discretion, by means which it may choose, determine the truth and accuracy of all statements made herein; and states that the information submitted in this questionnaire and any attached pages is true, accurate and complete. It is further acknowledged that intentional submission of false or misleading information may constitute a felony under Penal Law Section 175.35 or may constitute a misdemeanor under Penal Law Sections 175.30, 210.35 or 210.45, and may also be punishable by a fine and/or imprisonment of up to five years under 18 USC Section 1001 and may result in a denial of contract award or contract termination.

Sworn to before me this

_____day of _____, 20____

_____
Signature of Officer

_____
Notary Public

_____
Title

_____
Commission Expiration Date

_____
Officer Name (Please Print)

FEDERAL ID NO. _____

As of (date): _____

	ASSETS	
Current Assets		
1. Cash	$	
2. Accounts receivable - less allowance for doubtful accounts		
Retainers included in accounts receivable	$	
Claims included in accounts receivable not yet approved or in litigation		
3. Notes receivable - due within one year		
4. Inventory - materials		
5. Contract costs in excess of billings on uncompleted contracts		
6. Accrued income receivable		
Interest		
Other (list) _____		
_____		
Total accrued income receivable		
7. Deposits		
Bid and plan _____		
Other (list) _____		
_____		
Total deposits		
8. Prepaid Expenses		
Income Taxes		
Insurance		
Other (list) _____		
_____		
Total prepaid expenses		
9. Other current Assets		
(list) _____		
_____		
Total other current assets		
10. Total Current Assets		
11. Investments		
Listed securities-present market value		
Unlisted securities-present value		
Total investments		
12. Fixed Assets		
Land		
Building and improvements		
Leasehold improvements		
Machinery and equipment		

FEDERAL ID NO. _____

12. Fixed Assets (Continued)

Automotive equipment		
Office furniture and fixtures		
Other (list)_____		
_____		
Total		
Less: accumulated depreciation		
Total fixed assets - net		

13. Other Assets

Loans receivable	- officers	
	- employees	
	- shareholders	
Cash surrender value of officers' life insurance		
Organization expense - net of amortization		
Notes receivable - due after one year		
Other (list) _____		
_____		
Total Other Assets		

14. TOTAL ASSETS

FEDERAL ID NO. _____

LIABILITIES

Current Liabilities

15. Accounts payable $_____
16. Loans from shareholders - due within one year _____
17. Notes payable - due within one year _____
18. Mortgage payable - due within one year _____
19. Other payables - due within one year _____
    (list) _____ $_____
    _____ _____
    Total other payables - due within one year _____
20. Billings in excess of costs and estimated earnings _____
21. Accrued expenses payable - salaries and wages _____
    - payroll taxes _____
    - employees' benefits _____
    - insurance _____
    - other _____
    Total accrued expenses payable _____
22. Dividends payable _____
23. Income taxes payable - state _____
    - federal _____
    - other _____
    Total income taxes payable _____
24. Total Current Liabilities _____
25. Deferred Income Taxes Payable - state _____
    - federal _____
    - other _____
    Total deferred income taxes _____
26. Long Term Liabilities
    Loans from shareholders - due after one year _____
    Notes payable - due after one year _____
    Mortgage - due after one year _____
    Other payables - due after one year _____
    (list)_____ _____
    _____ _____
    Total long term liabilities _____
27. Other Liabilities
    (list) _____ _____
    _____ _____
    Total other liabilities _____

28. TOTAL LIABILITIES _____

FEDERAL ID NO. _____

NET WORTH

29. Net Worth (if proprietorship or partnership) $_____
30. Stockholders' Equity
    - Common stock issued and outstanding _____
    - Preferred stock issued and outstanding _____
    - Retaining earnings _____
    - Total _____
    - Less: Treasury stock _____
31. TOTAL STOCKHOLDERS' EQUITY _____
32. TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY _____

NOTE: IF ADDITIONAL SPACE IS REQUIRED, PLEASE NOTE AND ATTACH SCHEDULE TO STATEMENT

Dated this _____day of _____, 20___.

_____
Name of Organization

By:_____
Signature and Title

_____
Name (please print)

Article 2(g) - Affidavit of No Change

State of)
County of) s.s.:

The undersigned, being duly sworn, deposes and says:

1) I am an officer/owner of _____ (hereinafter the "Contractor"), which is currently submitting a bid on a State Contract.

2) Contractor previously submitted a NYS Uniform Contracting Questionnaire within one year prior to the date hereof to _____ in connection with a bid on another State Contract.

3) Attached is an accurate and true copy of such previously submitted NYS Uniform Contracting Questionnaire.

4) I hereby certify that, with the exception of the information specified in questions 10 and 11, there has been no material change in the information pertaining to the Contractor specified on such attached Questionnaire, except as follows: _____

_____

_____

_____

5) I hereby certify that there has been no change in the information pertaining to the uncompleted construction contracts of the Contractor specified in question 11 on the attached Questionnaire, except as follows:

_____

_____

_____

_____

On this _____ day of _____ 20___, before me personally came _____ to me known to be the person described herein, and who executed the foregoing instrument, and severally acknowledged that (s)he executed the same.

(Seal)

_____
Notary Public

ARTICLE 3(a) - Instructions for Certificate of Insurance

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

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

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

Insurance Agency

1) Complete Section 2 of the form.

2) Enter N/A if No Excess Umbrella (9) policy is in effect.

3) All insurance certificates must have a policy number entered otherwise it will result in rejection of the certificate.

4) Certificates must be signed by an authorized representative of the firm.

5) Specify policy if Other (10) is in effect, otherwise enter N/A.

Contractor

1) Complete Section 1 of the form.

2) At the top of the form, check "New" if you are submitting proof of coverage for a new contract. Check "Renewal" if you are submitting proof of renewals.

3) Submit original certificate and subsequent renewals to Division of Environmental Remediation, New York State Department of Environmental Conservation, 12th Floor, New York State Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-7017, Attention: "Gerard Burke, Project Manager"

ARTICLE 3(b)

Certificate of Insurance

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

NYSDEC-DER Site No. 1-30-041

Certificate of Insurance
_____**New** _____**Renewal**

SECTION 1

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

_____
_____
_____

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

Location and Description of Work Fumex Sanitation Site, Soil Excavation and Asphalt Cover Installation, Garden City Park, Nassau County, New York

SECTION 2

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

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

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

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

_____ By _____
Date Issued **(Signature of Authorized Representative)**

_____
Print Insurance Agency Name

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

01/08

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

1) The performance bond and the labor and material payment bond are to be only submitted by the bidder who receives the Notice of Intent to Award letter from **Department**.

2) Use the forms that are included in the Contract Documents. **DO NOT RETYPE THE FORMS.**

3) Attach a **SEPARATE** certified power of attorney and surety financial statement to **EACH** bond (i.e., one set attached to performance bond and one set attached to labor and material payment bond).

ARTICLE 3(d) - ***Performance Bond***

Date Bond Executed _____ **NYSDEC-DER Site Number** 1-30-041

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 _____

Corporate Seal of Surety Company

_____
Corporation Surety

_____
Business Address

By (President)_____

Attest (Secretary)

_____ **Date** _____

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ *(title)* of _____ *(firm)* the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ *(firm)*; namely, the _____ *(title)* of _____ *(firm)*; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

(CO-PARTNERSHIP ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known and known to me to be a member of _____, the firm described in and which executed the foregoing instrument, and (s)he acknowledged to me that (s)he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Seal

_____
Notary Public

(INDIVIDUAL ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20____, before me personally came _____ to me personally known, and known to me to be the individual described in, and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same.

Seal

_____
Notary Public

(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

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

Labor and Material Payment Bond

Date Bond Executed_____ **NYSDEC-DER Site Number** 1-30-041

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_____

Corporate Seal of Surety Company

_____
Corporation Surety

_____
Business Address

By (President)_____

Attest (Secretary)_____

Date_____

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ *(title)* of _____ *(firm)* the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ *(firm)*; namely, the _____ *(title)* of _____ *(firm)*; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

(CO-PARTNERSHIP ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known and known to me to be a member of _____, the firm described in and which executed the foregoing instrument, and (s)he acknowledged to me that (s)he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Seal

_____
Notary Public

(INDIVIDUAL ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20____, before me personally came _____ to me personally known, and known to me to be the individual described in, and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same.

Seal

_____
Notary Public

(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

CONSULTANT/CONTRACTOR DETAILED M/WBE-EEO UTILIZATION PLAN
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
(THE M/WBE-EEO GOALS MUST BE PLACED ON THE ENTIRE PROJECT COST)

Consultant/Contractor Name:			
Contract Type/Number:		Contract Award Date:	
Address:	City:	State:	Zip Code:
Project Owner Name:		Project/Grant No.:	
Address:	City:	State:	Zip Code:
Authorized Representative:		Title:	
Authorized Signature:			

EEO AND MBE/WBE CONTRACT SUMMARY (MUNICIPAL FORCE ACCOUNT N/A)

M/WBE CONTRACT SUMMARY	%	Amount	EEO CONTRACT SUMMARY	%	No./Employ.	Wk./Hrs.
1. Total Dollar Value of the Project			6. Total for all Employees			
2. Total Dollar Value of the Prime Contract			7. Total Goal for Minority Employees			
3. MBE Goal/Amount			8. Total Goal for Female Employees			
4. WBE Goal/Amount			9. EEO Combined Totals			
5. MBE/WBE Combined Totals						

Office of Minority & Women's Business Programs Use Only

Proposed Goals		Date Approved	Date Disapproved	Initials
MBE (%)	EEO-Minorities (%)			
WBE (%)	EEO-Minorities (%)			

SECTION I - MBE INFORMATION **In order to achieve the MBE Goals, New York State Certified MINORITY-OWNED firms are expected to participate in the following manner:**

MBE Firm	Projected MBE Contract Amount and Award Date	Description of Work MBE	Contract Schedule/Start Date(s)	Contract Payment Schedule	Project Completion Date
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				

SECTION II - WBE INFORMATION **In order to achieve the WBE Goals, New York State Certified WOMEN-OWNED firms are expected to participate in the following manner:**

WBE Firm	Projected WBE Contract Amount and Award Date	Description of Work WBE	Contract Schedule/Start Date(s)	Contract Payment Schedule	Project Completion Date
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				
Name: Address: City: State/Zip Code: Telephone No.:	$_____ DATE: _____				

SECTION III - EEO INFORMATION **In order to achieve the EEO Goals, Minorities and Females are expected to be employed in the following job categories for the specified amount of work hours:**

Job Categories	Total Work Hours of Contract	All Employees		Minority Employees			
		Male	Female	African-American	Asian/Pacific Islander	Native American	Hispanic
Officials/ Managers							
Professionals							
Technicians							
Sales Workers							
Office/Clerical							
Craftsman							
Laborers							
Services/ Workers							
Totals							

VERIFICATION

STATE OF ( )

COUNTY OF( ) **SS No.:**

(A)

_____, being duly sworn, states he or she is the owner of (or a partner in) the enterprise making the foregoing Utilization Plan and representations made in the Utilization Plan are true to his or her own knowledge.

(B)

_____, being duly sworn, states that he or she is the

Name of Corporate Officer

_____, of _____, the

Title of Corporate Officer **Name of Corporation**

enterprise making the foregoing Utilization Plan, that he or she has read the Utilization Plan and knows its contents, that the statements and representations made in the Utilization Plan are true to his or her knowledge, and that the Utilization Plan is made at the direction of the Board of Directors of the Corporation and/or owners.

_____ _____

Date **Signature**

Sworn to before me this_____

day of _____, _____

_____

Notary Public

Person assisting in completing the Utilization Plan:

_____

Print Name

_____ _____

Signature **Telephone No.**

CONSULTANT/CONTRACTOR DETAILED
M/WBE-EEO UTILIZATION PLAN

This Utilization Plan must be verified under oath in the following manner:

(A) if the enterprise is a sole proprietorship, by owner, or if the enterprise is a partnership, by partner; or

(B) if the enterprise is a corporation, by the principal officer designated by the Board of Directors. All Applicants/Contractors must read and review all items preceding the verification before signing. These items contain responsibilities of the Applicant, rights retained by the State of New York and penalties that may be applied for false statements.

FIRST, this Utilization Plan form, the supporting documents and any other information provided in support of the Utilization Plan are considered part of the Contract/Application. It is recognized and acknowledged that the information contained in this Utilization Plan is given under oath and that any misrepresentation made in this is subject to both the civil and criminal laws of the State of New York.

SECOND, by filing this Utilization Plan, the Contractor/Applicant consents to periodic examination of its books, records, and an interview of its principals and employees by the OMWBP for the purpose of determining the solicitation and utilization of certified Minority and Woman-Owned Business Enterprises.

THIRD, by filing this Utilization Plan, the Applicant/Contractor consents to inquiries that may be directed by the OMWBP to the Applicant's/Contractor's companies, banking institutions, credit agencies, and contractors for the purpose of ascertaining the Applicant's/Contractor's payments to subcontractors.

FOURTH, the Applicant/Contractor agrees to provide notice to the OMWBP of any material change in the information contained in the original application within fifteen (15) days of such change.

FIFTH, by filing this Utilization Plan, the Applicant/Contractor consents to the OMWBP's sharing reports, summaries, reviews, analyses, recommendations and determinations related to this Utilization Plan with other State agencies, which may request such information as a result of the Applicant/Contractor submitting this Utilization Plan.

I have read and acknowledge the foregoing.

_____
Signature of Owner/Applicant

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: _____	Comptroller's Contract Number
		Certificate Number
		Originating Agency
Work Period Ending 20____		Date Prepared

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

SCHEDULE I — FINANCIAL STATEMENT

CONTRACT AND CHANGE ORDER AMOUNTS Line		WORK COMPLETED TO DATE Line	
1. Original Bid Price (Schedule V, Col. 1)	$	1. Contract Work Performed (Schedule V, Col. 2)	$
2. Change Order (Schedule VI, Col. 1)	$	2. Change Orders (Schedule VI, Col. 2)	$
3. Net Contract Amount	$	3. Value earned to Date	$
4. Maximum Retainage (5% of Line 3)	$	4. Less Retainage (5% up to Maximum)	$
		5. Value Earned to Date Less Retainage, Damages, & Credits	$
		6. Less Prior Payments	$
		7. This Payment	$

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

_____ DATE _____ SIGNATURE

APPROVED FOR PAYMENT BY DIVISION OF FISCAL MANAGEMENT

_____ DATE _____ SIGNATURE

EXPENDITURES								LIQUIDATION			
					Accum						
Dept	Cost Center	Var	Yr	Object	Dept	Statewide	Amount	Orig. Agency	PO/Contract	Line	F/P

Project:	Contract Number
	Work Period

SCHEDULE V **JOB PROGRESS**

Itemized Proposal					Work Completed to Date		
Item No.	Unit Price	Estimated Quantity	Type of Work	COLUMN 1 Contract Amount	Actual Quantity	COLUMN 2 Amount	Code
				$		$	
Liquidated Damages						($)	
Credits						($)	
			Totals	$		$	

SCHEDULE VI **APPROVED CHANGE ORDERS**

COLUMN 1			WORK %		COLUMN 2	COLUMN 1			WORK %		COLUMN 2
No.	+ -	Additions - Deductions	Prior	New	Value Earned to Date	No.	+ -	Additions-Deductions	Prior	New	Value Earned to Date
		$			$			$	SUBTOTAL		$
(SUB) TOTAL		$			$	TOTAL		$			$

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MANAGEMENT AND BUDGET

CONTRACTOR'S APPLICATION FOR PAYMENT
(LUMP SUM CONTRACT)

Payee (Name and Address)	FOR INTERNAL USE ONLY	
	STATE COMPTROLLER'S PRE AUDIT CERTIFIED FOR PAYMENT IN THE SUM OF	Comptroller's Contract Number
		Certificate Number
	$ _____	Originating Agency
Work Period Ending 20____	By: _____	Date Prepared

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

SCHEDULE I — FINANCIAL STATEMENT

CONTRACT AND CHANGE ORDER AMOUNTS Line		WORK COMPLETED TO DATE Line	
1. Original Bid Price (Schedule V, Col. 1)	$	1. Contract Work Performed (Schedule V, Col. 2)	$
2. Change Order (Schedule VI, Col. 1)	$	2. Change Orders (Schedule VI, Col. 2)	$
3. Net Contract Amount	$	3. Value earned to Date	$
4. Maximum Retainage (5% of Line 3)	$	4. Less Retainage (5% up to Maximum)	$
		5. Value Earned to Date Less Retainage, Damages, & Credits	$
		6. Less Prior Payments	$
		7. This Payment	$

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

DATE _____ SIGNATURE _____

APPROVED FOR PAYMENT BY DIVISION OF FISCAL MANAGEMENT

DATE _____ SIGNATURE _____

EXPENDITURES								LIQUIDATION			
					Accum						
Dept	Cost Center	Var	Yr	Object	Dept	Statewide	Amount	Orig. Agency	PO/Contract	Line	F/P

Project:	Contract Number
	Work Period

SCHEDULE V — **JOB PROGRESS**

Item	Type of Work	COLUMN 1 Detailed Estimate	Work % Prior	Work % New	COLUMN 2 Value Earned to Date	Code
Liquidated Damages					($)	
Credits					($)	
	TOTALS	$			$	

SCHEDULE VI — **APPROVED CHANGE ORDERS**

COLUMN 1			WORK %		COLUMN 2	COLUMN 1			WORK %		COLUMN 2
No.	+ -	Additions - Deductions	Prior	New	Value Earned to Date	No.	+ -	Additions-Deductions	Prior	New	Value Earned to Date
		$			$			$	SUBTOTAL		$
(SUB) TOTAL		$			$	TOTAL		$			$

Final Payment Release

For and in consideration of the receipt of final payment on the contract hereinafter identified, and in order to induce the New York State Department of Environmental Conservation **(Department)** to make such payment, the **Contractor** hereby releases the **Department** for any and all claims, of any nature whatsoever, arising under or in connection with the contract, except for the following claims:

(List any exempted claims)

For and in consideration of the receipt of final payment on the contract hereinafter identified, and in order to induce the **Department** to make such payment, the **Contractor** hereby states that it has paid all moneys due subcontractors, subconsultants, suppliers, material, men or others due payment for work or services performed in furtherance of this contract, except as follows:

_____

_____

(List all subcontractors, subconsultants, suppliers, etc. who have outstanding claims for payment or who have not been paid in full. A complete explanation of the facts and circumstances should be set forth on a separate sheet and attached hereto)

The **Contractor** hereby indemnifies and holds the **Department** and the State of New York harmless from any losses from claims, demands, payments, suits, actions, liens, recoveries and judgments of every nature and description brought or recovered against it by reason of failure to make such payments.

Contract Number _____

_____

Firm

_____

Print Name

_____

Signature

_____

Date

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ ***(title)*** of _____ ***(firm)*** the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ *(title)* of _____ *(firm)* the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ *(firm)* ; namely, the _____ *(title)* of _____ *(firm)*; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

Payment Affidavit

This Article 4(c) is not applicable

Office of the State Comptroller
Division of Pre-Audit and Accounting Records
BUREAU OF STATE EXPENDITURES

New York State Labor Law, Section 220-a
Prime Contractor's Certification

1) That I am an officer of _____ and am duly authorized to make this affidavit on behalf of the prime contractor on public contract No. _____.

2) That I fully comprehend the terms and provisions of Section 220-a of the Labor Law.

3) That, except as herein stated, there are no amounts due and owing to or on behalf of laborers employed on the project by the contractor. (Set forth any unpaid wages and supplements, if none, so state).

Name **Amount**

_____

4) That the contractor hereby files every verified statement(s) required to be obtained by the contractor from the subcontractor(s).

5) That, upon information and belief, except as stated herein, all laborers (exclusive of executive or supervisory employees) employed on the project have been paid and prevailing wages and supplements for their services through _____, (if more than on subcontractor list name and date separately) the last day worked on the project by their subcontractor(s), (Set forth any unpaid wages and supplements, if none, so state and utilize clause 5 (A)).

Name **Amount**

_____

(5a) That the contractor has no knowledge of amounts owing to or on behalf of any laborers of its subcontractor(s).

6) In the event it is determined by the Commissioner of Labor that the wages or supplements or both of any such subcontractor(s) have not been paid or provided pursuant to the appropriate schedule of wages and supplants, then the contractor shall be responsible for payment of such wages and supplants pursuant to the provision of Section 223 of the Labor Law.

_____ _____ _____
Signature Print Name Title

Acknowledgment:

STATE OF_____)
) SS:
COUNTY OF_____)

On the_____ day of_____, 20____, before me personally came_____, to me known and known to me to be the person described in an executed for foregoing instrument and acknowledged to me that (s)he executed the same.

_____ _____
Notary Public **County**

If this affidavit is verified by an oath administered by a notary public in a foreign country other than Canada, it must be accompanied by a certificate authenticating the authority of the notary who administers the oath. (See CPLR § 2309(c); Real Property Law, § 311, 312).

Office of the State Comptroller
Division of Pre-Audit and Accounting Records
BUREAU OF STATE EXPENDITURES

New York State Labor Law, Section 220-a, Subcontractor's Certification

1) That I am an officer of _____ a subcontractor on public Contract Number _____ and I am duly authorized to make this affidavit on behalf of the firm.

2) That I make this affidavit in order to comply with the provisions of Section 220-a of the Labor Law.

3) That on _____ we received from _____ the prime contractor a copy of the initial/revised schedule of wages and supplements Prevailing Rate Schedule Case Number _____ (PRC) specified in the public improvement contract.

4) That I have reviewed such schedule(s), and agree to pay the applicable prevailing wages and to pay or provide the supplements specified therein.

_____
Signature

_____
Print Name

_____
Title

Acknowledgment

STATE OF_____)
) SS:
COUNTY OF_____)

On the _____ day of _____, 20____, before me personally came _____, to me known and known to me to be the person described in and who executed for foregoing instrument and acknowledged to me that (s)he executed the same.

_____
Notary Public

If this affidavit is verified by an oath administered by a notary public in a foreign country other than Canada, it must be accompanied by a certificate authenticating the authority of the notary who administers the oath. (See CPLR § 2309(c); Real Property Law, § 311, 312).

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: Fumex Sanitation Site
Contract Number: D007692
Date: October 2009

ARTICLE 3 - Engineer

(To Be Determined) shall assume all duties and responsibilities of and have the rights and authority assigned to **Engineer** in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - Contract Documents

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

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

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

ARTICLE 5 - Contractor's Representations

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

5.1 **Contractor** has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and applicable Laws that in any manner may affect cost, schedule, progress, performance or furnishing of the Work.

5.2 **Contractor** has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in Information to Bidders, as provided in the General Conditions, and accepts the determination set forth in said Section to the extent of the technical data contained in such reports and drawings upon which **Contractor** is entitled to reply.

5.3 **Contractor** has obtained and carefully studied all such examinations, investigations, explorations, tests, reports and studies which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, schedule, progress, performance or furnishing of the Work as **Contractor** considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by **Contractor** for such purposes.

5.4 **Contractor** has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by **Contractor** in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions.

5.5 **Contractor** has correlated (or assumes responsibility for correlating) the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

5.6 **Contractor** has given **Engineer** written notice of all conflicts, errors or discrepancies that he (she) has discovered in the Contract Documents and any written resolution thereof is acceptable to **Contractor**.

ARTICLE 6 - Contract Time

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

6.1 The Work will be Substantially Completed within one hundred and sixty (160) days from the date established in the Notice to Proceed.

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 date established in the Notice to Proceed.

6.3 The Work will be completed and ready for final payment in accordance with the General Conditions within two hundred and twenty (220) days from the date established in the Notice to Proceed or within 60 days of substantial completion, whichever is sooner.

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

6.5 Accordingly, **Contractor** agrees to forfeit and pay **Department** as liquidated damages, and not as a penalty, the amount of six hundred dollars ($600) 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 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 twelve hundred dollars ($1,200) 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.

9.1.1 Prior to Substantial Completion of the Work, progress payments will be made less five percent (5%) the aggregate of payments (i.e. retainage) previously made and less an amount necessary to satisfy any claims, liens, or judgments against **Contractor** which have not been suitably discharged.

9.2 **Payment upon substantial completion.** When the work or major portions thereof, as contemplated in the Contract Documents, is substantially completed, **Contractor** shall submit to **Department**, an Application for Payment in accordance with the General Conditions for the remaining amount of the contract balance or amount due for that major portion completed. **Department** will pay the remaining Contract balance, or amount due for that major portion completed, less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens, judgments against **Contractor** which have not been suitably discharged. Payment for remaining items will be made upon their completion.

9.3 **Final Payment.** Upon final completion of the physical Work and acceptance of the Work in accordance with the General Conditions, **Department** shall pay the remainder of the Contract Price as recommended by **Engineer**.

ARTICLE 10 - No Estimate on Contractor's Noncompliance

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

ARTICLE 11 - Delays, Inefficiencies, and Interference

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

1) **Contractor** further agrees that it has included in its bid prices for the various items of the contract any additional costs for delays, inefficiencies, or interferences affecting the performance or scheduling of contract work caused by, or attributable to, the following instances:

   a) The work or the presence on the Site of any third party, including but not limited to that of other contractors or personnel employed by the State, or by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises, or any delay in progressing such work by any third party.

   b) The existence of any facility or appurtenance owned, operated, or maintained by any third party.

   c) The act, or failure to act, of any other public or governmental body, including, but not limited to, approvals, permits, restrictions, regulations or ordinances.

   d) Restraining orders, injunctions, or judgments issued by a court.

   e) Any labor boycott, strike, picketing or similar situation.

   f) Any shortages of supplies or materials required by the contract work.

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

ARTICLE 12 - Postponement, Suspension or Termination

12.1 **Department** shall have the right to postpone, suspend or terminate this Contract in whole or in part for the convenience of **Department**. If, after termination for cause of **Contractor** it is determined that no cause existed for termination of **Contractor**, such termination shall be deemed to have been made for the convenience of **Department**.

12.2 If this Contract is terminated by **Department** for convenience or cause, **Department** shall make payment on an equitable basis for all work performed in accordance with the Contract Documents prior to termination in accordance with paragraphs 12.3 and 12.4 below.

12.3 If this contract is terminated for cause, no payment shall be made for anticipated profit on unperformed work or services. Additionally, **Department** may adjust any payment due to **Contractor** at the time of termination to account for any additional costs to **Department** because of **Contractor's** default.

12.4 If this contract is terminated for convenience, payment shall be made for any services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by **Contractor** which had become firm prior to the termination.

12.5 Upon termination of this Contract under this Agreement, **Department** may take over the work or may award or negotiate a contract with another party to complete work required by these Contract Documents.

ARTICLE 13 - Completion of Physical Work and Final Acceptance

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

Joseph Yavonditte, New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7016

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.

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

ARTICLE 19 - Contract Price

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

1)	Bid	$_____
2)	Bid Alternate (Pollution Liability Insurance)	$_____
	Total	$_____

Plus change order(s)

CONTRACT NUMBER: D007692

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

FOR DEPARTMENT

By: _____

Title: _____

Date: _____

FOR CONTRACTOR

By: _____

Title: _____

Date: _____

Approved as to Form:

By: _____
For Attorney General

Date: _____

Approved:

Thomas P. DiNapoli
State Comptroller

By: _____

Date: _____

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

CONTRACT NUMBER: D007692

(CORPORATE ACKNOWLEDGMENT WITH SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is _____ ***(title)*** of _____ ***(firm)*** the corporation described in and which executed the above instrument; that (s)he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that (s)he signed his(her) name thereto by like order.

Seal

_____
Notary Public

(CORPORATE ACKNOWLEDGMENT WITHOUT SEAL)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____, to me known, who being duly sworn, did depose and say that (s)he resides in _____, New York; that (s)he is an officer of _____ ***(firm)*** ; namely, the _____ ***(title)*** of _____ ***(firm)***; that (s)he is authorized by the governing body of said corporation to sign contracts; and that (s)he did sign the foregoing instrument on behalf of, and with authority to bind said corporation.

_____
Notary Public

(CO-PARTNERSHIP ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20 ____, before me personally came _____ to me known and known to me to be a member of _____, the firm described in and which executed the foregoing instrument, and (s)he acknowledged to me that (s)he subscribed the name of said firm thereto on behalf of said firm for the purpose therein mentioned.

Seal

_____
Notary Public

(INDIVIDUAL ACKNOWLEDGMENT)

State of)
County of) s.s.:

On the ____ day of _____, 20____, before me personally came _____ to me personally known, and known to me to be the individual described in, and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same.

Seal

_____
Notary Public

STANDARD CLAUSES FOR NYS CONTRACTS

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

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

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the previous consent, in writing, of the State and any attempts to assign the contract without the State's written consent are null and void. The Contractor may, however, assign its right to receive payment 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).

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

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

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

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

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

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

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

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

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION. (a) FEDERAL EMPLOYER IDENTIFICATION NUMBER and/or FEDERAL SOCIAL SECURITY NUMBER. All invoices or New York State standard vouchers submitted for payment for the sale of goods or services or the lease of real or personal property to a New York State agency must include the payee's identification number, i.e., the seller's or lessor's identification number. The number is either the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. Failure to include this number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or New York State standard voucher, 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 New York State's Central Accounting System by the Director of Accounting Operations, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law, 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:

(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, and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

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

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

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over $25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State; or (iii) banking services, insurance policies or the sale of securities. 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 Governor's Office 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 State Finance Law §165. (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
30 South Pearl St -- 7th Floor
Albany, New York 12245
Telephone: 518-292-5220
Fax: 518-292-5884
http://www.empire.state.ny.us

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
30 South Pearl St -- 2nd Floor
Albany, New York 12245
Telephone: 518-292-5250
Fax: 518-292-5803
http://www.empire.state.ny.us

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

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

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

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

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

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

22. PURCHASES OF APPAREL. In accordance with State Finance Law 162 (4-a), the State shall not purchase any apparel from any vendor unable or unwilling to certify that: (i) such apparel was manufactured in compliance with all applicable labor and occupational safety laws, including, but not limited to, child labor laws, wage and hours laws and workplace safety laws, and (ii) vendor will supply, with its bid (or, if not a bid situation, prior to or at the time of signing a contract with the State), if known, the names and addresses of each subcontractor and a list of all manufacturing plants to be utilized by the bidder.

APPENDIX B
(For DER Superfund/BOA Contracts)
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 Holdharmless** The Contractor agrees that it will indemnify and save harmless the Department and the State of New York from and against all losses from claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any acts or omissions of the Contractor, its agents, employees, or subcontractors in the performance of this contract which are shown to have been the result of negligence, gross negligence or reckless, wanton or intentional misconduct.

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

(1) An organizational conflict of interest exists when the nature of the work to be performed under this contract may, without some restriction on future activities, impair or appear to impair the Contractor's objectivity in performing the work for the Department.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. **Requests for Payment** All requests for payment

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

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

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

VII. **Article 15-A Requirements** The terms contained in this clause shall have the definitions as given in, and shall be construed according to the intent of Article 15-A of the Executive Law, 5 NYCRR Part 140, et. seq., Article 52 of the Environmental Conservation Law and 6 NYCRR Part 615, et. seq., as applicable, and any goals established by this clause are subject to the intent of such laws and regulations.

(a) If the maximum contract price herein equals or exceeds $25,000, and this contract is for labor, services, supplies, equipment, or materials; or

(b) If the maximum contract price herein equals or exceeds $100,000 and this contract is for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; then

(c) The affirmative action provisions and equal employment opportunity provisions contained in this paragraph and paragraphs (d) and (e) of this clause shall be applicable within the limitations established by Executive Law §§312 and 313 and the applicable regulations.

(1) The Contractor is required to make good faith efforts to subcontract at least 21.5 % of the dollar value of this contract to Minority Owned Business Enterprises (MBEs) and at least 13.7 % of such value to Women Owned Business Enterprises (WBEs).

(2) The Contractor is required to make good faith efforts to employ or contractually require any Subcontractor with whom it contracts to make good faith efforts to employ minority group members for at least 10 % of, and women for at least 10 % of, the workforce hours required to perform the work under this contract.

(3) The Contractor is required to make good faith efforts to solicit the meaningful participation by enterprises identified in the NYS Directory of Certified Businesses provided by:

Empire State Development Corp.
Div. Minority & Women's Business Development
30 South Pearl Street
Albany, New York 12245
Phone: (518) 292-5250
Fax: (518) 292-5803
and
Empire State Development Corp.
633 Third Avenue
New York, NY 10017
Phone: (212) 803-2414
Fax: (212) 803-3223
internet: www.empire.state.ny.us\esd.htm

(d) The Contractor agrees to include the provisions set forth in paragraphs (a), (b) and (c) above and paragraphs (a), (b), and (c) of clause 12 of Appendix A in every subcontract in such a manner that the provisions will be binding upon each Subcontractor as to work under such subcontract. For the purpose of this paragraph, a "subcontract" shall mean an agreement providing for a total expenditure in excess of $25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon in which a portion of the Contractor's obligation under a State contract is undertaken or assumed.

(e) The Contractor is required to make good faith efforts to utilize the MBE/WBEs identified in the utilization plan to the extent indicated in such plan, and otherwise to implement it according to its terms. The Contractor is requested to report on such

implementation periodically as provided by the contract, or annually, whichever is more frequent.

VIII. **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.

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

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

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

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

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

(c) The decision of the DAI shall be the final agency 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:

Robert Knizek, Director
(Name and Title)

Remedial Bureau E, Divivision of Env. Remediation

625 Broadway, 12th Floor, Albany, NY 12233-7017
(Address)

518-402-9814
(Telephone)

The designated appeal individual to review decisions is:

Sal Ervolina, Assistant Director
(Name and Title)

Division of Environmental Remediation, 12thFloor

625 Broadway, 12th Floor, Albany, NY 12233-7011
(Address)

518-402-9706
(Telephone)

The Chair of the Contract Review Committee is:

Department of Environmental Conservation
Nancy W. Lussier, Chair
Contract Review Committee
625 Broadway, 10th Floor
Albany, NY 12233-5010
Telephone: (518) 402-9228

(d) Upon receipt of the written appeal, the Chair of the CRC, in consultation with the members of the CRC and the Office of General Counsel, will take one of the following actions, or a combination thereof, with written notice to the Contractor.

(1) Remand the matter to program staff for additional fact finding,negotiation, or other appropriate action; or

(2) Adopt the decision of the DAI; or

(3) Consider the matter for review by the CRC in accordance with its procedures.

(e) Following a decision to proceed pursuant to (d) 3, above, the Chair of the CRC shall convene a proceeding in accordance with the CRC's established contract dispute resolution guidelines. The proceeding will provide the Contractor with an opportunity to be heard.

(f) Following a decision pursuant to (d) 2 or (d) 3, the CRC shall make a written recommendation to the Assistant Commissioner for Administration who shall render the final agency 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 agency determinations shall be subject to review only pursuant to Article 78 of the Civil Practice Law and Rules.

(i) Pending final determination of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract in accordance with the decision of the designated individual. Nothing in this Contract shall be construed as making final the decision of any administrative officer upon a question of law.

(j) (1) Notwithstanding the foregoing, at the option of the Contractor, the following shall be subject to review by the CRC: Disputes arising under Article 15-A of the Executive Law (Minority and Women Owned Business participation), the Department's determination with respect to the adequacy of the Contractor's Utilization Plan, or the Contractor's showing of good faith efforts to comply therewith. A request for a review before the CRC should be made, in writing, within twenty days of receipt of the Department's determination.

(2) The CRC will promptly convene a review in accordance with Article 15-A of the Executive Law and the regulations promulgated thereunder.

X. **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.

XI. **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.

XII. **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.

XIII. **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.

XIV. **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.

XV. **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.

XVI. **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:

(I) prompt written notice of any action, claim or threat of infringement suit, or other suit, and

(2) the opportunity to take over, settle or defend such action at the Contractor's sole expense, and

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

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

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

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

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

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

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

(c) In the event that an action at law or in equity is commenced against the Department arising out of a claim that the Department's use of any item or material pursuant to or resulting from this Contract infringes any patent, copyright or proprietary right, and such action is forwarded by the Department to the Contractor for defense and indemnification pursuant to this Article, the Department shall copy all pleadings and documents forwarded to the Contractor together with the forwarding correspondence and a copy of this Contract to the Office of the Attorney General of the

State of New York. If upon receipt of such request for defense, or at any time thereafter, the Contractor is of the opinion that the allegations in such action, in whole or in part, are not covered by the indemnification set forth in this Article, the Contractor shall immediately notify the Department and the Office of the Attorney General of the State of New York in writing and shall specify to what extent the Contractor believes it is and is not obligated to defend and indemnify under the terms and conditions of this Contract. The Contractor shall in such event protect the interests of the Department and State of New York and secure a continuance to permit the State of New York to appear and defend its interests in cooperation with Contractor as is appropriate, including any jurisdictional defenses which the Department and State shall have.

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

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

XVII. **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.

XVIII. **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.

XIX. **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.

SECTION VIII

General Conditions

ARTICLE 1 - Preliminary Matters

Copies of Documents:

1.1 **Department** shall furnish to **Contractor** without charge up to ten 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 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 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, at 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 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 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 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 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 a certified true copy of the agent's power of attorney. **Contractor's** failure to submit and keep in effect a Bond or form of financial security acceptable to **Department** in the manner required by this paragraph shall be cause for termination. **Contractor** shall give written notice to **Department** and reference the site number and project name, if the surety on any Bond furnished by **Contractor** is declared bankrupt, becomes insolvent, its right to do business is involuntarily terminated by any state or federal agency, it ceases to meet the requirements of paragraph 4.1, **Contractor**, if required by **Department**, shall within fourteen days substitute another Bond or Surety, in an acceptable form of financial security. The top of all bonds shall have "NYSDEC-DER Site No."

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

Insurance - All Types:

4.2 **Contractor** shall purchase and maintain at its own expense the specific coverages and types of insurance set forth in this Article. 4.2 through 4.4.3 except as noted in 4.3.

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

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

4.2.2.1 Comprehensive general liability insurance providing coverage as herein required of **Contractor** including Contractors' Protective Liability Insurance, Completed Operations Insurance, Products Liability Insurance and Contractual Liability Insurance. Insurance must be project specific or contain an endorsement (i.e., amendment) in writing (including print or stamp) added to and made part of the insurance contract for the purpose of changing the original terms such that the

general aggregate limit applies separately to each of **Contractor's** projects away from premises owned by or rented to **Contractor.**

Commercial General liability insurance with a limit of not less than $1,000,000 each occurrence. Such liability shall be written on the Insurance Service Office's (ISO) liability arising from premises operations, independent contractors' operations, products-completed operations, broad form property damage, personal and advertising injury, cross liability coverage, liability assumed in a contract (including tort liability of another assumed in a contract) and explosion, collapse and underground coverage.

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

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

4.2.2.3 Worker's Compensation, Employers Liability and Disability Benefits as required by State Law covering all employees doing work within New York State. If workers will be working on, or near navigable waters, US Longshore and Harbor Workers Compensation Act endorsement must be included. This contract shall be void and of no effect unless the contractor procures this policy and maintains it in effect until final acceptance of this work.

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

4.2.2.5 **Pollution Liability Insurance:** If the work involves abatement, removal, repair, replacement, enclosure, encapsulation and/or disposal of any hazardous material or substance, the **Contractor** shall maintain in full force and effect throughout the Term, pollution legal liability insurance with limits of not less than $1,000,000, providing coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such policy shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants or in the investigation, settlement or defense of any claim, suit, or proceedings against the State of New York and/or the **Department** and/or the **Engineer,** arising from **Contractor's** work and list Department as an additional insured. Claims made policies shall have a one (1) year tail beyond the date **Department** determines physical completion.

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

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

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

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

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

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

4.2.5 All insurance shall be maintained in full force and effect until the Contract has been fully and completely performed, as set forth in the Contract Documents. Completed operations insurance shall remain in effect until one year after the date of final acceptance of work under the contract, or one year after **Contractor** or any Subcontractor performs any work under the Contract, whichever is later. Should any coverage approach expiration during the period in which it must remain in full force and effect, it shall be renewed prior to its expiration , and a certificate again filed with **Department.** Also, any endorsements (i.e., amendments) which change insurance during the length of the contract shall also be submitted to **Department** for acceptance. All insurance policies shall require notice to **Department** 30 days prior to expiration, termination, or suspension of such policy, directed to the attention of **Department**. Expiration of any coverage shall be grounds for termination of contract for cause, at the option of **Department**. If any insurance provided hereunder contains an aggregate limit, the aggregate shall apply separately to this contract and shall not be less than $2,000,000. **Department** may suspend or terminate this contract unless Contractor maintains in full force and effect, the types and amounts of insurance required by this contract. No later than thirty (30) days prior to the expiration or renewal date of policy the **Contractor** should supply replacement certificates of insurance.

4.2.6 **Contractor** shall deliver, if requested by **Department**, duplicate originals of each policy required by Contract Documents, as well as insurance policies of Subcontractors, in such number as **Department** may require, and such alternate or additional proof of coverage as **Department** demands. **Contractor** shall provide prompt, written notice to the Department

and its insurer, of any claims made related to work done hereunder, in accordance with the insurance policy provisions.

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

4.3 **Additional Pollution Liability Insurance:** In addition, **Contractor** shall provide project specific Pollution Liability Insurance in an additional amount of not less than $4,000,000, for a total of $5,000,000, per claim if possible unless otherwise authorized in writing by the **Department.** If **Contractor** cannot obtain this additional level of coverage of $4,000,000, the following documentation is required: written confirmation by **Contractor** from at least three insurance carriers. The cost of this additional pollution liability insurance will be reimbursed by **Department. Department** will determine if it is in **Department's** best interest to have this additional insurance.

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

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

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

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

ARTICLE 5 - Contractor's Responsibilities

Supervision and Superintendence:

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

5.2 **Contractor** shall keep on the Site of the Work at all times during its progress, a competent and reliable resident superintendent, who shall not be replaced without written approval of **Department.** The superintendent will be **Contractor's** representative at the site and shall have authority to act on behalf

of **Contractor**. All communications given to the superintendent shall be as binding as if given to **Contractor**.

5.2.1 **Department** may require immediate replacement of the superintendent upon written notice for cause.

5.2.2 The superintendent and similar authorized representatives of any Subcontractors as requested by **Department** or **Engineer** shall attend all meetings pertaining to the Work.

5.2.3 Whenever the superintendent is not present for performance of a particular part of the Work and **Engineer** is not able to give to **Contractor**, through the superintendent, information relative to an interpretation of the Contract Documents, or relative to disapproval or rejection of materials or the performance of such work, **Engineer** may so inform the worker in charge of such Work. Information so given shall be binding as if given to superintendent.

5.2.4 **Contractor** shall issue all communications to **Department** through **Engineer** except as provided by Contract Documents. All written correspondence to **Engineer** shall be copied to **Department**.

Labor, Working Hours, Materials and Equipment:

5.3 **Contractor** shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. **Contractor** shall, at all times, employ labor and equipment which shall be sufficient to prosecute the several classes of work to full completion in the manner and time specified. All workers must have sufficient skill, experience and Health and Safety training required to perform properly the work assigned them. All workers engaged on special or skilled work shall have had sufficient experience in such work to perform properly and satisfactorily including operation of any equipment involved. Any person employed by **Contractor** or Subcontractor whom the **Engineer** or **Department** may determine incompetent or unfit to perform the work shall be at once discharged or reassigned and not again be employed on Work in connection with this Contract. The **Contractor** may request review by **Department** regarding the discharge of such employee(s). **Contractor** shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during normal working hours as defined in paragraph 5.3.1 below, and **Contractor** shall not permit overtime Work or the performance of Work during hours other than normal Working hours without: a) prior written notice to **Engineer**; b) **Department's** written consent; and c) written approval from the New York State Department of Labor as required by law.

5.3.1 Normal working hours shall be defined as a normal working schedule which a) does not exceed eight hours per working day, occurring between the hours set forth at the pre-construction conference, or if none are set forth, beginning no earlier than 7:00 a.m. and ending at no later than 5:00 p.m.; and b) does not exceed 40 hours per week, excluding overtime Work, Work on Saturdays, Sundays, and legal holidays (New Years, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas). Work during other than normal working hours may be scheduled by **Contractor** by first obtaining written permission from **Department** and as provided in Section 5.3. **Department** shall be entitled to recover extra costs incurred in providing inspection related to Work done during other than normal working hours in accordance with paragraph 5.3.5 below.

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

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

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

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

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

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

5.4.1 All water for testing, flushing and construction shall be furnished by **Contractor.** If water is available from **Department** and **Department** agrees to its use, **Contractor** shall connect to **Department's** water system at a point approved by **Department. Department** will charge

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

5.4.2 In the event that **Contractor** wishes to utilize water from **Department's** facilities as a substitute source of test water, **Contractor** shall submit sufficient information in accordance with paragraph 5.7.2 of the General Conditions to allow **Engineer** to evaluate the substitution. Such information shall in addition 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 revise the Progress Schedule to **Engineer** and **Department** by delivering Progress Schedule status and update submittals to **Engineer** in accordance with the Specifications and Article 1.6 of the General Conditions. If **Contractor** does not adequately update the

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

"Or-Equal" or Substitute Items:

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

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

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

required by the Contract Documents. The procedures for review by **Engineer** established by paragraph 5.7.1, and as may be supplemented in the Contract Documents, will apply to reviews under this paragraph.

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

Subcontractors, Suppliers and Others:

5.8.1 **Contractor** shall not employ nor award Work to Subcontractors in excess of the amount specified in Article 7 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 fully responsible 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 5.23 through 5.29 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 paragraph 5.12.1 thereof and in Appendix B.

5.12.1 **Contractor** shall, at its expense, defend any suit instituted against **Department** and indemnify **Department** against any award of damages and costs made against **Department** by a final judgment of a court of last resort based on the claim that any of inventions, designs, processes, products, devices or intellectual processes furnished by or used in the performance or incorporated in the Work by **Contractor** or any Subcontractor or Supplier, infringes any patent or copyright of the United States; provided **Department** gives **Contractor** immediate notice in writing, permits **Contractor** to defend the suit and gives **Contractor** all available information, assistance and authority to do so. **Contractor** shall control the defense of any such suit, including appeals, and all negotiations to effect settlement. If any of such items in any such suit is held to so infringe and its use is enjoined, **Contractor** shall, at its election and expense: 1) procure for **Department** the right to continue using the same; or 2) replace or modify the same so that it becomes non-infringing; or 3) remove the same and eliminate any obligation to pay future charges or royalties pertaining thereto.

5.12.2 In the event that an action at law or in equity is commenced against **Department** or State arising out of a claim that its use of any invention, design, process, product, device or intellectual process as under this Agreement infringes on any patent, copyright or proprietary right, and such action is forwarded to **Contractor** for defense and indemnification pursuant to paragraph 5.12.1 and Appendix B. **Department** shall copy all pleadings and documents forwarded to **Contractor** together with the forwarding correspondence to the Office of the Attorney General of the State of New York together with a copy of the Contract Documents. If upon receipt of such request for defense, or at any time thereafter, **Contractor** is of the opinion that the allegations in such action, in whole or in part, are not covered by the indemnification set forth herein, **Contractor** shall immediately notify **Department** and the Office of the Attorney General of the State of New York in writing and shall specify to what extent **Contractor** believes it is and is not obligated to defend and indemnify under the terms and conditions of this Agreement. **Contractor** shall in such event protect the interests of the 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 State shall have.

5.12.3 **Contractor** shall, however, have no liability to the **Department** under this Article 5.12 if any infringement is based upon or arises out of: 1) Compliance with designs, plans, or specifications furnished by or on behalf of **Department** as to the items; 2) Alterations of the items by **Department**; 3) Failure of **Department** to use updated items provided by **Contractor** for avoiding infringement; 4) Use of items in combination with apparatus or devices not delivered by **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 **Department** or any affiliate or subsidiary of the **Department** has any direct or indirect interest by license or otherwise.

5.12.4 The foregoing states **Contractor's** entire liability for, or resulting from, patent or copyright infringement or claim thereof.

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 by

arbitration or by Law. **Contractor** shall, to the fullest extent permitted by Laws, indemnify and hold **Department** harmless in accordance with the provisions of Appendix B.

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

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

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

5.16.4 All existing walks, roadways, paved or landscaped areas on which temporary driveways or walks are rerouted shall be restored to their original condition, immediately upon completion of the phases or portions of the Work for which such features were disturbed unless otherwise specified in the Contract Documents.

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

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

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

As-Built Documents:

5.19 **Contractor** shall maintain in a safe place at the Site one as-built document which shall consist of all Drawings, Specifications, Addenda, written amendments, Change Orders, Proposed Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 8.3) in good order and annotated to show all changes made during construction. **Contractor** will be required to review with **Engineer** the status of all as-built documents in connection with **Engineer's** evaluation of an Application for Payment. Pursuant to paragraph 13.2.1 of the General Conditions, failure to maintain a current file of such as-built documents up-to-date may be just cause to recommend withholding of payments for Work performed. These as-built documents together with all approved samples and a copy of all approved Shop Drawings shall be available to **Engineer** for reference at the Site. Upon completion of the Work, these as-built documents, samples and Shop Drawings shall be delivered to **Engineer** for **Department**. Failure by **Contractor** to produce acceptable as-built documents of the above listed items shall be cause for reduction of Contract Price in an amount equal to **Department's** cost of generating or producing the as-built documents.

Health, Safety and Protection:

5.20 **Contractor** shall be responsible for initiating, maintaining and supervising all health and safety precautions and programs in connection with the Work which include but are not limited by the Contract Documents and **Contractor's** Health and Safety Plan. **Contractor** shall take all necessary precautions for the health and safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees and other persons and organizations who may be affected thereby. **Contractor** shall comply with all applicable Laws of any public body having jurisdiction for the health and safety of persons or property in order to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such health, safety and protection. **Contractor** shall notify owners of Underground Facilities and utility owners when performance of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. In addition to any requirements imposed by Laws, **Contractor** shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site which are in any way affected by the excavations or other operations connected with performance of the Work under the Contract. All damage, injury or loss to any property referred to in this 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 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.

5.21 **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:

5.22 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**, **Contractor**, without special instruction or authorization from **Engineer** or **Department**, is obligated to act to prevent 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:

5.23 After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, **Contractor** shall submit to **Engineer** for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 1.4, hereof) six copies of all Shop Drawings plus additional copies as required by **Contractor**, unless otherwise specified in the Contract Documents. All such Shop Drawings shall bear a stamp or other specific written indication that **Contractor** has satisfied the requirements of the Contract Documents with respect to the review of the submissions including but not limited to subparagraph 5.25 below. All submissions shall be identified as **Engineer** may require. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable **Engineer** to review the information as required.

5.24 **Contractor** shall also submit to **Engineer** for review and approval, with such promptness as to cause no delay in Work, all samples required by the Contract Documents. **Contractor** shall check all samples, shall identify them clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended, and shall submit with them a written certification that **Contractor** has satisfied the requirements of the Contract Documents with respect to the review of such submissions including but not limited to subparagraph 5.25 below.

5.25 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.

5.26 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.

5.27 **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.

5.27.1 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 5.27.

5.27.2 **Contractor** shall revise and correct Shop Drawings and samples and resubmit them to **Engineer** for **Engineer's** second review and return pursuant to paragraph 5.28. **Contractor** shall direct specific attention in writing to revisions other than the corrections called for by **Engineer** on previous submittals.

5.27.3 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.

5.27.4 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.

5.28 **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 5.26 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 5.25.

5.29 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:

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

Weather Protection:

5.31 **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:

5.32 **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.

5.33 **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:

5.34 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:

5.35 **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:

5.36 **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:

5.37 **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 that of the former **Engineer**.

7.3 **Department** shall furnish the data required of **Department** under the Contract Documents promptly 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 Status During Construction

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 and within 14 days maximum such 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. If **Contractor** believes that a written clarification or interpretation justifies an increase in Contract Price or an extension in Contract Time, **Contractor** shall be required to deliver a written notice thereof to **Engineer** and **Department** 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, 11 and 15 of the General Conditions.

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 5.23 through 5.29 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 15 days after the date of any such decision, **Contractor** delivers to **Department** and to **Engineer** written notice of intention to dispute such a decision.

Decisions on Disputes:

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.** Disputes 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, and disputes under Articles 9, 10, 11 and 15 of the General Conditions 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 each such claim, dispute or other matter shall be delivered by **Contractor** to **Engineer** and **Department** within fifteen days after the occurrence of the event giving rise thereto. Written data supporting such dispute or other matters shall be submitted to **Department** within forty-five days after such occurrence, unless **Department** allows an extension of time to submit additional information.

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 Without invalidating the Agreement, **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 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 5.22 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 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 15 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 Admistrative 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 9, 10 and 11 of the General Conditions indicating that **Contractor** considers the written order a Proposed Change Order.

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

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

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

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

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

ARTICLE 10 - Change of Contract Price or Time

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

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

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

10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, those unit prices shall be used to determine the cost of the Work involved.

10.3.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by application of mutually agreed upon unit prices to the quantities of the items of Work involved.

10.3.3 By mutual acceptance of a lump sum.

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

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

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

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

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

10.4.3 Payments made by **Contractor** to subcontractors who perform a part of the Work involved. If required by **Department**, **Contractor** shall obtain competitive bids from prospective

subcontractors acceptable to **Contractor** and shall deliver such bids to **Department** who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost plus a fee, the subcontractor's cost shall be determined in the same manner as **Contractor's** cost of the Work involved. All subcontracts shall be subject to the provisions of the Contract Documents, insofar as applicable.

10.4.4 Costs of special consultants, including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants, employed for services specifically related to the Work involved to the extent authorized in writing by **Department**.

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

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

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

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

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

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

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

10.4.5.7 The geographic area adjustment factor and the Rate adjustment tables for federal aid projects shall be applied to the equipment ownership rates.

10.4.5.8 The rates used shall be those in effect at the time the Work involved is to be done as listed in the then current Rental Rate Blue Book.

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

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

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

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

10.4.6 Costs of **Contractor** rented equipment.

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

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

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

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

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

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

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

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

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

10.4.8.4 Royalty payments and fees for licenses and permits.

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

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

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

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

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

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

10.6.3 Any part of **Contractor's** capital expenses, including interest on **Contractor's** capital employed for the Work involved and charges against **Contractor** for delinquent payments.

10.6.4 Cost of premiums for all bonds and insurance whether or not **Contractor** is required by the Contract Documents to purchase and maintain the same.

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

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

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

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

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

Contractor's Fee:

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

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

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

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

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

10.7.2.3 For costs incurred under paragraph 10.4.3 (Cost of Subcontracts) of this Article, the **Contractor's** fee shall not exceed five percent (5%) and the subcontractor's fee shall not exceed ten percent (10%).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10.11 Additional costs incurred due to acceleration or additional work performed by **Contractor** without an agreed upon Proposed Change Order will not entitle **Contractor** to an increase in Contract Price or Contract Time, except in the case of emergency work as provided in paragraph 5.22 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 (9.4), unless **Department** in writing, allows an additional period of time to ascertain accurate cost data. **Contractor** shall prove that additional costs were necessarily incurred, despite **Contractor's** reasonable, prudent, and diligent efforts to prevent such costs and which meet the criteria set forth in this Article. Any delays in the submittal of **Contractor** proposals relative to adjustments in Contract Price will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time.

10.13.2 **Contractor** proposals (or claims) shall be submitted on forms required by Contract Documents, and shall remain firm for a period of at least 60 days from delivery of the proposal (or claim). Proposals (or claims) shall include itemized estimates of all costs and schedule adjustments that will result directly or indirectly from the changes described. Unless otherwise specified, itemized estimates shall be in accordance with the requirements of this Article of the General Conditions and in sufficient detail to reasonably permit an analysis by **Engineer** and **Department** of all quantities involved, labor and payroll costs, productivity rates, material costs, Subcontractor and Supplier costs, supplemental costs as described in paragraph 10.4.8, special consultant costs as described in paragraph 10.4.4, equipment costs, general and administrative overhead costs, field office overhead costs, and profit and shall cover all aspects of the Work involved in the change, whether such was deleted, added, changed, or impacted. Any amount claimed for Subcontractors, Suppliers or other persons or organizations shall be similarly supported. Itemized schedule adjustments shall be sufficiently detailed to permit an analysis of effects on the Progress Schedule as required in the Standard Specifications.

ARTICLE 11 - Unit Price Work and Cash Allowances

Cash Allowances:

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

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

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

Unit Price Work:

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

11.2.1 The original Contract Price shall include the sum of the bid unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated on the Contract Bid Form.

11.2.2 Unless otherwise provided by the Contract Documents, the estimated quantities of Unit Price Work are not guaranteed and are solely for the purpose of comparing Bids and determining the initial Contract Price.

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

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

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

11.2.5.1 If the total cost of a particular item of Unit Price Work changes by $30,000 or 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 warrantees 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 warrantees 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 9 and 10 and 15 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 f urnish 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 9, 10, 11 and 15 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 9, 10, 11 and 15 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 9, 10, 11 and 15 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 9, 10, 11 and 15. Such direct, indirect and consequential costs shall include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all costs of delay and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of **Contractor's** Defective Work. **Contractor** shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by **Department** of **Department's** rights and remedies hereunder.

ARTICLE 13 - Payments to Contractor and Completion

Schedule of Values:

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

Application for Progress Payment:

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

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

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

Contractor's Warranty of Title:

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

Review of Applications for Progress Payment:

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

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

Substantial Completion:

13.6 When **Contractor** considers all or part of the Work ready for its intended use, **Contractor** shall notify **Department** and **Engineer** in writing that the Work, or specified part thereof, is substantially complete except for items specifically listed by **Contractor** as incomplete, and request that **Engineer** issue a certificate of Substantial Completion for the Work, or such specified part thereof. Within a reasonable time thereafter, not to exceed 30 days, **Department**, **Contractor** and **Engineer** shall make an inspection of the Work, or specified part thereof, to determine the status of completion. If **Engineer** or **Department** does not consider the Work, or specified part thereof, substantially complete, **Engineer** shall notify **Contractor** in writing giving the reasons therefor, after consultation with the **Department**.

If **Engineer** considers the Work, or part thereof, substantially complete, **Engineer** shall prepare and deliver to **Department** a tentative certificate of Substantial Completion for the Work, or part thereof which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be completed or corrected before final payment, and **Engineer's** written recommendation as to a division of responsibilities between **Department** and **Contractor** pending final payment including but not limited to security, operation, safety, maintenance, heat, utilities, insurance and warranties. **Department** shall have seven days after receipt of the tentative certificate with attachments during which to make written objection to **Engineer** as to any provisions of the referenced submittals and to direct a revision of the tentative certificate. Unless **Department** and **Contractor** agree otherwise in writing and so inform **Engineer** or **Department** directs the revision of the certificate of Substantial Completion for the Work, or specified part thereof, **Engineer's** recommendation will be binding on **Contractor** until final payment.

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

Partial Utilization:

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

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

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

upon **Department** and **Contractor** at the time when **Department** takes over such operation unless they shall have agreed otherwise in writing. During such operation and prior to Substantial Completion of such part of the Work, **Department** shall allow **Contractor** reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

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

Final Application for Payment:

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

Final Payment and Acceptance:

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

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

Waiver of Claims:

13.13 The making and acceptance of final payment will constitute:

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

13.13.2 A waiver of all claims by **Contractor** against **Department** other than those previously made in writing and still unsettled.

ARTICLE 14 - Suspension of Work and Termination

Department May Suspend Work:

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

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

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

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

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

Department May Terminate:

14.3 **Department** may 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

14.3.10 If **Contractor** otherwise violates in any substantial way any provision of the Contract Documents;

Department may, after giving **Contractor** and its surety seven days written notice and to the extent permitted by Federal and New York State Law, terminate the services of **Contractor**, 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.

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 Upon seven days written notice to **Contractor** and **Engineer**, **Department** may, without cause and without prejudice to any other right or remedy, 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 5.30 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with **Department**.

ARTICLE 15 - Disputes

Giving Notice:

15.1 All claims, counterclaims, disputes and other matters in question between **Department** and **Contractor**, arising out of or relating to the Contract Documents or the breach thereof (hereafter referred to claims) except for claims which have been waived by the making or acceptance of final payment as provided in paragraph 13.11, shall be resolved under this Article.

15.1.1 A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under this Article. Such a submission may be converted to a claim under this Article by complying with the requirements of this Article, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

15.2 A claim by **Contractor** shall be made in writing and submitted to **Department** for evaluation with a copy to **Engineer**.

15.3 A written demand or written assertion by **Contractor** seeking the payment of money exceeding $10,000 is not a claim under this Article until certified as required below. For claims exceeding $10,000 **Contractor** shall submit with the claim a certification that:

15.3.1 The claim is made in good faith,

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

15.3.3 The amount of the claim accurately reflects the adjustments in Contract Price or Contract Time which **Department** has agreed to or for which **Contractor** believes **Department** is liable.

15.4 The **Contractor's** certification shall be executed by **Contractor's** Authorized Representative specified in the Contract Documents.

15.5 For claims of $10,000 or less, **Department** shall render a decision if requested in writing by **Contractor**. For **Contractor** certified claims over $10,000, **Department** shall decide the claim or notify **Contractor** of the date by which the decision will be made.

15.6 **Department's** decision shall be final unless **Contractor** initiates legal action within 120 days of **Department's** final decision.

15.7 **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.

15.8 **Contractor** agrees that all claims shall be subject to resolution pursuant to **Department** procedures as described in the Disputes article of the Agreement.

ARTICLE 16 - Miscellaneous

Notice and Service:

16.1 All notices, demands, requests, instructions, approvals and claims shall be in writing.

16.1.1 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.

16.1.2 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.

16.1.3 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.

16.1.4 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:

16.2 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:

16.3 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.

16.4 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.

16.5 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:

16.6.1 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.

16.6.2 **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.

16.6.3 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:

16.7.1 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.

16.7.2 These documents will be furnished to **Department** on the forms included with the Contract Documents.

16.7.3 **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:

16.8 **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:

16.9 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:

16.10.1 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.

16.10.2 **Contractor** shall make available at **Contractor's** office at all reasonable times the materials described in paragraph 16.10.1 above, for examination, audit, or reproduction, until 6 years after final payment under this Contract.

16.10.2.1 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.

16.10.2.2 Records pertaining to appeals under Article 15 of Section 8, "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.

16.10.3 A provision stating that all the requirements of this Article of Section 8, "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:

16.11.1 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:

16.11.1.1 Based on adequate price competition;

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

16.11.1.3 Set by New York State law.

16.11.2 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.

16.11.3 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.

16.11.4 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:

16.11.4.1 Based on adequate price competition;

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

16.11.4.3 Set by New York State law.

16.11.5 **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 16.11.4 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.

16.11.6 **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:

16.12.1 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.

16.12.2 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:

16.13.1 **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.

16.13.2 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 16.13.1.

Unlawful Provisions Deemed Stricken:

16.14.1 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:

16.15.1 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:

16.16 **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:

16.16.1 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,

16.16.2 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:

16.17 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:

16.18 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

FUMEX SANITATION SITE
NYSDEC SITE NO. 1-30-041
CONTRACT NO. D007692

SUPPLEMENTARY CONDITIONS

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SECTION IX

SUPPLEMENTARY CONDITIONS
NYSDEC CONTRACT NO. D007692

SC 1.0 – PROTECTION OF ON-SITE UTILITIES

A. The Contractor's attention is directed to the existing utilities running throughout the work. The Contractor is required to take any and all precautions necessary to locate, support and protect these utilities during construction. All costs associated with protecting, supporting, locating, digging test pits, etc., of all utilities or process pipelines shall be included in the prices bid for all work.

B. The locations of all utilities shown on the contract drawings are based on available in-house information furnished by the Owner and utility companies and public agencies with lines and property in the vicinity of the proposed work areas and are not guaranteed to be complete or accurate. The contractor shall obtain utility markouts on all public and private properties in accordance with all local and state requirements where work under this contract is to be performed. Prior to any excavation or construction, the contractor shall notify the Owner, all utility companies and applicable agencies and request a markout of their lines and properties in the field in the area of the proposed work. In addition, on the project site (outside of public right-of-way), the contractor shall provide the services of an independent utility markout service subcontractor qualified to locate and mark out all utilities in the vicinity of the work using the appropriate equipment and methods available prior to construction. The subcontractor shall survey (location/elevation) and prepare a utilities location as-built drawing for use by the contractor in performance of the work under this contract.

C. Prior to any excavation, in addition to utility location and markouts performed by the contractor, local and state required services and the independent markout service subcontractor, the contractor shall accurately locate existing utilities by probing test holes and excavating test pits where existing underground utilities are known to exist in the vicinity of the new work and at maximum intervals of 25 feet along the route or within the area of the proposed work. The contractor shall survey (location/elevation) and prepare an as-built drawing of all underground utilities encountered while constructing test pits and/or test hole probes for use in performance of the work under this contract. The contractor shall backfill/restore the holes and pits, and mark out the existing utilities and take extreme caution against damaging the utilities during excavation or sheeting installation.

D. Work shall include, in addition to constructing test probes/pits, excavating and backfill, temporary sheeting, compacting and site restoration.

E. Schedules for maintenance of utility markouts on public and private property shall be consistent with New York State law throughout the duration of the Contract.

F. During construction/excavation, the contractor shall locate each utility by hand digging methods prior to the use of mechanical excavation equipment. During construction/excavation, if the contractor encounters evidence of suspected unmarked utilities, such as magnetic tape or other underground markers, the contractor shall promptly determine the location of the suspected utility, if any, before proceeding with the work. The contractor shall cooperate with the Owner and the utility companies involved to avoid delay or interference of service normally performed by their lines and properties.

G. The Contractor shall take extreme caution against damaging utilities when excavating, sheeting and backfilling, during construction of test probes and test pits and while performing the work required under this Contract.

H. The contractor shall be responsible for all costs associated with pre-project construction utility survey(s)/markout(s), the construction of the test holes and test pit work, and utility as-builts for this project, as well as protection and hand digging operations to verify location of all utilities during construction.

SC 2.0 – PRECONSTRUCTION PHOTOGRAPHS

A. The General Contractor shall employ an experienced photographer to take preconstruction and progress photographs during the duration of the Work.

B. Seventy-five (75) preconstruction photographs shall be made of the work as directed by the Engineer to show the general extent before the work begins. Thereafter, an additional twenty-five (25) photographs shall be taken as directed by the Engineer to show the progress of the work each month. All photographs shall be color, 8 x 10 inches in size and two (2) prints of each negative shall be delivered to the Engineer. A rubber stamp impression showing an outline plan of the project shall appear on the reverse side of each print with an arrow showing direction and approximate location of the photograph. Prints shall be dated and numbered consecutively on the reverse side and indicate project name/number and photo description.

SECTION X

Standard Specifications

00001	Progress Schedule
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SECTION X - Standard Specifications

SPEC 00001
Progress Schedule

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SECTION X

Standard Specifications

SPEC 00001

Progress Schedule

1) *Terms and Definitions*

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

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

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

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

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

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

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

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

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

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

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

k) ***Contract Float*** - Working days between the date(s) for Substantial Completion shown for the Work, or part thereof, in **Contractor's** anticipated Early Schedule, and the corresponding Contract Time or Contract Times.

l) ***Total Float*** - Working days between the Early Schedule and the Late Schedule for an Activity by which that Activity may be delayed without necessarily extending the Contract time, or Contract Times.

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

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

o) ***Preferential Logic*** - **Contractor's** approach to sequencing of the Work over and above those sequences indicated in or required by the Contract Documents. Examples include equipment restraints, crew movements, form reuse, special logic (lead/lag) restraints, etc. factored into the Progress Schedule instead of disclosing the associated Float Times.

2) ***Requirements Included***

a) Pursuant to the requirements of the Contract Documents, **Contractor** shall prepare and submit, finalize, and periodically adjust the Progress Schedule as required herein.

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

3) ***Bar Chart Description***

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

b) Total Float and Contract Float are not for the exclusive benefit of **Owner**, **Engineer**, **Contractor**, or others, but is time available to all parties as needed for the Contract as a whole. Such Float times shall be shared between **Owner**, **Engineer**, **Contractor** and others to absorb delays which could not be mitigated by any other reasonable means.

c) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.

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

a) The Progress Schedule shall be based on the Critical Path Method (CPM) of planning and scheduling, and prepared, finalized, and revised in accordance with the principles, definitions and terms described hereafter and those standards of the industry for CPM scheduling which are not in conflict with this Specification.

b) CPM Diagrams shall show in detail the priority, sequencing and interdependence of Activities, and the sequence in which the Work is to be accomplished to: a) to comply with the Contract Time(s), named allowances, and those sequences of Work indicated in or required by the Contract Documents; b) to anticipate foreseeable events that may in any manner affect cost, progress, schedule, performance, and furnishing of the Work; and c) to reflect the means, methods, techniques, sequences, and procedures of construction anticipated by **Contractor**, subject to the limitations on Float sequestering set forth by this Specification.

c) Total Float and contract Float are not for the exclusive benefit of **Owner**, **Engineer**, **Contractor**, OR OTHERS, but is time available to all parties as needed for the Contract as a whole. Such Float Times shall be shared between **Owner**, **Engineer**, **Contractor** and others to absorb delays which could not be mitigated by any other reasonable means. Use of Float Time shown in the approved progress Schedule for interim milestones or Contract Times will be available to **Owner**, if required to effect proper interfacing between work performed.

d) Use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended Activity times, imposed Activity dates, scheduling items of Work required for Final Completion as though they were prerequisites to Substantial Completion, and others, and 2) use of Float time disclosed or implied by the use of alternate Float suppression techniques will be allowed, provided: a) that **Contractor** not engage in Float manipulations which have the net effect of "sequestering" Float, that is to reduce unilaterally otherwise available Float Time by more than 50 percent; and b) that **Contractor** agrees that in order to mitigate the impact of delays to the Work, or parts thereof, adjustment or removal of such Float suppression techniques will be a prerequisite to consideration of any requests for compensation for delay or acceleration or for extensions in Contract Time.

e) The finalized Schedule of Values will be acceptable to **Engineer** as to form and substance, and will serve as the basis for progress payments.

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

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

a) All CPM Diagrams, Schedule of Values, Schedule of Shop Drawing submissions, associated computer reports, and narratives submitted by **Contractor** shall be consistent with the requirements of this Specification.

b) The "Preliminary" submittal set shall consist of:

1) A CPM Diagram and associated Schedule of Values and a supporting narrative.

2) A User Manual for the scheduling software to be used by **Contractor** for the purposes of computation of the Progress Schedule.

c) The "Interim" submittals shall consists of the interim CPM Diagram and associated Schedule of Values and Schedule of Shop Drawings submissions and a supporting narrative.

d) The "Detailed" submittal set shall consist of:

1) The Detailed CPM Diagram, and the reports associated with the Schedule of Values, and Schedule of Shop Drawing submissions, and a supporting narrative.

2) The five associated Activity reports described in paragraph 18.A sorted by each of the first four sequencing criteria described in paragraph 18.D.

e) "Status" submittal sets shall consist of "mark-up" versions of the current Detailed CPM Diagram, Schedule of Values, and Schedule of Shop Drawings, together with a supporting narrative.

f) "Update" submittal sets shall consist of revised Detailed CPM Diagrams, Schedule of Values and Schedule of Shop Drawings, the six associated computer reports, a detailed **Contractor's** Cost report, and a supporting narrative.

g) The "Contract Completion" submittal set shall consist of the Detailed Contract Completion Schedule, and associated computer reports.

h) The "As-Built" submittal set shall consist of the As-Built CPM Diagram, and a "Schedule Reconciliation" report.

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

a) **Engineer** will review and if acceptable, approve the Progress Schedule.

b) In preparing a version of the Progress Schedule, pursuant to paragraph 1.6 of the General Conditions and Supplementary Conditions, it is the responsibility of **Contractor** 1) to inspect the preaward "Preliminary Progress Schedule" submitted in compliance with Article 11 of Section III of the Contract Documents, 2) to verify site conditions that may in any manner affect cost, scheduling, progress, performance and furnishing of the Work,

3) to work with each major Subcontractor, Supplier, or other relevant person or organization to obtain information on Activities, sequencing, and Activity Durations for incorporation into the Progress Schedule, and 4) to request and obtain written interpretations from **Engineer** as needed.

c) The Detailed Progress Schedule shall break down the Work into Activities in sufficient detail to identify clearly all individual parts of the Work and those factors which may in any manner affect the cost, schedule, progress, performance, and furnishing of the Work. At a minimum, the break down of the Work in the detailed Progress Schedule submittal for CPM schedules only, shall delineate the following:

1) Those Activities designating the date for commencement of the Contract Time, or Contract Times; those Activities leading to Substantial Completion of the Work, or parts thereof; and those Activities identifying parts of the Work to be performed or furnished leading from Substantial Completion to Final Completion.

2) All special Work sequences, schedule milestones, intermediate Contract Times, and named allowances set forth in the Contract Documents.

3) Items pertaining to securing prerequisite permits and approvals from those agencies with jurisdiction over Work to be performed under the Contract.

4) All items of Work involved in the preparation, submittal, review and approval of Shop Drawings and samples required by the Specifications.

5) Appropriate times required for the fabrication, delivery, receipt and inspection, and storage of items of materials and equipment.

6) Work associated with installation, erection and other field construction activities.

7) Items of Work required to work around existing physical conditions and Underground Facilities which are at or contiguous to the site including the time for permanent or temporary relocation of such existing physical conditions and/or underground facilities.

8) Items of interface which relate to the responsibilities of **Owner**, **Engineer** or other contractors performing work under separate contracts with **Owner**.

9) Work required to implement cut-offs or closures, power shutdowns or temporary or permanent take-down or interruptions to existing facilities or affecting the operations of **Owner**, utilities or similarly involved third-parties. Specific dates when such cut-offs, etc. are to take place shall be shown as milestone dates on the appropriate Activities.

10) All items of Work related to shop and field testing, associated trimout activities and specified manufacturer or supplier training required prior to placing the facilities in service, including but not limited to manufacturer or supplier installation checks; leak, disinfection and pressure tests; removal or erection of temporary components; tie-ins; flushing and chemical/mechanical cleaning operations; specified performance tests; and other necessary non-operating tasks

adjustments, cold-alignment checks, corrections, housekeeping and spare parts stocking required of **Contractor** to conform to the Pre-operational testing requirements of the Contract Documents.

11) All items of Work associated with the performance of the Start-Up Testing requirements of the Contract Documents, including, but not limited to, trial operation tests and operator training, performance tests under simulated and design operating conditions, emission testing, final acceptance or guarantee tests.

12) Work related to the tentative list of items to be completed or corrected before and subsequent to Pre-operational, Startup Testing and Final Testing.

d) The following limitations shall also apply to the selection and scoping of Activities for CPM schedules only:

1) Activity Durations shall be in working days and represent **Contractor's** best estimate of the time required for completion based on the Work included and the resources planned for that Activity. The computation of the Activity dates shall be based on a calendar recognizing the applicable holidays and the limitations on Work during hours other than the normal working hours set forth in the General Conditions and the Supplementary Conditions.

2) Unless otherwise provided in the Special Progress Schedule Requirements, all Activities, except those identifying Work related to Shop Drawings and deliveries, shall span twenty working days or less, and their Values shall not exceed $45,000. Duration requirements for Activities identifying Work related to **Engineer's** review of Shop Drawing or sample submissions are prescribed in the Special progress Schedule Requirements.

3) Installation Activities shall not combine Work located in separate structures, buildings or facilities, nor Work corresponding to different Divisions of the Specifications. Submittal and associated delivery Activities shall identify each submittal required by the Sections of the specifications. Activities identifying Work in connection with Pre-Operational or Start-up Testing shall not combine Work pertaining to the different Division within the specifications.

4) Reference is made to Article 1.11 of this specification for the identification of allowances and their incorporation into the Progress Schedule.

5) Items that qualify as (a) on-site stored materials, fixtures and equipment and (b) undelivered equipment, shall be separately identified on the Progress Schedule.

7) ***References for CPM Schedules***

a) The text "Precedence and Arrow Networking Techniques for Construction," by R.B. Harris (Wiley, 1978), provides principles, definitions and terms common to CPM arrow and precedence diagrams, and schedule computations therefrom.

b) The provisions of this Section are binding on **Contractor** in the event of a conflict between the Standard Specifications and this Specification.

8) *Review of Progress Schedule Submittals*

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

b) **Engineer's** and **Owner's** review of progress schedule submittals will be predicated on a **Contractor's** stamp of approval signed off by **Contractor**. **Contractor's** stamp of approval on Progress Schedule submittals shall constitute a representation to **Owner** that **Contractor** has either determined or verified all data on the Progress Schedule submittal, or assumes full responsibility for doing so, and that **Contractor** and his Subcontractors, Suppliers or other persons or organizations have reviewed and coordinated the sequences shown in the Progress Schedule with the requirements of the Work under the Contract Documents.

c) **Engineer's** and **Owner's** review will not be intended to be for the purpose of determining the accuracy of other matters that may be contained in the submittals. When the review of a Progress Schedule results in a number of comments or exceptions taken, **Engineer** and **Owner** does not warrant that these comments are inclusive of all variations, as it shall remain the responsibility of **Contractor** to meet the requirements of the contract documents and to identify expressly any proposed variations.

d) **Engineer's** and **Owner's** review of progress schedule submittals shall not relieve **contractor** from responsibility for any variations from the requirements of the Contract Documents unless **Contractor** has in writing, by means of a specific notice, called **Engineer's** attention to each variation, and **Engineer** has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Progress Schedule submittal.

e) **Engineer's** approval of Progress Schedule submittals will not relieve **Contractor** from responsibility for errors and omissions in the submittals or from responsibility for having complied with the provisions of General Conditions and Supplementary Conditions. Approval of a Progress Schedule with undisclosed variations or errors such as omitted Work or erroneous sequences will not relieve **Contractor** from completing the omitted or impacted Work within the applicable Contract Time(s).

f) Progress Schedules that include Activities with negative Float Times, or Activities scheduled beyond the applicable Contract Time(s), will not be approved until a specific Change Order or Proposed Change Order authorizing appropriate changes to the impacted Contract Time(s) is agreed upon between **Owner** and **Contractor**.

g) When reviewed by **Engineer** and **Owner**, each progress schedule submittal will be returned stamped as either "approved," "approved as noted," "resubmit with revisions," or "disapproved." Submittals stamped as "approved" or "approved as noted" will indicate approval thereof, subject to the limitations set forth, and will be considered to

represent the approved progress schedule as of the date in the approval stamp until an updated progress schedule is submitted by **Contractor** and approved by **Owner** and **Engineer**.

h) If **Contractor** believes that **Engineer's** approval of a progress schedule justifies an increase or decrease in contract price or an extension or shortening in contract time, **Contractor** shall be required to deliver a proposed change order thereof to **Engineer** in accordance with the provisions of article 9 of the general conditions. If **Owner** and **Contractor** are unable to agree as to amount and extent thereof, a claim 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 of Shop Drawings and samples specified in this Specification, b) the requirements for anticipated repeat submissions for particular items of materials or equipment, and c) the requirements for anticipated or required time intervals for the performance of specific parts of the Work by **Contractor.**

b) **Contractor** shall make allowances for time required by a) those other activities indicated in or required by the contract Documents which are the responsibility of **Owner** or **Engineer**, b) the potential time requirements of **Owner** and **Engineer** to investigate instances of potential differing site conditions, and c) those other named time allowances required by the Contract Documents.

c) It is understood that **Contractor** has included in the Contract Price the effect of accommodating all of these time allowances and requirements in the planning, scheduling and execution of the Work; that **Contractor's** Progress Schedule will incorporate Activities and sequences contemplated by the time allowances based on the information indicated in or required by the Contract Documents; and that **Contractor** shall cause the Work or requirements covered by such time allowances to be done within the limits of the Contract Time(s).

13) ***Measurement and Payments***

a) All costs in connection with these requirements, including the Work to be performed by the Scheduling Subcontractor, shall be borne by **Contractor.** Payments made to **Contractor** under the allowance for the Scheduling Subcontractor provided for in paragraph 11.A shall be disbursed in their entirety to the Scheduling Subcontractor.

b) Payments for Work performed under this Section of the Specifications will be made pursuant to Article 9 of the Agreement. Payment for Work performed shall be in accordance with the schedule of payments in the Special Progress Schedule Requirements.

14) ***Compliance***

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

15) ***Acceptable CPM Diagrams***

a) Interim and Detailed CPM Diagrams shall be based on an arrow or precedence diagram format, and sequenced by the separate structures, facilities, buildings or site areas.

b) CPM Diagrams shall be allotted on a time-scaled calendar and expressly identify: 1) the Contract Times, 2) the approach taken to comply with the Work Sequence conditions, 3) the Critical Path(s), and 4) all Activities. Activities shall be shown on their Early Schedule, and their total Float Times noted beside them.

c) CPM Diagrams shall include title blocks identifying the name and location of the Project, Contract designation, names of **Owner, Engineer, Contractor** and Scheduling Subcontractor, Progress Schedule issue number and date, and sheet title. Diagram sheets shall be dimensioned as the full-size Contract Drawings, be neat and legible and submitted on a medium suitable for reproduction. Connections between Activities on different sheets shall be shown on the different sheets of the CPM Diagrams to allow a complete schedule document.

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

a) Activity schedule information shall, at a minimum, include the following data:

1) Activity identified, i.e., I-J numbers in arrow format, or alphanumeric numbers in precedence format, such that not more than one Activity, dummy, or restraint may have the same identifier.

2) Activity Description for each Activity, dummy or preferential restraint shall fully convey the scope of the Work included.

3) Special Activity codes designating: a) location of the Work, e.g., site areas, elevations, etc., b) Work breakdown, e.g., process, trade, performing organization, c) responsibility, e.g., **Contractor, Owner,** Subcontractors, etc., d) as-awarded from amended (added or deleted by a Change Order or Proposed Change Order) items of Work.

4) Activity labor requirements, based on a proportionate share of the (direct) labor manhours and quantities in the associated items from the Contract Price Breakdown developed pursuant to the requirements of the Supplementary Conditions.

5) The use of start or finish restraint dates must be annotated as to the basis for the chosen restraints.

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

a) Activity data pertaining to the Schedule of Values shall at a minimum include the following for each Activity:

1) Activity code and description as on the CPM Diagram.

2) Activity representative quantities, Activity Value, Activity Percent Complete data, Activity Value of Work performed, and the applicable Value of significant subcomponents. The sum of all Activity Values shall equal the corresponding Contract Price for the Work. The sum of all Activity Values for Work performed divided by the Contract Price shall equal the Percent Complete for the Work.

3) Activity Values shall breakdown Value for anticipated stored materials from Value for Work installed, as applicable.

4) Cost of equipment or materials to be incorporated in the Work shall be assigned to the appropriate fabrication and delivery Activities.

b) Activity data pertaining to the Schedule of Shop Drawing submissions shall at a minimum include the following for each Activity:

1) Activity code and description as on the CPM Diagram.

2) A list of specific submissions, Specification Section, Contract Drawing sheet numbers, and applicable submission dates.

c) The Schedule of Values and the Schedule of Shop Drawing submissions shall be provided on forms acceptable to **Engineer**.

18) ***Acceptable Scheduling Software***

a) **Contractor's** evaluation of the CPM Diagrams shall be based on scheduling software meeting the data management, computational, and reporting requirements of this Specification. Activity reports provided by the scheduling software selected shall, at a minimum, display the following data for each Activity, dummy, or restraint:

1) Activity identifier, activity description, activity duration, activity man-days, computed or restrained Early Start date, computed Early Finish date, computed Late Start date, computed or restrained Late Finish date, Total Float and Free Float, Activity Value, Percent Complete, Activity Value for Work performed, and associated Activity list items (e.g., Shop Drawing submissions).

2) Dates shall be in calendar form. Contract Times representing Substantial Completion requirements shall be set as restrained Late Finish Dates where applicable; Contract Times representing Commencement of Work conditions shall be shown as restrained Early Start Dates as applicable. Contract Float times shall be computed and shown pursuant to the definition in Attachment A.

b) If the CPM Diagram is based on the precedence format, an additional computer report tabulating the sequences on the Diagram shall be provided showing: a) each Activity together with a listing of all of its preceding and succeeding Activities, and b) the relationship type, lead/lag types, and lead/lag times between each Activity and each of its preceding and succeeding Activities.

c) The scheduling software shall have the capability of sorting out computer reports by the special Activity codes designated in 17(a) above.

d) The scheduling software shall have the capability of sequencing computer reports by:

1) Activity identifier, in order of ascending I-J number.

2) Activity identifier, in order of descending J-I number.

3) Total Float, in order of ascending Total Float values, and by ascending Early Start Dates, or by ascending I-J numbers, or by descending J-I numbers, within the same Total Float values.

4) Early Start dates in chronological order of Early Start dates, and by ascending I-J numbers within the same Early Start Dates.

5) Late Finish dates, in chronological order of Late Finish Dates and by descending J-I numbers within the same Late Finish Dates.

6) Change Order or Proposed Change Order No.

e) In addition to the ability to process the required Activity data, the scheduling software shall offer the following features: a) the capability of accepting and processing schedules with actual start and actual finish dates for the Activities; b) processing of CPM schedules with negative Total Float values; c) printing or plotting of rate of progress data, such as labor utilization and payment curves; d) the ability of drawing CPM Diagrams using plottergraphics.

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

a) A narrative shall include sufficient information to substantiate the basis of the data used to develop that Progress Schedule submittal, and detail:

1) The status of the Progress Schedule in terms of number of days ahead or behind the Contract Time, or Contract Times.

2) The progress status (i.e., progress achieved vs. that forecasted) for a) Activities designating accomplishment of Substantial Completion, b) Critical and other significant Activities, c) Work related to achieving milestones set forth by the Work Sequences indicated in or required by the Contract Documents, d) long-lead delivery items of material or equipment.

3) The assumptions made in incorporating Work related to pending or authorized Change Orders and Proposed change Orders.

4) Actual or potential delays, including causes, the steps taken or anticipated to mitigate their impact, and the anticipated effect on the Progress Schedule as a whole.

5) Schedule recovery statement describing actions under consideration by **Contractor** to recover from a negative float or overrun in Late Finish Date condition.

6) Any significant changes in Progress Schedule sequences, and their basis thereof. Significant sequencing changes shall be those affecting Critical Activities, or causing a substantial reduction or increase in the Total Float Times available.

7) **Owner** and **Engineer** Activities which become due over the next two months on account of **Contractor's** requirements for performing Work which follows such **Owner** and **Engineer** Activities.

8) Rate of progress or "momentum" curves showing: a) the anticipated levels of labor utilization, e.g., man-days per week, and b) the anticipated level of payments for Work to be performed, all in accordance with the Activity time frames supported by the Early and Late Dates in the Progress Schedule.

9) Other information relevant to or of concern in the planning, scheduling and execution of Work over the next two months.

10) **Contractor's** responses to **Engineer's** comments raised in the review of the previous Progress Schedule submittal.

11) Actions taken to address schedule noncompliance issues which have negated **Engineer's** approval of a previous Progress Schedule submittal.

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

a) Cost data for inclusion in the **Contractor's** Cost reports required with each Progress Schedule Update submittal shall detail Contract financial and budget data available to and customarily relied upon by **Contractor** to monitor financial and cost performance.

b) Acceptable financial and cost data for each cost account used by **Contractor** to approportion the contract Price to separable parts of the Work shall include:

1) Account number and description.

2) Account estimate data, identifying labor, material and equipment, and Subcontract costs for that account is included in the **Contractor's** Bid estimate, together with the sum increase or decrease in associated authorized Change Orders or Proposed Change Orders, and those sums anticipated by proposed Change Orders in negotiation or claims pending resolution.

3) Current labor, material and equipment, and Subcontract cost data for the account; percent complete for the Work designated by that account; and **Contractor's** current forecast of the cost to complete Work designated by the account.

*** END OF SECTION ***

SECTION X - Standard Specifications

SPEC 00002
Concrete

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SPEC 00002
Concrete

1) ***General***

1.1 **Scope of Work**

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

1.2 **Submittals**

a) Cast-in-place concrete.

1) Name and location of batch plant.

2) Design mix.

3) Shop drawings indicating placement of all reinforcing inserts, location of joints, sealing of joints, etc.

4) Submittal on grating and frame.

b) Precast concrete

1) Name and location of precaster.

2) Submittals of precast units.

3) Certifications of design for loading.

4) Submittal on manhole frame and cover.

1.3 **Quality Assurance**

a) Codes and Standards

1) Comply with the provisions of the following codes and standards, except as otherwise shown or specified:

a) ACI 301 - "Specifications for Structural Concrete for Buildings."

b) ACI 318 - "Building Code Requirements for Reinforced Concrete."

c) CRSI - "Manual of Standard Practice."

d) ACI 305 - "Recommended Practice for Hot Weather Concreting."

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

2) ***Products***

2.1 **Cast-In-Place Concrete**

a) Portland Cement - ASTM C 150, Type III.

b) Aggregates - ASTM C 33

1) Fine aggregates - clean, sharp, natural sand free of dune sand, bank run sand, manufactured sand, loam, clay, etc.

2) Coarse aggregate - clean processed natural limestone free of all foreign matter.

c) Water - clean, fresh, free of all oils, acids organics, etc.

d) Admixtures.

1) Air-Entraining - ASTM C 260.

2) Water-Reducing - ASTM C 494.

3) Floor sealer - Sonoglaze is manufactured by Sonneborn Building Products or similar product by Master Builders.

e) Concrete Qualifiers.

1) Concrete mix shall be DOT Class E.

2) Strength - 4,000 psi at twenty-eight (28) days with maximum water-cement ratio of 0.45.

3) Air content - 6 percent.

4) Slump limits - 3-4 inch.

f) Reinforcing

1) Bars - ASTM A615, Grade 40.

2) Welded Wire Fabric - ASTM A185.

g) Frame and Grating - (Reteculine)

1) The frames, gratings, and appurtenances shall be fabricated from steel conforming to ASTM A36.

2) All parts shall be galvanized according to the requirements of the NYSDOT 719-01 type 1.

3) Grating shall be provided with lock down bolt anchors.

h) Waterstops

1) Waterstops to be 6" PVC dumbbell style, made of virgin raw materials.

2) Waterstops shall be #747 as manufactured by Greenstreak, #8046 as manufactured by Vulcan Metal Products, Inc., or equal.

2.2 Precast Concrete Units

a) Precast concrete units shall be of sizes shown and built in accordance with ASTM standards C913-89. Units to be designated to withstand H-20 loading.

b) Manhole cover and frame shall conform to NYSDOT Standard 715-05, Class No. 30. Units shall be supplied with lock down device.

3) *Execution*

3.1 Concrete Placement

a) General - Place concrete in compliance with the practices and recommendations of ACI-304, and herein specified.

b) Deposit and consolidate concrete slabs in a continuous operation, within the limits of construction joints, until the placing of a panel or section is complete. In the event that the slab is placed in two sections, the sections shall have continuous waterstops.

c) Consolidate concrete during placing operations using mechanical vibrating equipment, so that concrete is thoroughly worked around reinforcing and other embedded items and into corners.

d) Bring slab surfaces to the correct level with a straight edge strike off. Use bull floats or darbies to smooth the surface, leaving it free of humps or hollows.

3.2 Cold Weather Placing

a) Protect all concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures.

b) When air temperature has fallen to or is expected to fall below 40° F, uniformly heat all water and aggregate before mixing, to obtain a mixture temperature of not less than 50° F and not more than 80° F at point of placement.

c) Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators.

3.3 **Monolithic Slab Finish**

a) Begin float finishing when surface water has disappeared or when concrete has stiffened sufficiently to permit the operation of a power-driven float. Check surface plane to a tolerance not to exceed 1/4 inch in 10 feet, with uniform slopes to drains.

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

3.4 **Concrete Curing and Protection**

a) Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

b) Weather permitting, keep placed concrete continuously moist for not less than 72 hours.

3.5 **Concrete Floor Sealer**

a) Concrete slab shall be fully cured, cleaned, and etched.

b) Apply sealer as recommended by manufacturer or as specified in the contract documents.

*** END OF SECTION ***

SECTION X - Standard Specifications

SPEC 00003
Minimum Requirements for Health and Safety

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SPEC 00003

MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY

1. GENERAL

1.01 Description

A. The **CONTRACTOR** is solely responsible and liable for the health and safety of all on-site personnel and any off-site community potentially impacted by the remediation.

B. This section describes the minimum health and safety requirements for this project including the requirements for the development of a written Health and Safety Plan (HASP). All on-site workers must comply with the requirements of the HASP. The **CONTRACTOR's** HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this site remediation. The HASP is a required deliverable for this project. The HASP will be reviewed by the **ENGINEER**. The **CONTRACTOR** will resubmit the HASP, addressing all review comments from the **ENGINEER**. The **CONTRACTOR** shall not initiate on-site work in contaminated areas until an acceptable HASP addressing all comments has been developed.

C. Consistent disregard for the provision of these health and safety specifications shall be deemed just and sufficient cause for immediate stoppage of work and/or termination of the Contract or any Subcontract without compromise or prejudice to the rights of the **DEPARTMENT** or the **ENGINEER**.

D. Any discrepancies between this HASP and the specifications (or OSHA requirements) shall be resolved in favor of the more stringent requirements as determined by the **ENGINEER**.

1.02 Basis

A. The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (20 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (EPA), Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and EPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the EPA and the National Institute for Occupation Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

B. The safety and health of the public and project personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Any additional costs will be considered only after the cause for suspension of operations is addressed and work is resumed. The **ENGINEER's** on-site representative and the **CONTRACTOR's** Superintendent will be kept appraised, by the Safety Officer, of conditions which may adversely affect the safety and health of project personnel and the community. The **ENGINEER** may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the **ENGINEER**. The cost of work stoppage due to health and safety is the responsibility of the **CONTRACTOR** under this Contract.

1.03 Health and Safety Definitions

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

1. Project Personnel: Project personnel include the **ENGINEER**, the **ENGINEER's** On-site Representatives, **CONTRACTOR**, Subcontractors, and Federal and State Representatives, working or having official business at the Project Site.

2. Authorized Visitor: Authorized visitors who work for the State of New York shall receive approval to enter the site from the **DEPARTMENT**. The Safety Officer has primary responsibility on determining who is qualified and may enter the site. The Site Safety Officer will only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.

3. Health and Safety Coordinator (HSC): The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the **CONTRACTOR**. The HSC will be responsible for the development and implementation of the HASP.

4. Safety Officer (SO): The SO will be the **CONTRACTOR's** on-site person who will be responsible for the day-to-day implementation and enforcement of the HASP.

5. Health and Safety Technicians (HST): The HST(s) will be the **CONTRACTOR's** on-site personnel who will assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.

6. Medical Consultant (MC): The MC is a physician retained by the **CONTRACTOR** who will be responsible for conducting physical exams as specified under the Medical Monitoring Programs in this section.

7. Project Site: The area designated on the Site Sketch, which includes the Contractor Work Area.

8. Contractor Work Area: An area of the project site including the Support Zone, access road, staging area, and Exclusion Zone.

9. Contractor Support Zone: An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.

10. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.

11. Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination. Protective clothing and breathing apparatus as specified in the health and safety requirements and in the **CONTRACTOR's** approved HASP must be worn.

12. Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.

13. **ENGINEER's** on-site representative: The **ENGINEER's** representative assigned responsibility and authority by the **ENGINEER** for day-to-day field surveillance duties.

14. Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by the **ENGINEER**.

15. Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases and/or vapor, which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials and hazardous conditions.

1.04 Responsibilities

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

1. Reviewing the HASP for the acceptability for its personnel and the impact on the site and human health.

2. Reviewing modifications to the HASP.

B. The **CONTRACTOR** will be responsible for the following:

C. The **CONTRACTOR** will perform all work required by the Contract Documents in a safe and environmentally acceptable manner. The **CONTRACTOR** will provide for the safety of all project personnel and the community for the duration of the Contract.

D. The CONTRACTOR shall:

1. Employ an SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the **CONTRACTOR** shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications contained herein. No work will proceed on this project in the absence of an approved SO.

2. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract.

3. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations.

4. Be responsible for the implementation of this HASP, and the Emergency Contingency and Response Plan.

5. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary.

6. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the respective emergency services.

7. Have sole and complete responsibility of safety conditions for the project, including safety of all persons (including employees).

8. Be responsible for protecting the project personnel and the general public from hazards due to the exposure, handling, and transport of contaminated materials. Barricades, lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.

9. Ensure all OSHA health and safety requirements are met.

10. Maintain a chronological log of all persons entering the project site. It will include organization, date, and time of entry and exit. Each person must sign in and out.

1.05 Health and Safety Plan

A. The HASP is a deliverable product of this project. The **ENGINEER** will review and comment on the **CONTRACTOR's** HASP. Agreed upon responses to all comments will be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this contract. The HASP shall address, at a minimum, the following items in accordance with 29 CFR 1910.120(I)(2):

1. Health and Safety Organization.

2. Site Description and Hazard Assessment.

3. Training.

4. Medical Surveillance.

5. Work Areas.

6. Standard Operating Safety Procedures and Engineering Controls.

7. Personal Protective Equipment (PPE).

8. Personnel Hygiene and Decontamination.

9. Equipment Decontamination.

10. Air Monitoring.

11. Emergency Equipment/First Aid Requirements.

12. Emergency Response and Contingency Plan.

13. Confined-Space Entry Procedures.

14. Spill Containment Plan.

15. Heat & Cold Stress.

16. Record Keeping.

17. Community Protection Plan.

B. The following sections will describe the requirements of each of the above-listed elements of the HASP.

1.06 Health and Safety Organization

A. The **CONTRACTOR** shall list in the HASP a safety organization with specific names and responsibilities. At a minimum, the **CONTRACTOR** shall provide the services of a Health and Safety Coordinator, SO, Health and Safety Technician, and a Medical Consultant.

B. Health and Safety Coordinator: The **CONTRACTOR** must retain the services of a Health and Safety Coordinator (HSC). The HSC must be an American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP). The HSC must have a minimum of two years experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations. The HSC must be familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.

In addition to meeting the above requirements the HSC will have the following responsibilities:

1. Responsibility for the overall development and implementation of the HASP.

2. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.

3. Availability during normal business hours for consultation by the Safety Officer.

4. Availability to assist the Safety Officer in follow-up training and if changes in site conditions occur.

C. Safety Officer: The designated SO must have, at a minimum, two years of experience in the remediation of hazardous waste sites or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.

In addition to meeting the above qualifications, the SO will be responsible for the following minimum requirements:

1. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.

2. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction, including:

   a. Potential hazards.

   b. Personal hygiene principles.

   c. PPE.

   d. Respiratory protection equipment usage and fit testing.

   e. Emergency procedures dealing with fire and medical situations.

   f. Conduct daily update meetings in regard to health and safety.

3. Responsibility for alerting the **ENGINEER's** on-site representative prior to the **CONTRACTOR** starting any particular hazardous work.

4. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).

5. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.

D. Health and Safety Technicians: The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid. The HST will be under direct supervision of the SO during on-site work. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.

E. Medical Consultant: The **CONTRACTOR** is required to retain a Medical Consultant (MC) who is a physician, certified in occupational medicine. The physician shall have experience in the occupational health area and shall be familiar with potential site hazards of remedial action projects. The MC will also be available to provide annual physicals and to provide additional medical evaluations of personnel when necessary.

1.07 Site Description and Hazard Assessment

A. The **CONTRACTOR** shall perform a hazard assessment to provide information to assist in selection of PPE and establish air monitoring guidelines to protect on-site personnel, the environment, and the public. The **CONTRACTOR** shall provide a general description of the site, its location, past history, previous environmental sampling results, and general background on the conditions present at the site.

1. Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:

   - Nature of potential contaminants;
   - Location of potential contaminants at the project site;
   - Potential for exposure during site activities; and
   - Effects of potential contaminants on human health.

2. Biological Hazards: A qualitative evaluation of biological hazards consisting of the elements listed for chemical hazards.

3. Physical Hazards: The **CONTRACTOR** shall assess the potential for physical hazards affecting personnel during the performance of on-site work.

B. The **CONTRACTOR** shall develop a hazard assessment for each site task and operation established in the HASP.

1.08 Training

A. OSHA Training

1. The **CONTRACTOR** is responsible to ensure that all project personnel have been trained in accordance with OSHA 1910.120 regulations.

2. The **CONTRACTOR** shall ensure that all employees are informed of the potential hazards of toxic chemicals to the unborn child and of the risks associated with working at the project site.

3. The **CONTRACTOR** shall be responsible for, and guarantee that, personnel not successfully completing the required training are not permitted to enter the project site to perform work.

B. Safety Meetings

1. The SO will conduct daily safety meetings for each working shift that will be mandatory for all project personnel. The meetings will provide refresher courses for existing equipment and protocols, and will examine new site conditions as they are encountered.

2. Additional safety meetings will be held on an as-required basis.

C. Should any unforeseen or site-specific safety-related factor, hazard, or condition become evident during the performance of work at this site, the **CONTRACTOR** will bring such to the attention of the SO in writing as quickly as possible for resolution. In the interim, the **CONTRACTOR** will take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.

1.09 Medical Surveillance

A. The **CONTRACTOR** shall utilize the services of a Physician to provide the minimum medical examinations and surveillance specified herein. The name of the Physician and evidence of examination of all **CONTRACTOR** and Subcontractor on-site personnel shall be kept by the SO.

B. **CONTRACTOR** and Subcontractor project personnel involved in this project shall be provided with medical surveillance prior to onset of work. Immediately at the conclusion of this project, and at any time there is suspected excessive exposure to substances that would be medically detectable, all project personnel will be medically monitored. The costs for these medical exams, including state field representatives, (four maximum) are to be borne by the **CONTRACTOR**.

C. Physical examinations are required for:

1. Any and all personnel entering hazardous or transition zones or performing work that required respiratory protection.

2. All **CONTRACTOR** personnel on site who are dedicated or may be used for emergency response purposes in the Exclusion Zone.

3. **CONTRACTOR** supervisors entering hazardous or transition zones, or on site for more than 16 hours during the length of the contract.

D. Physical examinations are not required for people making periodic deliveries provided they do not enter hazardous or transition zones.

E. In accordance with good medical practice, the examining Physician or other appropriate representative of the Physician shall discuss the results of such medical examination with the individual examined. Such discussion shall include an explanation of any medical condition that the Physician believes required further evaluation or treatment and any medical condition which the Physician believes would be adversely affected by such individual's employment at the project site. A written report of such examination shall be transmitted to the individual's private physician upon written request by the individual.

F. The examining Physician or Physician group shall notify the SO in writing that the individual has received a medical examination and shall advise the SO as to any specific limitations upon such individual's ability to work at the project site that were identified as a result of the examination. Appropriate action shall be taken in light of the advice given pursuant to this subparagraph.

G. The physical examination shall also include but not be limited to the following minimum requirements:

1. Complete blood profile;

2. Blood chemistry to include: chloride, CO_2, potassium, sodium, BUN, glucose, globulin, total protein, albumin, calcium, cholesterol, alkaline phosphatase, triglycerides, uric acid, creatinine, total bilirubin, phosphorous, lactic dehydrogenase, SGPT, SGOT;

3. Urine analysis;

4. "Hands on" physical examination to include a complete evaluation of all organ systems including any follow-up appointments deemed necessary in the clinical judgement of the examining physician to monitor any chronic conditions or abnormalities;

5. Electrocardiogram;

6. Chest X-ray (if recommended by examining physician in accordance with good medical practice);

7. Pulmonary function;

8. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.

9. Vision screening - Use a battery (TITMUS) instrument to screen the individual's ability to see test targets well at 13 to 16 inches and at 20 feet. Tests should include an assessment of muscle balance, eye coordination, depth perception, peripheral vision, color discrimination, and tonometry.

10. Tetanus booster shot (if no inoculation has been received within the last five years); and

11. Complete medical history.

1.10 Site Control

A. Security

1. Security shall be provided and maintained by the **CONTRACTOR**.

2. The **CONTRACTOR** shall contact law enforcement officials, emergency medical care units, local fire departments and utility emergency teams to ascertain the type of response required in any emergency situation and to coordinate the responses of the various units. A standard operating procedure describing security force response to foreseeable contingencies shall be developed. The **CONTRACTOR** shall also prepare and update a list of emergency points of contact, telephone numbers, radio frequencies, and call signs to ensure dependable responses.

3. Security personnel shall record their presence while patrolling the site using a watchman's clock. The Tapes or punch cards shall be delivered to the **ENGINEER** once a week.

4. Security identification, specific to the project site, shall be provided by the **CONTRACTOR** for all project personnel entering the project site. The **CONTRACTOR** shall be responsible for and ensure that such identification shall be worn by each individual, visible at all times, while the individual is on the site. Vehicular access to the site, other than to designated parking areas, shall be restricted to authorized vehicles only.

5. Use of on-site designated parking areas shall be restricted to vehicles of the **ENGINEER, ENGINEER's** on-site representative, **CONTRACTOR,** subcontractor, and service personnel assigned to the site and actually on duty but may also be used on short-term basis for authorized visitors.

6. The **CONTRACTOR** shall be responsible for maintaining a log of security incidents and visitor access granted.

7. The **CONTRACTOR** shall require all personnel having access to the project site to sign-in and sign-out, and shall keep a record of all site access.

8. All approved visitors to the site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit.

9. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the **DEPARTMENT** with appropriate site access agreement.

10. Project sites shall be posted, "Warning Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence or equal at a minimum. Warning signs shall be posted at a minimum of every 500 feet.

B. Site Control

1. The **CONTRACTOR** shall provide the following site control procedures as a minimum:

   - A site map;
   - A map showing site work zones;
   - The use of a "buddy system"; and
   - Standard operating procedures or safe work practices.

C. Work Areas

1. The **CONTRACTOR** will clearly lay out and identify work areas in the field and will limit equipment, operations and personnel in the areas as defined below:

   a. Exclusion Zone (EZ) - This will include all areas where potential environmental monitoring has shown or it is suspected that a potential hazard may exist to workers. The level of PPE required in these areas will be determined by the SO after air monitoring and on-site inspection has been conducted. The area will be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The Exclusion Zone will be delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing).

   b. Contamination Reduction Zone - This zone will occur at the interface of "Hazardous" and "Clean" areas and will provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and clothing prior to entering the "Clean" area, and for the physical segregation of the "Clean" and "Hazardous" areas. This area will contain all required emergency equipment, etc. This area will be clearly delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing). It shall also delineate an area that although not contaminated at a particular time may become so at a later date.

   c. Support Zone - This area is the remainder of the work site and project site. The Support Zone will be clearly delineated and procedures implemented to prevent active or passive contamination from the work site. The function of the Support Zone includes:

      1. An entry area for personnel, material and equipment to the Exclusion Zone of site operations through the Contamination Reduction Zone;

      2. An exit for decontamination personnel, materials and equipment from the "Decontamination" area of site operations;

      3. The housing of site special services; and

      4. A storage area for clean, safety, and work equipment.

1.11 Standard Operating Safety Procedures (SOSP), Engineering Controls

A. General SOSP

1. The **CONTRACTOR** will ensure that all safety equipment and protective clothing is kept clean and well maintained.

2. All prescription eyeglasses in use on this project will be safety glasses and will be compatible with respirators. No contact lenses shall be allowed on site.

3. All disposable or reusable gloves worn on the site will be approved by the SO.

4. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.

5. Footwear used on site will be covered by rubber overboots or booties when entering or working in the Exclusion Zone area or Contamination Reduction Zone. Boots or booties will be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or Contamination Reduction Zone.

6. All PPE used on site will be decontaminated or disposed of at the end of the work day. The SO will be responsible for ensuring decontamination of PPE before reuse.

7. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.

8. **CONTRACTOR**, subcontractor and service personnel unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that requires respiratory protection.

9. The **CONTRACTOR** will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.

10. On-site personnel found to be disregarding any provision of this plan will, at the request of the SO, be barred from the project.

11. Used disposable outerwear such as coveralls, gloves, and boots shall not be reused. Used disposable outerwear will be removed upon leaving the hazardous work zone and will be placed inside disposable containers provided for that purpose. These containers will be stored at the site at the designated staging area and the **CONTRACTOR** will be responsible for proper disposal of these materials at the completion of the project. This cost shall be borne by the **CONTRACTOR**.

12. Protective coveralls that become torn or badly soiled will be replaced immediately.

13. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.

14. All personnel will thoroughly cleanse their hands, face, and forearms and other exposed areas prior to eating, smoking or drinking.

15. Workers who have worked in a hazardous work zone will shower at the completion of the work day.

16. All personnel will wash their hands, face, and forearms before using toilet facilities.

17. No alcohol, firearms or drugs (without prescriptions) will be allowed on site at any time.

18. All personnel who are on medication should report it to the SO who will make a determination whether or not the individual will be allowed to work and in what capacity. The SO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.

B. Engineering Controls - Air Emissions

1. The **CONTRACTOR** shall provide all equipment and personnel necessary to monitor and control air emissions.

1.12 Personal Protective Equipment

A. General

1. The **CONTRACTOR** shall provide all project personnel with the necessary safety equipment and protective clothing, taking into consideration the chemical wastes at the site. The **CONTRACTOR** shall supply the **ENGINEER's** on-site personnel (average two people for the project duration) with PPE as specified. The **ENGINEER** will require specific manufacturers and styles of PPE, which are detailed in the Safety Equipment Specifications portion of this section. At a minimum, the **CONTRACTOR** shall supply all project personnel with the following:

   a. Two (2) sets of cotton work clothing to include underwear, socks, work shirts, and work pants. Leather steel-toed work boots, and such other clothing and outer garments as required by weather conditions (e.g., insulated coveralls and winter jacket);

   b. Sufficient disposable coveralls;

   c. One pair splash goggles;

   d. Chemical-resistant outer and inner gloves;

   e. Rubber overshoes (to be washed daily);

   f. Hard hat;

   g. One full-face mask with appropriate canisters. The **ENGINEER** and the **DEPARTMENT** will supply their own full-face mask. The **CONTRACTOR** will supply the appropriate canisters to all on-site project personnel including the **ENGINEER** and the **DEPARTMENT**. The **CONTRACTOR** shall supply MSA canisters; and

h. For all project personnel involved with Level B protection, a positive-pressure SCBA or in-line air. A 5-minute escape bottle must be included with the in-line air apparatus.

B. Levels of Protection

1. It is planned that Levels C and D PPE will be required in this remediation. Although Levels A and B are not planned, site conditions may be encountered that require their use. The following sections described the requirements of each level of protection.

a. Level A Protection

1. PPE:

a. Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and NIOSH. Respirators may be:

- Positive-pressure SCBA; or
- Positive-pressure airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere).

b. Fully encapsulating chemical-resistant suit.

c. Coveralls.

d. Cotton long underwear.*

e. Gloves (inner), chemical-resistant.

f. Boots, chemical-resistant, steel toe and shank. (Depending on suit construction, worn over or under suit boot.)

g. Hard hat (under suit).*

h. Disposal gloves and boot covers (worn over fully encapsulating suit).

i. Cooling unit.*

j. Two-way radio communications (inherently safe).*

* Optional

2. Criteria for Selection:

Meeting any of these criteria warrants use of Level A protection:

a. The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on:

- Measures (or potential for) high concentration of atmospheric vapors, gases, or particulates, or
- Site operations and work functions involves high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials highly toxic to the skin.

b. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible.

c. Operations must be conducted in confined, poorly ventilated areas until the absence of substances requiring Level A protection is determined.

d. Direct readings on field Flame Ionization Detectors (FID) or Photoionization Detectors (PID) and similar instruments indicate high levels of unidentified vapors and gases in the air.

3. Guidance on Selection:

a. Fully encapsulating suits are primarily designed to provide a gas- or vapor-tight barrier between the wearer and atmospheric contaminants. Therefore, Level A is generally worn when high concentrations of airborne substances could severely effect the skin. Since Level A requires the use of SCBA, the eyes and respiratory system are also more protected.

Until air surveillance data become available to assist in the selection of the appropriate level of protection, the use of Level A may have to be based on indirect evidence of the potential for atmospheric contamination or other means of skin contact with severe skin affecting substances.

Conditions that may require Level A protection include:

- Confined spaces: Enclosed, confined, or poorly ventilated areas are conducive to the buildup of toxic vapors, gases, or particulates. (Explosive or oxygen-deficient atmospheres are also more probable in confined spaces). Confined-space entry does not automatically warrant wearing Level A protection, but should serve as a cue to carefully consider and to justify a lower level of protection.
- Suspected/known highly toxic substances: Various substances that are highly toxic, especially skin

absorption, for example, fuming corrosives, cyanide compounds, concentrated pesticides, Department of Transportation Poison "A" materials, suspected carcinogens, and infectious substances may be known or suspected to be involved. Field instruments may not be available to detect or quantify air concentrations of these materials. Until these substances are identified and concentrations measured, maximum protection may be necessary.

- Visible emissions: Visible air emissions from leaking containers or railroad/vehicular tank cars, as well as smoke from chemical fires and others, indicate high potential for concentrations of substances that could be extreme respiratory or skin hazards.

- Job Functions: Initial site entries are generally walk-throughs, in which instruments and visual observations are used to make a preliminary evaluation of the hazards.

In initial site entries, Level A should be worn when:

- There is a probability for exposure to high concentrations of vapors, gases, or particulates; and

- Substances are known or suspected of being extremely toxic directly to the skin or by being absorbed.

Subsequent entries are to conduct the many activities needed to reduce the environmental impact of the incident. Levels of protection for later operations are based not only on data obtained from the initial and subsequent environmental monitoring, but also on the probability of contamination and ease of decontamination.

Examples of situations where Level A has been worn are:

- Excavating of soil to sample buried drums suspected of containing high concentrations of dioxin;

- Entering a cloud of chlorine to repair a valve broken in a railroad accident;

- Handling and moving drums known to contain oleum; and

- Responding to accidents involving cyanide, arsenic, and undiluted pesticides.

b. The fully encapsulating suit provides the highest degree of protection to skin, eyes, and respiratory system if the suit material resists chemicals during the time the suit is worn. While Level A provides maximum protection, all suit material may be rapidly permeated and degraded by certain chemicals from extremely high air concentrations, splashes, or immersion of boots or gloves in

concentrated liquids or sludges. These limitations should be recognized when specifying the type of fully encapsulating suit. Whenever possible, the suit material should be matched with the substance it is used to protect against.

b. Level B Protection

1. PPE:

a.. Positive-pressure SCBA (MSHA/NIOSH approved); or

b. Positive-pressure air line respirator (with escape bottle for IDLH or potential for IDLH atmosphere) MSHA/NIOSH approved;

c. Chemical-resistant clothing (overalls and long-sleeved jacket; coveralls or hooded, one- or two-piece chemical-splash suit; disposable chemical-resistant, one-piece suits);

d. Cotton long underwear;*

e. Coveralls;

f. Gloves (outer), chemical-resistant;

g. Gloves (inner), chemical-resistant;

h. Boots (inner), leather work shoe with steel toe and shank;

I. Boots (outer), chemical-resistant, (disposable);

j. Hard hat (face shield*);

k. 2-way radio communication;* and

l. Taping between suit and gloves, and suit and boots.

*Optional

2. Criteria for Selection:

Any one of the following conditions warrants use of Level B Protection:

a. The type and atmospheric concentration of toxic substances have been identified and require a high level of respiratory protection, but less skin protection than Level A. These atmospheres would:

- Have IDLH concentrations; or
- Exceed limits of protection afforded by an air-purifying mask; or

- Contain substances for which air-purifying canisters do not exist or have low removal efficiency; or

- Contain substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard.

b. The atmosphere contains less than 19.5% oxygen.

c. Site operations make it highly unlikely that the work being done will generate high concentrations of vapors, gases or particulates, or splashes of material that will affect the skin of 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

1. It is anticipated that most of the work shall be performed in Level D. A respirator shall be immediately available in the event that air monitoring indicates an upgrade to Level C is required. The determination of the proper level of protection for each task shall be the responsibility of the **CONTRACTOR**. These task specific levels of protection shall be stated in the **CONTRACTOR's** HASP.

C. Safety Equipment Specifications

Note: Prior to purchasing any equipment or supplies required by this HASP, the **CONTRACTOR** shall notify the **ENGINEER** of the type, model and manufacturer/supplier of that particular safety equipment he is proposing to use or purchase for use on this project. The specifications for PPE that the **CONTRACTOR** is to supply to the **ENGINEER** and which differ from the minimum requirements shown below are provided at the end of this section.

D. Self-Contained Breathing Apparatus

1. The **CONTRACTOR** shall provide positive-pressure SCBA for possible upgrades in respiratory protection. The **CONTRACTOR** shall further supply all the SCBA for all field personnel for the duration of normal work activities. The units must be a MSHA/NIOSH-approved pressure-demand type with a 30-minute service life, manufactured/supplied by Scott, MSA, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators in accordance with OSHA regulations (29 CFR 1910.13-4) and as recommended by the manufacturer.

E. Disposable Coveralls

1. The **CONTRACTOR** shall provide, as necessary, protective coveralls for all project personnel each day with extra sets provided for authorized visitors. The coveralls shall be of the disposable type made of Tyvek or equivalent material, and shall be manufactured/supplied by Durafab, Koppler, or other appropriate manufacturers. To protect project personnel from exposure to liquids, splash-resistant suits (Saranex suits, from appropriate manufacturers) shall be provided. Ripped suits will be immediately replaced after all necessary decontamination has been completed to the satisfaction of the SO.

F. Hard Hat

1. The **CONTRACTOR** shall provide and maintain one hard hat per person on site (authorized visitors included). The hard hats shall comply with OSHA Health and Safety Standards (29 CFR 1910.135).

G. Face Shields

1. The **CONTRACTOR** shall provide and maintain one face shield per person on site. The face shields shall be of the full face type meeting OSHA Health and Safety Standards (29 CFR 1910.133) and shall have brackets for mounting on hard hats. Hard hats and face shields shall be from the same manufacturer to ensure proper fit and shall be manufactured/supplied by Bullard, Norton, or other appropriate manufacturers.

H. Work Clothing

1. The **CONTRACTOR** shall provide a minimum of two sets of work clothing per personnel to allow for changing if contaminated. The work clothing shall include a minimum of underwear, socks, work shirts, work pants, and other clothing as weather conditions dictate. All work clothes shall be put on clean, before entering the site and shall not be kept in same lockers as the workers street clothes. All project personnel shall shower and change to street clothing prior to leaving the site. All contaminated work clothing shall be laundered on site with wash water drained to the decontamination water holding tank.

I. **Escape-Type Respirator**

1. The **CONTRACTOR** shall provide and maintain one self-contained breathing escape-type respirator per person working on site. The small self-contained device shall be capable of providing oxygen to the worker while protecting an escaping worker from toxic gases. The respirator shall be made by Scott, MSA, or other appropriate manufacturer. The **CONTRACTOR** shall inspect and ensure all devices are in working order before issuing to personnel. Employees must be trained to use equipment prior to being allowed to work on site and carry the escape-type respirator with them. An escape-type respirator must be provided if positive-pressure SCBA are not part of the ensemble worn by each person on site.

J. **Full Face Organic Vapor Respirator**

1. The **CONTRACTOR** shall provide and maintain a dedicated air-purifying organic vapor respirator per person working in hazardous work and neutral work zones. The respirator shall be of the full-face canister type with cartridges appropriate for the respiratory hazards. Respirators and cartridges shall be MSHA/NIOSH approved, manufactured/supplied by MSA, Scott, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators and canisters in accordance with OSHA regulations (29 CFR 1910.134) and in accordance with manufacturer's instructions. The **CONTRACTOR** shall ensure that proper fit testing training and medical surveillance of respirator users is in accordance with OSHA regulations (29 CFR 1910.134).

K. **Gloves (outer)**

1. The **CONTRACTOR** shall supply a minimum of one pair of gloves per workman in areas where skin contact with hazardous material is possible. Work gloves shall consist of nitrile (NCR) or Neoprene material. Other gloves may be selected if required based on the potential chemical present. Cotton liners will be provided by the **CONTRACTOR**
during cold weather.

L. **Gloves (inner)**

1. The **CONTRACTOR** shall supply Latex or equivalent surgical gloves to be worn inside the outer gloves.

M. **Boots (inner)**

1. The **CONTRACTOR** shall supply one pair of safety shoes or boots per workman and shall be of the safety-toe type meeting the requirements of 29 CFR 1910.136.

N. **Boots (outer)**

1. The **CONTRACTOR** shall provide and maintain one pair of overshoes for the on-site person entering a hazardous work area. The overshoes shall be constructed of rubber and shall be 12 inches high minimum.

PERSONAL PROTECTIVE EQUIPMENT SPECIFICATIONS				
Description	**Manufacturer**	**Model Number**	**Size**	**Comments**
Tyvek coveralls	Kappler/Abanda	1427/1428	xl/lg	NA
Saranex coveralls	Kappler/Abanda	77427/77428/77434	xl/lg	NA
Sijal acid suit	Chemtex Bata	91522-G	xl/lg	NA
Surgical gloves	Best	7005	xl/lg	NA
Neoprene gloves	Edmont	8-354	xl/lg	NA
Nitrile gloves	Granet	1711	10	NA
Butyl gloves	North	B-161	10	NA
Viton gloves	North	F-124	10/11	NA
Long gauntlet neoprene	Edmont	19-938	xl	NA
Cotton work gloves	North	Grip-N/K511M	men's	or equal
Latex booties	Rainfair	1250-Y	xl	NA
PAPR pesticide cartridges	Racal	AP-3	NA	NA
PAPR asbestos cartridges	Racal	SP-3	NA	NA
APR organic cartridges	MSA	GMC-H	NA	NA
APR asbestos cartridges	MSA	Type H	NA	NA
APR pesticide cartridges	MSA	GMP	NA	NA

1.13 Personnel Hygiene and Decontamination

A. On-Site Hygiene Facility

1. The **CONTRACTOR** shall provide a hygiene facility on site. The hygiene facility shall include the following:

   - Adequate lighting and heat;
   - Shower facilities for project personnel;
   - Laundry facilities for washing work clothes and towels;
   - Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
   - Clean and "dirty" locker facilities; and

- Storage area for work clothing, etc.

a. Portable "Boot Wash" Decontamination Equipment

1. The **CONTRACTOR** shall provide a portable decontamination station, commonly referred to as a "Boot Wash" facility for each hazardous work zone requiring decontamination for project personnel. These facilities shall be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform, with the equipment being mobile, allowing easy transport from one hazardous work zone to the next. All such wash water shall be disposed of at the dewatering facility. An appropriate detergent such as trisodium phosphate shall be used.

b. Personnel Decontamination

1. The **CONTRACTOR** shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.

c. Disposal of Spent Clothing and Material

1. Contaminated clothing, used respirator cartridges and other disposable items will be put into drums/containers for transport and proper disposal in accordance with TSCA and RCRA requirements.

2. Containers/55-gallon capacity drums shall conform to the requirements of 40 CFR Part 178 for Transportation of Hazardous Materials. The containers/drums containing excavated and other hazardous material shall be transported by the **CONTRACTOR** to the staging area.

3. The **CONTRACTOR** is responsible for the proper container packaging, labeling, transporting, and disposal.

1.14 Equipment Decontamination

A. General

1. All equipment and material used in this project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. With the exception of the excavated materials, all other contaminated debris, clothing, etc. that cannot be decontaminated shall be disposed at the **CONTRACTOR's** expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization the unit prices bid for disposal of decontamination liquids or as otherwise directed on this project. All vehicles and equipment used in the "Dirty Area" will be decontaminated to the satisfaction of the SO in the decontamination area on site prior to leaving the project. The **CONTRACTOR** will certify, in writing, that each piece of equipment has been decontaminated prior to removal from the site.

2. Decontamination shall take place within the designated equipment and materials decontamination area. The decontamination shall consist of degreasing (if required), followed by high-pressure, hot-water cleaning, supplemented by detergents as appropriate. Wash units shall be portable, high-pressure with a self-contained water storage tank and pressurizing system (as required). Each unit shall be capable of heating wash waters to 180 degrees Fahrenheit and providing a nozzle pressure of 150 psi.

3. Personnel engaged in vehicle decontamination will wear protective clothing and equipment as determined in the HASP. If the **CONTRACTOR** cannot or does not satisfactorily decontaminate his tools or equipment at the completion of the project, the **CONTRACTOR** will dispose of any equipment which cannot be decontaminated satisfactorily and will bear the cost of such tools and equipment and its disposal without any liability to the **ENGINEER**. At the completion of the project the **CONTRACTOR** shall completely decontaminate and clean the decontamination area.

B. Decontamination Station

1. The **CONTRACTOR** shall construct a decontamination station as described. The decontamination station shall be located in the Contamination Reduction Zone and shall be used to clean all vehicles leaving the Exclusion Zone prior to entering the Support Zone or leaving the site.

2. Each decontamination pad will be equipped with a drain system and holding tank on a properly graded area that has no deleterious material. The **CONTRACTOR** shall obtain and analyze one soil sample at the area where the decontamination pad is to be built and one soil sample after the pad has been dismantled, as directed by the Engineer. The cost associated with the samples shall be included in the cost of providing health and safety at the site.

3. Shop drawings of the decontamination pad shall be submitted to the **ENGINEER** for approval.

4. The **CONTRACTOR** shall be responsible for the provision of an adequately equipped decontamination pad which shall meet the following requirements:

   a. Adequate dimensions to contain wash water and debris from the largest sized vehicles to be utilized in this contract. All vehicles and construction equipment leaving a contaminated zone shall be decontaminated.

   b. Perimeter to be curbed and provided with splash guards.

   c. 40 mil impervious HDPE membrane is required to prevent seepage into the ground.

   d. Sumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.

   e. Temporary storage facility may be mobile tankers or suitable fixed tanks. Fixed tanks shall be located within secondary containment areas capable of containing 100% of the tank capacity, or 110% of the largest tank where the secondary containment area holds more than one tank. The secondary containment area shall have a permeability of not more than 1.0×10^{-7} cm/sec.

f. The decontamination pad is to be located at the exit of each contaminated zone such that previously non-contaminated areas are not contaminated during remedial activities. This may require the construction and use of multiple decontamination pads.

g. The **CONTRACTOR** shall place a minimum of six (6) inches of sand under the decontamination pad.

h. There shall be side wall panels, six (6) feet high minimum on two sides to prevent over spray.

C. The **CONTRACTOR** shall clean the decontamination pad after daily use. No contamination shall be left behind. The **CONTRACTOR** will be required to dismantle, remove and properly dispose of the pad at their own expense.

1.15 Air Monitoring Program

A. General

1. The **CONTRACTOR** shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-site receptors as a result of site work.

2. The **CONTRACTOR** shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum real-time aerosol monitors, depending on work activities and environmental conditions.

3. The **CONTRACTOR's** AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring will be to determine if an upgrade (or 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.

4. The **CONTRACTOR** shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration of contamination to off-site receptors. Documentation monitoring shall include the collection and analysis of samples for total nuisance dust.

5. To protect the public in the neighboring residential neighborhood, the **CONTRACTOR** must include in the AMP provisions for suspending work and implementing engineering controls based upon detectable odors, as well as upon instrument monitoring results.

6. During the progress of active remedial work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work site will be conducted on a continuous basis. Any departures from general background will be reported to the SO prior to entering the area. The SO will determine when and if operations should be shut down.

7. Air monitoring (both real time and documentation monitoring) shall be conducted by a minimum of one dedicated person with communication to the foreman whenever intrusive activities (such as excavation, tank removal, and soil treatment) are performed in an exclusion zone. After completion of intrusive activities involving contaminated materials and removal of the exclusion zone, air monitoring may be discontinued.

8. Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the **ENGINEER's** on-site representative.

B. Action Levels

1. The **CONTRACTOR** is responsible for developing level of protection site action levels for organic vapors and/or inorganic species.

2. The SO, **CONTRACTOR**, and their personnel will be responsible for implementing, maintaining and enforcing the respirator program.

3. 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.

Parameter	Action Level	Action
Total particulates	2.5 times background and/or greater than 150 $\mu g/m^3$	Work ceases until mitigated
Visible Dust	Visible dust as determined by the **ENGINEER**.	Work ceases until mitigated

The following action levels shall be used as minimum action levels for organic vapors and odors.

Parameter	Action Level	Action
Total Organic Vapors	5 ppm at work zone	Workers use respirators
	25 ppm at work zone	Work ceases until mitigated
Odors	Noticeable odors outside the exclusion zone as determined by the **ENGINEER**.	Work ceases until mitigated

C. **Real-Time Monitoring**

1. The **CONTRACTOR** shall submit a written copy of the real time air monitoring results for each Workday, by 10:00 a.m. the following Workday, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

2. Real-time monitoring shall be conducted using the following equipment:

3. Organic vapor photoionizers shall be Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equal. The **CONTRACTOR** shall provide one Photovac TIP for each and every hazardous work zone operation.

4. Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPDM-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM_{10}) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols
Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 µg/m³)
Precision (2-sigma) at constant temperature:
+/- 10 µg/m³ for one second averaging; +/- 1.5 µg/m³ for sixty second averaging
Accuracy:
+/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 µm, g= 2.5, as aerosolized)
Resolution: 0.1% of reading or 1 µg/m³, whichever is larger
Particle Size Range of Maximum Response: 0.1-10 µ
Total Number of Data Points in Memory: 10,000
Logged Data:
Each Data Point: average concentration, time/date, and data point number
Run Summary:
overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
Alarm Averaging Time (user selectable):
real-time (1-60 seconds) or STEL (15 minutes)
Operating Time: 48 hours (fully charged NiMH battery); continuously with charger
Operating Temperature: -10 to 50°C (14 to 122°F)

Automatic alarms are suggested.

5. Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although the instrument's design does not allow it to make a sharp differentiation of particulates at the PM_{10} standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10µ range in the immediate vicinity of construction activities.

6. Monitor the air, using the same equipment, for 10-15 minutes upwind of the work site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m^3 or 2.5 times the established background level at the work site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m^3 above background, monitor the downwind site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m^3 above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m^3 over background concentration, the CONTRACTOR shall immediately suspend work at the site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.

7. Real-time monitoring will be conducted at any excavation of contaminated soil or sediments. Real-time monitoring will also be conducted at perimeter locations including an upwind (background) and three downwind locations. A background reading will be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading will be made. Downwind readings at the perimeter will be made when **CONTRACTOR** action levels have been exceeded at the excavation face or at a minimum of twice a day.

8. If action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.

9. Construction activities generate dust which could potentially transport contaminants off site. There may be situations when visible dust is being generated and leaving the site and the monitoring equipment does not measure PM_{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**.

D. Documentation Monitoring

1. Documentation monitoring will be conducted at the perimeter at a minimum of four locations (one upwind and three downwind) for total dust. Documentation monitoring will be conducted only during excavation, consolidation, staging, removal, or decontamination activities (i.e., intrusive activities).

   a. Collect total nuisance dust using PVC collection filter and personnel sampling pump and analyze gravimetrically according to NIOSH 89-127 Method 0500.

   b. Documentation samples will be collected at established perimeter locations. The four locations will be chosen according to site activities and expected wind direction.

   c. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site. Samples will be collected at a height of 6 feet above ground surface.

d. Documentation samples will be collected continuously, during the normal work hours when activities are occurring on site. At the end of the week, one days worth of sampling (i.e. three downwind locations and one upwind location) will be selected by the Engineer for analysis by the Contractor.

e. The documentation samples will be collected over an eight (8) hour work period.

f.. In addition to perimeter monitoring, personnel documentation samples will be collected on site once a week. On-site samples will be collected by choosing "high risk" workers to wear appropriate collection media for pesticides, metals, and particulate. "High risk" workers are those who are most likely to encounter contamination on a particular task. At a minimum, two high risk workers will be chosen to wear collection media for a particular day each week and the media will be analyzed with the documentation air monitoring samples.

g. The **CONTRACTOR** shall submit a written copy of the documentation air monitoring results within 7 days of sampling, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

h. The documentation sampling submitted shall also identify the "high risk" workers chosen to wear appropriate collection media for contaminants; date media was worn; task involved; analytical results and applicable standards.

i. Payment for air monitoring will not be approved until the above submittals have been received and approved by the **ENGINEER**.

E. Community Air Monitoring

1. 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/m^3 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.

2. 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

A. Communications

1. The **CONTRACTOR** shall provide telephone communication at the site field office. Emergency numbers, such as police, sheriff, fire, ambulance, hospital, poison control, NYSDEC, EPA, NYSDOH, and utilities, applicable to this site shall be prominently posted near the telephone.

2. The **CONTRACTOR** shall establish a signaling system for emergency purposes.

B. **Emergency Shower and Emergency Eye Wash**

1. The **CONTRACTOR** shall supply and maintain one portable eyewash/body wash facility per active hazardous work zone. The facility shall have a minimum water capacity of 10 gallons and shall conform to OSHA regulations 29 CFR 1910.151. The portable eyewash/body wash facility shall be manufactured/ supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

C. **Fire Extinguishers**

1. The **CONTRACTOR** shall supply and maintain at least one fire extinguisher in the **CONTRACTOR's** office and one at each hazardous work zone. The fire extinguisher shall be a 20-pound Class ABC dry fire extinguisher with UL-approval per OSHA Safety and Health Training Standards 29 CFR 1910.157. The fire extinguisher shall be manufactured/supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

D. **First Aid Kit**

1. The **CONTRACTOR** shall supply and locate in his project office and at each and every hazardous work zone one 24-unit (minimum size) "industrial" or "Contractor" first aid kit, required by OSHA requirements 29 CFR 1910.151. The first aid kit shall be manufactured/supplied by Norton, Scott, or other appropriate suppliers.

E. **Emergency Inventory**

1. In addition to those items specified elsewhere, the SO will maintain the following inventory of equipment and protective clothing for use at the site in the event of emergencies.

   a. Washable coveralls;

   b. Gloves (outer);

   c. Gloves (inner);

   d. SCBA;

   e. Escape SCBA (authorized visitor use);

   f. Face shields;

   g. Safety glasses;

   h. Respirators and appropriate cartridges;

   i. Disposable coveralls;

   j. Chemical-resistant boots and latex boot covers;

   k. Hard hats;

   l. Bottled breathing air; and

m. Rain suits.

1.17 Emergency Responses/contingency Plan and Procedures

A. Daily Work

1. During the progress of work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation prior to personnel entering these areas. Sampling shall be conducted on a continuous basis. Based on the air monitoring data, the proper level of protection will be chosen by the SO.

B. Emergency Vehicle Access

1. In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is blocked by the working crew operations, those operations (equipment, materials, etc.) will be immediately moved to allow those vehicles access. Emergency crews will be briefed as to site conditions and hazards by the SO. All vehicles and personnel will be decontaminated prior to leaving the site.

2. The **CONTRACTOR** shall schedule a site briefing with the local Fire Department at the completion of mobilization to familiarize emergency response personnel with his operations and site layout.

C. Personal Injury Response Plan

1. In cases of personal injuries, the injured person or the crew personnel in charge will notify the SO. The SO will assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO will arrange for an ambulance if required.

2. If soiled clothing cannot be removed, the injured person will be wrapped in blankets for transportation to the hospital.

3. Personnel, including unauthorized personnel, having skin contact with chemically contaminated liquids or soils shall be flushed with water after any wet or soiled clothing has been removed.

4. These personnel should be observed by the SO to ascertain whether there are any symptoms resulting from the exposure. If there is any visible manifestation of exposure such as skin irritation, the project personnel will refer to a consulting physician to determine whether the symptoms were the result of a delayed or acute exposure, a secondary response to exposure such as skin infection, or occupational dermatitis. All episodes of obvious chemical contamination will be reviewed by the SO in order to determine whether changes are needed in work procedures.

D. Route to the Hospital

1. The **CONTRACTOR** shall post in conspicuous places in the Support Zone a map with written directions to the nearest hospital or emergency medical treatment facility.

E. **Fire Service**

1. The **CONTRACTOR** will make arrangements to take immediate fire fighting and fire protection measures with the local Fire Chief. If there is a fire, the crewmen or their person in charge will immediately call the SO. The SO will immediately call the fire personnel.

2. The air downwind from any fire or explosion will be monitored immediately in order to protect workers and the nearby community. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan are to be followed.

F. **Master Telephone List**

1. The attached master telephone list will be completed and prominently posted at the field office. The list will have telephone numbers of all project personnel, emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the **DEPARTMENT** for emergency reference purposes.

Emergency Service		Telephone Number
Fire Department		911
Police Department		911
Ambulance		911
Hospital/Emergency Care Facility		To be determined
Poison Control Center		(800) 336-6997
Chemical Emergency Advice (CHEMTREC)		(800) 424-9300
NYSDEC Albany Office	Work Hours	To be determined
	After Hours	To be determined
NYSDEC Regional Office	Work Hours	To be determined
County Dept. of Health		To be determined
New York State Dept. of Health - Albany		To be determined
New York State Dept. of Health - Regional		To be determined

1.18 Heat Stress Monitoring

A. Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion, and heat stroke can be experienced, which, if not remedied, can threaten life or health. Therefore, an American Red Cross Standard First Aid book or equivalent will be maintained on site at all times so that the SO and site personnel will be able to recognize symptoms of heat emergencies and be capable of controlling the problem.

B. When protective clothing is worn, especially Levels A and B, the suggested guidelines for ambient temperature and maximum wearing time per excursion are:

Ambient Temperature (°F)	Maximum Wearing Time Per Excursion (Minutes)
Above 90	15
85 to 90	30
80 to 85	60
70 to 80	90
60 to 70	120
50 to 60	180

C. One method of measuring the effectiveness of employees' rest-recovery regime is by monitoring the heart rate. The "Brouha guideline" is one such method:

- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minute.
- Double the count.

D. If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.

E. In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages will return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard.

F. This liquid refreshment will be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:

1. Personnel shall wash and rinse their outer gloves and remove them.

2. Personnel shall remove their hard hats and respirators and place on table.

3. Personnel shall remove their inner gloves and place them on table.

4. Personnel shall wash and rinse their face and hands.

5. Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.

6. The used bottle or cups will not be returned to the cooler, but will be placed in a receptacle or container to be cleaned or disposed of.

7. Personnel shall replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

G. When personnel are working in situations where the ambient temperatures and humidity are high--and especially in situations where protection Levels A, B, and C are required--the SO must:

- Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);
- Assure that frequent breaks are scheduled so overheating does not occur; and
- Revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

1.19 Cold Stress

A. Whole-body protection shall be provided to all site personnel that have prolonged exposure to cold air. The right kind of protective clothing shall be provided to site personnel to prevent cold stress. The following dry clothing shall be provided by the **CONTRACTOR** as deemed necessary by the SO:

- Appropriate underclothing (wool or other);
- Outer coats that repel wind and moisture;
- Face, head, and ear coverings;
- Extra pair of socks;
- Insulated safety boots; and
- Glove liners (wool) or wind- and water-repellant gloves.

B. The SO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

C. Site personnel working continuously in the cold are required to warm themselves on a regular basis in the on-site hygiene facility. Warm, sweet drinks will also be provided to site personnel to prevent dehydration. The SO shall follow the work practices and recommendations for cold stress threshold limit values as stated by the 1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.

1.20 Logs, Reports and Record Keeping

A. Security Log

1. A daily log of security incidents and visitors granted access to the site will be maintained, as well as a log of all personnel entering and exiting the site.

2. All approved visitors to the site will be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors will not be permitted to enter a hazardous work zone.

3. Project site shall be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence.

B. Safety Log

1. The **CONTRACTOR's** SO will maintain a bound safety logbook. The log will include all health and safety matters on site and include, but not be limited to, the following information:

- Date and weather conditions on site;
- A description of the proposed work for the day;
- Times when site personnel arrive and depart;
- Air monitoring data;
- Heat and/or cold stress monitoring;
- Decontamination procedures;
- Type and calibration of air sampling/monitoring equipment used;
- Safety meeting summaries; and
- Accidents.

C. Emergency Or Accident Report

1. Any emergency or accident will be reported immediately to the SO. The **ENGINEER** will also be notified. The **CONTRACTOR** will submit a written report immediately, but no later than 24 hours of its concurrence. The report will include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the **CONTRACTOR** will institute to minimize future occurrences. All spills will be treated as emergencies.

D. **Daily Work Report**

1. The **CONTRACTOR** shall maintain a daily work report that summarizes the following:

   - Work performed,
   - Level of protection,
   - Air monitoring results,
   - Safety-related problems, and
   - Corrective actions implemented.

1.21 Posting Regulations

A. The **CONTRACTOR** will post signs at the perimeter of the Exclusion Zone that state "Warning, Hazardous Work Area, Do Not Enter Unless Authorized." In addition, a notice directing visitors to sign in will be posted at the project site. Also, the **CONTRACTOR** will post a sign stating that any questions about the site should be directed to the New York State Department of Environmental Conservation.

B. Safety regulations and safety reminders will be posted at conspicuous locations throughout the project area. The following safety regulations and safety reminders are at a minimum to be posted around the job site:

SAFETY REGULATIONS

(To be Posted for Project Personnel)

The main safety emphasis is on preventing personal **contact** with gases, soils, sludge and water. Towards that end, the following rules have been established.

Regulations

A. Eating, drinking and smoking on the site is PROHIBITED except in specifically designated areas.

B. All project personnel on the site must wear clean or new gloves daily.

C. If you get wet to the skin, you must wash the affected area with soap and water immediately. If clothes in touch with the skin are wet, these must be changed.

D. You must wash your hands and face before eating, drinking or smoking.

E. Observe regulations on washing and removing boots before entering the dressing room or a clean area and showering before going home.

Recommendations

A. Do not smoke on site with dirty hands; better yet, do not smoke.

B. Check for any personal habit which could get soil or water into your body.

Examples: food off your fingers, wiping your face or nose with a dirty hand or running a dirty hand through your hair.

C. Check that any regularly worn clothing is clean. Examples include dirty watchbands, neck chains and a dirty liner on your safety helmet. Safety practices with poisonous chemicals can be summed up with a few words:

Don't breathe in chemical odors and don't touch the water, soil, and sludge.

If you do get dirty or wet, clean up as soon as possible.

SAFETY REMINDER FOR TOXIC CHEMICALS

(Post for Project Personnel)

Chemicals can't cause problems unless you breathe them, eat them, or put them on your skin.

Chemicals in Gases, Soils, Sludge, and Water

Don't let them go into your mouth, nose, or stay on your skin.

Use common personal hygiene.

A. Don't eat or drink on the site.

B. No smoking in the area of work.

C. Wear protective clothing.

D. Glove liners must be **clean.**

E. Wash your hands whenever practical. Wash before eating, drinking, or smoking.

F. Don't carry chemicals home to your family. (For example, on clothing, mud in the car, dirty hands.)

G. Follow strictly the HASP.

1.22 Community Protection Plan

A. General

1. Develop, as part of this HASP, a Community Protection Plan (CPP). The CPP shall outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.

B. Air Monitoring

1. As part of the Air Monitoring Program, use real-time monitoring and documentation sampling as described in the Subpart "Air Monitoring Program" of this section to determine if off-site emission, as a result of site work, poses a threat to the surrounding community.

2. Provide real-time air monitoring for volatile compounds and particulate levels as the perimeter of the work area as necessary. Include the following:

   a. Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities shall be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.

   b. Particulates shall be continuously monitored at the 4 documentation sampling stations for a total of 4 dust monitors. If the downwind particulate level is 150 ug/m^3 greater than the upwind particulate level, dust suppression techniques shall be employed. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.

C. Vapor Emission Response Plan

1. If the ambient air concentration of organic vapors exceed 5 ppm above background at the perimter of the work area, activities shall be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume. If the organic vapor levels are greater than 5 ppm over background but less than 225 ppm over background at the perimeter of the work area, activities may resume provided the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

2. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities shall be shutdown. When work shutdown occurs, downwind air monitoring as directed by the SO shall be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

D. Major Vapor Emission

1. If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities shall be halted.

2. If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, the air quality shall be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

3. If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background and persist for more than 30 minutes in the 20 Foot Zone, the Major Vapor Emission Response Plan shall automatically be placed into effect.

4. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background levels.

E. Major Vapor Emission Response Plan

1. Upon activation, the following shall be undertaken:

   a. All Emergency Response Contracts as listed in the Subpart titled "Emergency Response and Contingency Plan" paragraph titled "Telephone List."

   b. The local police authorities shall immediately be contacted by the SO and advised of the situation. Coordinate with local officials to arrange for notification and evacuation of the surrounding community.

   c. Frequent air monitoring shall be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring say be halted or modified by the SO.

2. The Air Monitoring Program shall include real-time air monitoring and shall be conducted at the perimeter of the site. Particulates should be continuously monitored upwind, downwind and within the Exclusion Zone at temporary particulate monitoring stations. If the downwind particulate level is more than 2.5 times greater than the upwind particulate level and greater than 150 ug/m^3, then dust suppression techniques shall be employed. This is a general action level. A site-specific action level shall be developed based on available analytical data. All readings shall be recorded and be available for ENGINEER, NYSDEC, and NYSDOH personnel to review.

3. Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-site emissions pose a threat.

F. Odor

1. Foam active work areas to reduce odors if odor complaints are received from nearby residences during site activities. Odor masking agents or other odor control methods may be used subject to **ENGINEER's** review. Continue odor suppression during each day that odor complaints are received.

G. **Off-Site Spill Response**

1. Produce as part of the HASP a Spill Response Plan, also coordinated with local officials, in case of an off-site spill of either liquid or solid wastes. The plan shall include transportation routes and times, as well as the minimum requirements set forth in the Subpart titled "On-Site Spill Containment Plan." The driver shall be supplied with Material Safety Data Sheets (MSDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project site.

1.23 Confined Space Work

A. Evaluate the work areas and determine if there are any permit-required confined spaces. If the **CONTRACTOR** determines that personnel will not need to enter a permit-required confined space, appropriate measures to prevent personnel from entering such shall be taken. If the **CONTRACTOR** determines that personnel will need to enter a permit-required confined space, develop and implement a written permit-required confined space program.

B. The written program shall comply with 29 CFR 1910.146 and shall include the following:

1. Implement methods to prevent unauthorized entry;
2. Identify and evaluate the hazards of permit-required confined spaces before personnel entry;
3. Develop and implement procedures for safe permit-required confined space entry;
4. Provide the appropriate equipment to evaluate permit-required confined spaces;
5. Evaluate permit-required confined spaces when entry operations are conducted;
6. Provide at least one attendant outside the permit-required confined space which will be entered; .
7. Designate the personnel who will have active roles in entry operations;
8. Develop and implement procedures for obtaining rescue and emergency services;
9. Develop and implement a system for the preparation, issuance, use, and collection of entry permits;
10. Develop and implement procedures to coordinate entry operations when personnel from more than one employer are working;
11. Develop and implement procedures for concluding the entry;
12. Review and revise entry operations if measures may not protect personnel; and
13. Review the permit-required confined space program to ensure personnel are protected from the hazards present.

C. Copes of the permit-required confined space program and employee training certificates shall be included with the HASP.

2. PRODUCTS

Not Used.

3. EXECUTION

Not Used.

*** END OF SECTION ***

SECTION XI

Supplementary Specifications

FUMEX SANITATION SITE
GARDEN CITY PARK, NEW YORK

SUPPLEMENTARY SPECIFICATIONS

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SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The Fumex Sanitation Site is an inactive hazardous waste disposal site located at 131 Herricks Road in Garden City Park, Town of North Hempstead, Nassau County, New York. The property is approximately 1/3 acre in size and includes a one-story brick building and a paved parking area in the rear. The site was historically occupied by Fumex Sanitation, Inc., a commercial termite extermination business. According to information provided by the NYSDEC, the Fumex Site operated as a commercial termite extermination business from 1952 to 1992. It was reported that the originally unpaved parking area behind the building was sprayed regularly with chlordane for insect control from 1952 to 1978. The parking area was paved sometime between 1978 and 1981. In 1981, a chlordane rinse water spill of less than 30 gallons occurred in the parking area, and some of the rinse water entered the on-site dry well located within the parking area.

B. The Contractor shall furnish all labor, equipment, materials, supplies, facilities, power and incidentals as necessary to fully complete the Work as shown, as specified and as directed by the Department. The Contractor shall be responsible for performing all the Work described in the Contract Documents, including items not specifically identified, as required to complete the Work.

C. The type and quantity of Work specified are estimates that have been shown solely for the convenience of the Department, Engineer and Contractor, and may not necessarily include all of the items of Work required.

D. All of the Work shall be performed in accordance with applicable federal, state and local laws and regulations, and the Contractor's approved submittals. If any law, regulation, and/or Contract Documents have contradicting requirements, then the most stringent requirement shall apply, as determined by the Engineer. Local laws shall include any town, village, city or other local regulatory authority having jurisdiction.

E. Pesticides have been detected at the site at elevated concentrations. As a result, and in accordance with New York State Department of Environmental Conservation (NYSDEC) regulations, pesticide contaminated environmental media at the site is classified as a hazardous

waste. Work must be conducted in accordance with the NYSDEC's hazardous waste regulations found at 6 NYCRR Parts 370-376. If any law, regulation, and/or Contract Documents have contradicting requirements, then the most stringent requirement shall apply, as determined by the Engineer.

F. The Contractor is restricted from performing any operations outside the Contract Limits, which are defined on the Drawings. Additionally, all work completed shall conform with applicable access agreements, including any temporary and permanent easements obtained for the project.

G. The Contractor is solely responsible for sequencing construction in an efficient manner. The proposed sequence of construction shall be identified in the Contractor's Work Plan (see Section 01653).

H. The Contractor shall be solely responsible for identifying, marking out and protecting all aboveground and underground utilities and structures.

I. The Contractor shall identify, apply for and obtain, pay all fees for, and comply with all requirements of all issued licenses, permits, approvals and insurance required from federal, state and local government and public agencies and authorities as necessary to perform the Work. The Contractor shall provide indemnifications to public and private agencies and authorities as necessary to perform the Work.

J. The principal features of the Work to be performed by the Contractor (Contract No. D007692) include, but are not limited to:

1. Preparation of and obtaining approval for and implementing the specified and requested submittals.

2. Installation and sampling of groundwater monitoring wells.

3. Furnishing and installing temporary facilities and utilities in accordance with specification Section 01500, Temporary Facilities and Controls.

4. Excavation, grading, backfilling, compaction and landscaping.

5. Closure of existing dry well and removal of underground piping.

6. Installation of new storm water drainage facilities and associated connection to storm sewer.

7. Installation of asphalt cover.

8. Abatement of asbestos floor tiles in garage.

9. Decontamination and sealing of concrete floor in garage.

10. Soil sampling and testing.

11. Furnishing and installing sediment and erosion control measures.

12. Transportation and disposal of waste materials.

13. Removal of temporary utilities and facilities, and site restoration.

The foregoing is a general description only and shall not be construed as a complete description of the Work to be performed for this project.

1.2 GENERAL

A. Where articles of other sections of the Contract Documents are repeated in Division 1, Special Conditions, it is intended to elaborate or qualify such articles. It is not intended that other articles of the above documents shall be omitted or that additional requirements set forth in the above documents and noted herein shall be excluded from contract requirements unless specifically noted as such hereinafter.

1.3 GENERAL ARRANGEMENT

A. The Drawings indicate the extent and general arrangement of the Work. The specific equipment proposed for use by the Contractor on the project may require changes in the construction detailed on the Contract Drawings, and all such changes shall be submitted to the Engineer for approval in accordance with the requirements of the Contract Documents and shall be made without additional cost to the Department.

1.4 TIME OF WORK

A. Unless otherwise specifically permitted, all work that would be subject to damage shall be stopped during inclement, stormy or freezing weather. Only such work as will not suffer injury to workmanship or materials will be permitted. Contractor shall carefully protect Work against damage or injury from the weather, and when work is permitted during freezing weather shall provide and maintain approved facilities for heating the materials and for protecting the finished Work.

1.5 ACCESS TO CONSTRUCTION SITE

A. Whenever construction work is in progress or preparation, the Contractor shall permit access and inspection and shall provide proper and necessary

facilities to representatives of the Department, Engineer and regulatory agencies as specified in the Contract Documents.

1.6 CONFINED SPACE ENTRY REQUIREMENTS

A. The Contractor shall be responsible for making determinations regarding confined spaces as defined by the federal and state regulations governing confined space entry and safety procedures in such areas. The Contractor shall be responsible for compliance with Occupational Safety and Health Administration (OSHA) and all applicable provisions of federal, state and local laws and regulations pertaining to confined spaces in performing the Work.

B. The Contractor shall prepare a complete confined space entry plan to be used for this project. The Contractor shall maintain a copy of the confined space entry plan in his/her field office at all times. Prior to the start of construction, the Contractor shall submit a listing of personnel who have completed training in accordance with the confined space entry plan and are certified for confined space entry. The Contractor shall be responsible for ensuring that only those personnel who have received proper training perform any work requiring confined space entry. The Contractor is responsible for supplying the necessary confined space equipment and is responsible for compliance with all OSHA requirements for confined space entry.

1.7 CONCRETE CONSTRUCTION

A. Contractor shall refer to Section X – Standard Specifications, Spec. 00002 for concrete work associated with the installation of bollards, the on-site trench drain and on-site groundwater monitoring wells. For all other concrete work, refer to Division 3.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION 01012

DRAWINGS

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Drawings which accompany and form a part of these Specifications bear the general title: Fumex Sanitation Site, Garden City Park, New York, General Construction Contract No. D007692. The Work shall conform to the following Drawings:

Title Sheet

1 General Notes, Symbols and Abbreviations

2 Site Plan

3 Site Remediation Plan

4 Site Restoration Plan

5 Details I

6 Details II

7 Details III

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The Contractor shall perform an Initial Site Survey to establish existing site conditions, baseline elevations and benchmarks for the layout and completion of Work as specified, as shown on the Drawings and as described in the Contract Documents. Any errors, omissions or apparent discrepancies found in the Drawings as a result of the completion of the Initial Site Survey shall be called to the Engineer's attention for interpretation prior to proceeding with the work.

B. Upon completion of the excavation of pesticide contaminated soil, the Contractor shall perform an Intermediate Site Survey showing all dimensions, locations, angles and elevations of the final excavation limits, as well as the elevation and location of all endpoint samples taken. Calculations documenting the amount of soil removed based upon comparing the Intermediate Site Survey and the Initial Site Survey shall be depicted on the survey. The Intermediate Site Survey shall be used or payment purposes for excavation, handling and disposal of contaminated soil.

C. Following completion of construction activities and prior to final acceptance, the Contractor shall perform a detailed physical/topographical survey of the completed work. These drawings shall constitute the Record Drawings for the project.

D. Contractor shall:

1. Provide civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.

2. Develop and make all detailed surveys and measurements needed for construction including slope, stakes, batter boards, pilling and pier layouts and all other working lines, elevations and cut sheets. Arrange for utility mark outs.

3. Keep a transit and leveling instrument on the site at all times and a skilled instrument person employed or obtained whenever necessary for layout of the Work.

4. Provide all material required for bench marks, control points, batter boards, grade stakes, and other items.

5. Be solely responsible for all locations, dimensions and levels. No data other than written order of the Engineer shall justify departure from the dimensions and levels required by the Drawings.

E. The Contractor shall carefully preserve all existing benchmarks, and in the case of disturbance or destruction thereof caused by its Work, Contractor shall be charged with the expense and damage resulting therefrom, and shall be responsible to correct any mistakes that may be caused by the loss or disturbance of such benchmarks at no additional cost to the Department.

F. The Contractor shall establish two (2) permanent survey benchmarks of known elevation measured from a benchmark(s) approved by the Engineer. The benchmarks shall be the reference point for establishing vertical elevations.

1.2 CONTRACTOR'S FIELD ENGINEER

A. The Contractor shall employ and retain at the location of the Work a field engineer and/or superintendent capable of performing all engineering tasks required of the Contractor. Tasks included are:

1. A projection of work to be completed the following week must be submitted to the Engineer by 4:00 p.m. of the preceding work day. This projection must include:

   a. Location of all areas in which construction will be done, including Contractor and his/her Subcontractors.

   b. Major construction equipment utilized.

   c. Equipment and materials to be installed.

2. Provide all surveying equipment required including transit, level, stakes and required surveying accessories.

3. Furnish all required lines and grades for construction operations. Check all form work, reinforcing, inserts, structural steel, bolts, sleeves, piping, other materials and equipment.

4. Maintain field office files, Record Drawings, a complete, accurate log of all control and survey work as it progresses and coordinate

engineering services with Subcontractors. Prepare layout and coordination drawings for construction operations.

5. Check and coordinate Work for conflicts and interferences and immediately advise the Engineer of all discrepancies noted.

6. Cooperate with Engineer in field inspections as required.

7. Follow without delay all instructions of the Engineer or his assistants in the prosecution and completion of the work in conformity with this Contract. The Contractor's representative shall have full authority to supply labor and materials immediately.

8. The Contractor shall also have a competent representative available to receive telephone messages and provide a reasonable reply as soon as possible, but not later than 24 hours.

1.3 QUALIFICATIONS OF SURVEYOR AND ENGINEER

A. All surveys required by this Contract shall be prepared, stamped and signed by a New York State licensed surveyor.

B. The Contractor's field engineer and/or superintendent shall be a qualified engineer as demonstrated by the credentials required to be presented to the Engineer in approval as part of the Work Plan (see Section 01653).

1.4 DATUM

A. All survey work completed by the Contractor shall be based on the horizontal and vertical datum indicated on the Drawings.

1.5 SUBMITTALS

A. In accordance with the requirements of Section 01330, the Contractor shall submit the following:

1. Initial Site Survey (Engineer's approval required prior to commencement of intrusive activities at the site).

2. Intermediate Site Survey (Engineer's approval required prior to backfilling excavations).

3. Record Drawings (Engineer's approval required prior to final acceptance of the work).

B. Contractor shall submit to the Engineer two sets of paper prints and an electronic version for review and approval of each submittal specified in

Paragraph 1.5(A). Electronic versions shall be in AutoCAD version 2002 (or alternate version approved by the Engineer).

C. The paper print of each submittal specified in Paragraph 1.5(A) shall be signed and sealed by a New York State licensed surveyor retained by the Contractor.

D. Final approved versions of each submittal specified in Paragraph 1.5(A) shall be submitted as follows: four (4) sets of paper prints signed and sealed by a New York State licensed surveyor and four (4) sets of compact disks. The surveys shall be saved in AutoCAD version 2002 (or alternate version approved by the Engineer) on the compact disks.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

A. The Initial Site Survey shall be performed prior to the performance of the Work to verify existing site conditions and to establish benchmarks for the completion of Work, as specified. The Initial Site Survey shall show the exact surveyed location and elevation of all Work in relation to the accepted benchmarks and reference points, including, but not limited to:

1. Aboveground and buried utilities.

2. Property boundary and established reference points.

3. Ground surface elevations measured across the entire site at the intersection points of a 25'-0" by 25'-0" grid, as approved by the Engineer.

4. Existing site features (e.g., site structures, limits of paved areas, fence, gates, etc.).

5. Groundwater monitoring well locations and elevations of top of casings to within ±0.01 foot.

B. The Intermediate Site Survey shall show the exact surveyed locations and elevations of all Work in relation to the accepted benchmarks and reference points, including, but not limited to:

1. Property boundary and established reference points.

2. All utilities identified or uncovered during the performance of the Work.

3. Limits of all excavations.

4. Elevation of excavation bottom, measured at the intersection points of a 25'-0" by 25'-0" grid as approved by the Engineer, and volume in cubic feet of soil removed.

5. Elevations and locations of all post-excavation soil samples collected.

C. The Record Drawings shall show the exact surveyed locations and elevations of all Work, as specified in paragraph 1.5(A), in relation to the accepted benchmarks and reference points, including, but not limited to:

1. Property boundary and established reference points.

2. Results of all construction activities.

3. All deviations from the Contract Documents.

D. Vertical coordinates shall be surveyed to the nearest 0.1 foot and horizontal coordinates shall be surveyed to the nearest 0.1 foot.

E. Contractor shall revise and resubmit the survey drawings in accordance with Engineer's comments. Engineer's checking and approval of drawings will apply to content only. Contractor shall be responsible for the accuracy and completeness of its Work.

++ END OF SECTION ++

SECTION 01072

REFERENCE STANDARDS

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

A. When a reference standard is specified, comply with requirements and recommendations stated in that standard, except when they are modified by the Contract Documents, or when applicable laws, ordinances, rules, regulations or codes establish stricter standards. The latest provisions of applicable standards shall apply to the Work, unless otherwise specified. Reference standards include, but are not necessarily limited to, the following:

AMCA	Air Moving and Conditioning Association, Inc.
AASHTO	American Association of State Highway and Transportation Officials.
ABMA	American Boiler Manufacturers Association
ACI	American Concrete Institute
ACIFS	American Cast Iron Flange Standards
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturing Associations
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
ASCE	American Society of Civil Engineers

ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Associations
CGA	Compressed Gas Association
CRSI	Concrete Reinforcing Steel Institute
CMAA	Crane Manufacturers Association of America
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
EJMA	Expansion Joint Manufacturers' Association
Fed Spec	Federal Specifications
FM	Factory Mutual
HMI	Hoist Manufacturers Institute
IEEE	Institute of Electrical and Electronic Engineers
IPCEA	Insulated Power Cable Engineers Association - Nassau County Fire Prevention Ordinance, Article III
NACE	National Association of Corrosion Engineers
NB	National Board of Boiler Pressure Vessels
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NGWA	National Groundwater Association

NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York Department of Transportation
OSHA	Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
RMA	Rubber Manufacturers' Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry
SSPC	Steel Structures Painting Council
STI	Steel Tank Institute
UL	Underwriters Laboratory

B. Contractor shall, when required, furnish evidence satisfactory to the Engineer that materials and methods are in accordance with such standards where so specified.

C. In the event any questions arise as to the application of these standards or codes, copies shall be supplied on site by the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01311

PROJECT MEETINGS

PART 1 - GENERAL

1.1 PRE-CONSTRUCTION MEETING

A. No later than twenty (20) days after the Effective Date of the Agreement between Department and Contractor, and prior to mobilizing to the site, a pre-construction meeting shall be attended by the Contractor. At a minimum, Contractor's project manager, superintendent and Health and Safety Coordinator shall attend the meeting. This pre-construction meeting will be conducted by the Engineer and will include an overview of the construction activities that will be performed at the site, and a review of the responsibilities of the Engineer and Contractor. This meeting will be held at the offices of the Engineer.

B. The preconstruction meeting shall address procedures and processing of submittals, substitutions, change orders, applications for payment, proposals, field changes and contract closeout will be discussed. Contractor's schedule will also be reviewed. The pre-construction meeting shall also address specific requirements of the Department, including the limitations of use of the available facilities by the Contractor and access to the work by the Department.

1.2 PROJECT MEETINGS

A. Project meetings will be held once every week that Work is performed at the site.

B. The purpose of the project meetings will be to discuss Work progress, plan work activities for the upcoming week and discuss any unanticipated site conditions encountered.

C. The Engineer shall conduct the project meetings. The Contractor shall be responsible for attending all project meetings.

D. The following is the suggested agenda for progress meetings:

1. Review and approval of minutes of previous meeting.

2. Review of work progress since the previous meeting.

3. Field observations, problems, conflicts.

4. Problems which impede construction and proposed corrective actions.

5. Review of delivery and submittal schedules.

6. Revisions to the construction schedule.

7. Anticipated progress during the succeeding work period.

8. Coordination of schedule.

9. Maintenance of construction quality, and health and safety standards.

10. Identification of pending changes and substitutions and review of pending changes for effect on construction and project completion date.

11. Other matters, as appropriate.

E. Contractor personnel must attend each project meeting and shall include, at a minimum, Contractor's superintendent.

F. If required by the Department or Engineer, a representative of any Subcontractor used by the Contractor shall attend any requested progress meetings.

G. It is anticipated that in addition to the Engineer and Contractor personnel, the progress meetings may be attended by representatives of the Department.

H. All progress meetings will be held at the project site.

I. Site inspections may be performed as a component of the progress meetings.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

+ + END OF SECTION + +

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Contractor shall submit all items specified in this Section and specified in the other sections of the Contract Documents. The Engineer may request submittals in addition to those listed when deemed necessary to adequately describe the Work covered in the Contract Documents and the Contractor shall submit such submittals at no additional cost to the Department.

B. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with the requirements of the Contract Documents. Prior to submittal, all items shall be checked and approved by the Contractor. Proposed deviation(s) from the requirements of the Contract Documents shall be clearly identified.

C. Submittals shall include items such as: Contractor's drawings; descriptive literature including, but not limited to, catalog cuts, diagrams, operating charts or curves; test reports; samples; certifications; warranties; and other such required submittals.

D. Submittals requiring approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. The Contractor shall revise submittals in accordance with comments from the Engineer and resubmit revised submittals, as required to obtain approval.

E. Refer to Section III, Article 5 of the Contract Documents for additional submittal requirements.

1.2 SUBMITTAL PROCEDURES

A. The Contractor shall submit six (6) copies of all submittals to the Engineer, unless otherwise specified.

B. Submittals shall be transmitted with a transmittal sheet providing date; project title; contract number; Contractor's name, address and telephone number; title of enclosed submittal(s); and name, telephone number, title and signature of Contractor's authorized representative responsible for preparing the submittal and revising the submittal in response to comments from the Engineer and the Department.

C. All submittals shall be bound, properly labeled and consecutively numbered. In a clear space above the title block, or on the back, the Contractor shall hand stamp the following, and enter the following information:

OWNER

NAME OF PROJECT

Contract No. _____

Equipment Identification No. _____

Contract Drawings No. _____

Specification Section:_____

I hereby certify that all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto have been reviewed with the requirements of the Work and the Contract Documents. The information herein has been coordinated with other Shop Drawings and samples, as well as, all involved CONTRACTORs.

CONTRACTOR _____

Signed/Date _____

1.3 SUBMITTALS

A. The following provides a list of the major submittals required by the Supplementary Specifications:

1. Sampling Plan. Requires approval prior to mobilization to the site. (Submitted within five days of notification that the bidder is the apparent low bidder)

2. Health and Safety Plan. Requires approval prior to mobilization to the site. (Submitted within five days of notification that the bidder is the apparent low bidder)

3. Work Plan. Requires approval prior to mobilization to the site. (Submitted within five days of notification that the bidder is the apparent low bidder)

4. Construction QA/QC Plan. Requires approval prior to mobilization to the site. (Submitted within 5 days of notification that the bidder is the apparent low bidder.)

5. Project Record Documents and Site Survey(s)

6. Any other submittals required by the Contract Documents.

1.4 SHOP DRAWINGS

A. Shop drawings, where required, shall be furnished to the Engineer for approval at a minimum 30 days prior to initiating associated work. Approval from the Engineer is required for each shop drawing prior to mobilizing any personnel, equipment, materials and supplies to the site. Refer to Section VIII, Article 5 of the Contract Documents for additional requirements regarding shop drawings.

1.5 OTHER SUBMITTALS/REQUIREMENTS

A. The Contractor shall submit to the Engineer copies of all waste manifests, waste characterization forms and Chain of Custody forms.

B. Copies of all correspondence issued by the Contractor to regulatory agencies, including all applications for permits, licenses and approvals, shall be submitted to the Department and the Engineer at the time of transmittal to the regulatory agency.

C. The Contractor shall provide all other submittals as required by the Contract Documents or as requested by the Engineer.

D. After approval of any and all submittals, the Engineer must be notified by the Contractor in writing a minimum of 14 calendar days prior to making any proposed changes or within 24 hours of making any unavoidable changes. All changes shall require the approval of the Engineer.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01342

SAMPLES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Samples shall be submitted by the Contractor where required in the Specifications or as otherwise requested by the Department or Engineer of any material to be used and of the finish to be applied in the Work for approval by the Engineer.

B. Samples and shop drawings which are related to the same unit of Work or Specification section shall be submitted at the same time. If related shop drawings and samples are submitted at different times, they cannot be reviewed until both are furnished to the Engineer.

C. Samples shall be furnished so as not to delay fabrication, allowing the Engineer reasonable time for the consideration of the samples submitted.

D. Accepted samples shall establish the standards by which the completed work shall be judged.

E. Samples shall be of sufficient size or quantity to clearly illustrate the quality, type, range of color, finish or texture and shall be properly identified.

F. Samples shall be checked by the Contractor for conformance to the Contract Documents before being submitted to the Engineer and shall bear the Contractor's stamp of approval certifying that they have been checked.

G. If samples are disapproved, the Contractor shall make all corrections required and shall resubmit the required number of new samples until approval is received.

H. Samples remaining upon completion of the Work shall be disposed of by the Contractor in accordance with manufacturer's Material Safety Data Sheets (MSDSs), and in accordance with all Federal, State and local laws and regulations.

I. Refer to Section VIII, Article 5 of the Contract Documents for additional requirements regarding samples.

1.2 SUBMITTAL PROCEDURES

A. The Contractor shall submit a total of four (4) samples to the Engineer, unless otherwise specified.

B. Samples shall be submitted with a transmittal sheet providing date, project title, contract number, Contractor's name, address and telephone number, title of enclosed sample(s), material supplier, use for which intended, and name, telephone number, title and signature of Contractor's authorized representative responsible for preparing the submittal and revising the submittal in response to comments from the Engineer and Department.

C. All samples shall be properly labeled and consecutively numbered. In a clear space above the title block, or on the back, the Contractor shall hand stamp the following, and enter the following information:

OWNER

NAME OF PROJECT

Contract No. _____

Equipment Identification No. _____

Contract Drawings No. _____

Specification Section: _____

I hereby certify that all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto have been reviewed with the requirements of the Work and the Contract Documents. The information herein has been coordinated with other Shop Drawings and samples, as well as, all involved CONTRACTORs.

CONTRACTOR _____

Signed/Date _____

1.3 SAMPLES

A. Samples, where required, shall be furnished to the Engineer for approval at a minimum 30 days prior to initiating associated work. Any work performed prior to the Engineer's review and approval or the pertinent submittal will be at the sole expense of and responsibility of the Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01392

MODIFICATIONS TO MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY

PART 1 - GENERAL

1.1 SUMMARY

This section modifies the Standard Specifications in Section X: Spec 00003, Minimum Requirements for Health and Safety:

A. Delete the following from Section 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."

B. Section 1.17, Emergency Responses/contingency Plan and Procedures, The Master Telephone list shall be revised as follows:

Fire Department	911
Police Department	911
Ambulance	911
Hospital/Emergency Care Facility	(516) 663-0333
Poison Control Center	(800) 222-1222
Chemical Emergency Advice (Chemtrec)	(800) 424-9300

NYSDEC (Albany Office)	*Work Hours:* (518) 402-9622 *After Hours:* (800) 342-9226 (leave message)
NYSDEC (Region 1 Office)	*Work Hours:* (631) 444-0204
Nassau County Department of Health	(516) 571-3410
New York State Department of Health, Division of Environmental Health	(800) 458-1158

+ + END OF SECTION + +

SECTION 01400

PROJECT SIGN

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor, upon receipt of Notice to Proceed, shall furnish all labor, materials, equipment, facilities and incidentals necessary to furnish and install a Project Sign at the site indicating the project as a State of New York funded project.

B. The Contractor shall install the Project Sign at a location designated by the Engineer adjacent to the site entrance.

C. No signs, except those specified, shall be displayed at the site.

1.2 PERMITS AND REGULATIONS

A. The Contractor shall obtain all necessary permits, variances and approvals for the Work as required by federal, state and local agencies.

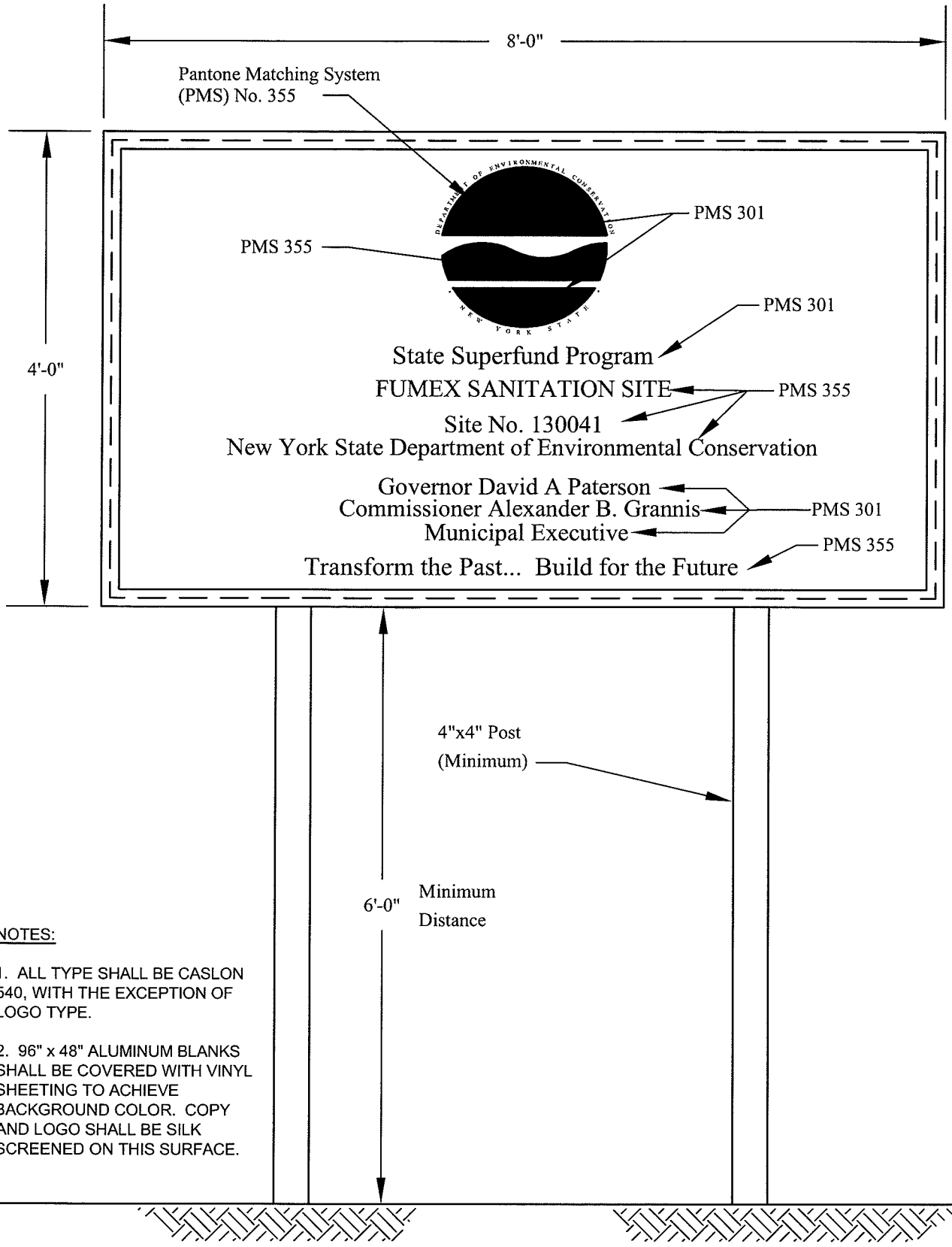
PART 2 – PRODUCTS

2.1 PROJECT SIGN

A. The Project Sign (see Figure 1) shall be 4 feet high by 8 feet wide, and constructed of aluminum or wood blank sign boards with vinyl sheeting.

B. Copy surrounding NYSDEC logo shall be:

Text	Pantone Matching System (PMS) Shade
"NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION"	PMS 355 Green
NYSDEC logo	PMS 301 Blue PMS 355 Green
State Superfund Program	PMS 301 Blue



NOTES:

1. ALL TYPE SHALL BE CASLON 540, WITH THE EXCEPTION OF LOGO TYPE.

2. 96" x 48" ALUMINUM BLANKS SHALL BE COVERED WITH VINYL SHEETING TO ACHIEVE BACKGROUND COLOR. COPY AND LOGO SHALL BE SILK SCREENED ON THIS SURFACE.

FUMEX SANITATION SITE

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

PROJECT SIGN

FIGURE No. 1

\\Nt4\cadwork\2602\DWG\2602-7.dwg, FIG1, 4/30/2008 8:01:24 AM, MDeVinney

Text	Pantone Matching System (PMS) Shade
Site Name, Site Number, Party Performing Remedial Activities	PMS 355 Green
Names of Governor, Commissioner, Municipal Executive	PMS 301 Blue
Transform the Past....Build for the Future	PMS 355 Green

C. All type shall be Caslon 540, with the exception of the logotype. Form shall be: center each line of copy with small caps and initial caps.

D. 96" wide x 48" high aluminum blanks shall be covered with vinyl sheeting to achieve background color. Copy and logo shall0 be silk screened on this surface.

E. The legend, layout and text of the Project Sign shall be as indicated on Figure 1.

PART 3 – EXECUTION

3.1 GENERAL

A. The sign shall be erected on two 4 inch by 4 inch pressure treated posts or similarly suitable material such as Western Cedar. The posts shall be imbedded a minimum of 30 inches below grade. The sign shall be erected plumb and level, and such that the bottom of the sign is 6 feet above ground surface.

+ + END OF SECTION + +

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. All temporary facilities and controls shall be provided in the manner and by the Contractor as designated herein.

B. The Contractor shall initiate, establish and maintain use of each temporary facility, including telephone service, electrical power and lighting, and potable water, throughout the performance of construction work and until the date of acceptance of construction by the Department unless specifically directed otherwise by the Department.

C. The Contractor shall install, operate, maintain and protect temporary facilities and utilities, including telephone service, electrical power and lighting, and potable water, in a manner which will be safe, non-hazardous, sanitary and protective of persons and property. Temporary facilities shall be located within the contract limits and in accordance with the Contractor's prepared approved submittals.

D. The Contractor shall be responsible for the operation and maintenance of all systems and temporary facilities to assure that necessary services are provided without disruption.

E. The Contractor shall coordinate and install all temporary facilities and controls in accordance with the requirements of the local authorities and utility companies having jurisdiction and in accordance with all federal, state and local codes, laws and regulations.

F. At the completion of the construction work, or when the temporary facilities and controls are no longer required, subject to the approval of the Department, the temporary facilities and controls shall be removed and the facilities restored to their original conditions by the Contractor.

G. All costs in connection with the temporary facilities and controls including but not limited to, installation, maintenance, relocation and removal shall be borne by the Contractor at no additional cost to the Department.

H. All facilities, equipment and utilities furnished under this section shall be provided and maintained in good working order at all times. In addition, the Contractor shall furnish daily janitorial services. All electrical and telephone utility costs shall be paid for by the Contractor.

1.2 TEMPORARY UTILITIES

A. Temporary Electrical Facilities:

1. Electrical power is not available for use by the Contractor at the site. The Contractor shall furnish and install a new electrical service for the facility, including Long Island Power Authority (LIPA) coordination, as required. The Contractor shall provide electrical connections to the power source as necessary to accommodate construction operations, including the operation of field offices, use of power tools and lighting. The Contractor shall determine the electrical loads prior to submitting his/her bid; contact LIPA regarding the requirements and origination point of the service; and determine local requirements.

2. Contractor shall submit the following for approval by Engineer prior to installation:

   a. Site plan locating padmount transformers, metering, related conduit and wiring for the temporary electrical facilities system.

   b. Copies of all utility company correspondence.

   c. Service capacity and electrical load of the facility.

3. Work Included: Temporary work shall include the following:

   a. Furnish and install temporary electrical facilities system.

   b. Furnish and pay for all labor, material and equipment for the installation of the temporary electrical services facility system. The installation shall comply with all applicable requirements of the National Electrical Code and any other codes or bodies having jurisdiction, including LIPA.

   c. Furnish and pay for all labor, material and equipment for the maintenance of the temporary electrical facilities system.

   d. Furnish and pay for labor, materials and equipment for removing all temporary electrical facilities.

4. The Contractor shall be responsible for all electrical usage charges (energy and demand costs) related to the temporary electrical system. Payments shall be made according to LIPA requirements on the basis of utility bills.

5. Requirements:

   a. Temporary electrical facilities system shall be as herein specified, and shall be provided no later than 45 days after the date of Notice to Proceed with Construction.

6. Temporary Electric Service Point:

   a. Contractor shall furnish and install LIPA metering equipment, distribution circuit breakers or fused switches, panelboards, poles for overhead lines, wire and conduit as required for the temporary electrical facilities. All work shall conform to the requirements of LIPA, the National Electrical Safety Code and the National Electrical Code.

   b. Contractor shall furnish and install power feeds from the Temporary Electric Service Point as required for the Contractor's field offices and Engineer's/Department's office trailer.

   c. Distribution circuit breakers or fused switches shall be furnished and installed for disconnection and overcurrent protection of the temporary electrical facilities fed from the service point.

   d. At the completion of construction, as determined by the Department, the Contractor shall remove the temporary electric service point equipment in its entirety including all overhead lines and poles, wire and conduit.

7. Contractor's Field Offices and Engineer's/Department's Office Trailer:

   a. Contractor shall extend the service from the Temporary Electric Service Point to the Contractor's field office and the Engineer's/Department's office trailer.

   b. The Contractor shall furnish and install distribution circuit breakers or fused switches, transformers, wiring and conduit as required for the services to the field offices.

   c. At the completion of construction, as determined by the Department, the Contractor shall remove the services to the field offices, including all related electrical equipment.

8. Additional Facilities:

a. Should any portion of any Contractor's work require light or power in addition to that supplied by the temporary electrical facilities herein described, he/she shall furnish, install and maintain such additional temporary lighting and power facilities at his/her own expense. Additional temporary lighting shall be sufficient for safe access to and egress from such work, and for safe expeditious construction.

b. The installation of additional facilities shall comply with all applicable requirements of the National Electrical Code and any other codes of enforcing bodies having jurisdiction, and shall be installed so as not to interfere with the work of other Contractors.

c. Upon completion of the work under his/her contract, the Contractor responsible shall remove all additional facilities installed by him/her.

B. Temporary Water:

1. The Contractor shall make potable water available as needed at the site for consumption by site personnel and for the performance of all construction operations.

2. The Contractor shall be responsible for supplying and storing potable water. The Contractor shall be required to obtain the Engineer's approval of the sources of all water delivered to and used at the site, prior to delivery and use.

C. Sanitary Facilities:

1. The Contractor shall provide a suitable number of self-contained toilet (Port-O-John) units for use by the Engineer, Department and each Contractor's personnel.

2. Sanitary facilities shall be maintained on a regular basis by the Contractor and when directed by Engineer.

3. The Contractor shall provide separate facilities for male and female personnel.

D. Trash Disposal:

1. Contractor shall make arrangements for off-site disposal of trash not less than weekly. All garbage and miscellaneous material

collected during performance of the Work shall be properly disposed. Prior to being sent off-site, all trash must be temporarily staged on-site in an orderly manner acceptable to the Department.

E. Temporary Telephone Service:

1. The Contractor shall install temporary telephone service to the Contractor's office trailer and the Engineer's/Department's office trailer.

F. DSL Internet Service:

1. The Contractor shall install temporary DSL internet service or alternate high speed internet service as approved by the Engineer, to the Contractor's office trailer and the Engineer's/Department's office trailer.

1.3 TEMPORARY HEATING AND VENTILATION

A. The Contractor shall provide temporary heat and ventilation as required for work carried on during cold weather and to prevent damage to the work of the Contractor. Temporary heat shall be provided to maintain a minimum of 55°F on a 24 hour a day, 7 day per week basis within all structures throughout the Contract Time. The Contractor shall provide all temporary heating and ventilation at no additional cost to the Department. Additional heat shall be furnished when and as directed by the Engineer.

1.4 CONTRACTOR'S FIELD OFFICE

A. The Contractor shall furnish and maintain a suitable single field office during the period of construction. Copies of the Contract Documents shall be kept at all times at said office.

B. Each field office shall be located within the contact limits.

C. Refer to paragraph 1.11 for additional requirements.

1.5 ENGINEER'S/DEPARTMENT'S OFFICE TRAILER

A. The Contractor shall furnish, install, operate and maintain during the period of construction, an approved separate weatherproof Engineer's/Department's office trailer ("Office Trailer") as describe herein, within the contract limits. Use and occupancy by the Engineer/Department shall be made available during construction and shall be so continued for a period not to exceed two months after the construction work has been accepted by the Department. No construction shall be started until the Office Trailer is installed, furnished as herein specified, and made

available to the Engineer/Department. The Office Trailer shall be erected at a location approved by the Engineer. The Engineer's/Department's office trailer shall be separate from any office used by the Contractor.

B. The trailer shall be structurally sound and weathertight, with floors raised above ground and open to allow free circulation of air.

C. The trailer shall be provided with the following:

1. Lighting: electric, non-glare type producing a minimum illumination level of 50 foot-candles measured at desk height and exterior lights at entrances.

2. Heating and cooling: capable of maintaining ambient temperatures within the structure of 70 degrees Fahrenheit (plus or minus three degrees).

3. Potable bottled water.

4. Fire extinguisher: non-toxic dry chemical type, UL-approved for Class A, B and C fires (minimum rating of 2A, 10B, 10C).

D. The Office Trailer shall be placed on concrete blocks and leveled, with adequate wooden steps and handrails provided at each exterior door. The trailer and associated equipment shall be new or recently renovated to a like-new condition subject to the Engineer's approval. The interior shall consist of a pastel-shade paneling and fluorescent ceiling lights. The Office Trailer shall be provided with proper safety features in accordance with applicable NFPA standards and shall meet the requirements of applicable building codes.

E. The Office Trailer shall contain two partitioned offices with locking doors, each having a minimum of 96 square feet of floor area to be utilized by the Engineer and the Department. The door locks and keys shall be different for the Engineer, Department and the Contractor's offices. Each office shall contain at least four operable windows, which are equipped with functioning blinds and security guard screens.

F. Each of the two offices shall be supplied with the following equipment:

1. One (1) office desk with lockable drawers, one (1) swivel chair and one (1) table (60 inches by 30 inches laminated top).

2. Telephone with answering machine. The telephone shall have a minimum of 12 feet of cord.

3. Shelf set, two shelves 12 inches deep by 3 feet long (attachable to wall). Attachment shall be performed by Contractor at the direction of Engineer.

4. One (1) waste basket.

5. One (1) bulletin board, measuring 4 feet by 6 feet.

6. Plan rack.

7. Coat rack and hooks.

8. Two (2) four–drawer filing cabinets with lock. The filing cabinets shall be new, commercial quality and shall be legal size with full suspension drawer slides. Color shall be black. Upon completion of the project, the filing cabinets shall become the property of the Department. The Contractor shall remove the cabinets from the trailer and deliver them to the designated offices of the Department.

G. The Office Trailer shall contain one partitioned meeting area having a minimum of 140 square feet of floor area. The meeting area shall contain the following equipment:

1. Eight (8) straight-backed chairs.

2. One (1) bulletin board, 4 feet by 6 feet.

3. One (1) waste basket.

4. One (1) paper towel dispenser with towels. The supply of towels to be replenished by the Contractor as required by the Engineer.

5. Plain paper fax machine with a dedicated telephone line, built in telephone, auto-dial and auto-receive features.

6. One (1) office table with laminated top 3 feet by 8 feet.

7. One (1) paper cup dispenser with cups. The supply of cups to be replenished by the Contractor as required by the Engineer.

8. One (1) operational water cooler with built-in refrigerator. Supply of water to be replenished by the Contractor as required by the Engineer.

9. One (1) drafting table (3 feet by 6 feet) with a drafting stool.

10. One (1) coat rack and clothes hanger.

11. First aid kit suitable for 10 people with manual, American White Cross No. K10 or equal.

12. One (1) operational coffee pot with a capacity of 10-cup minimum. Contractor shall provide coffee for the coffee pot.

13. Duplicating machine, capable of producing 8 1/2 by 11 inch and 11 by 17 inch copies. The copy machine shall also be capable of producing enlarged or reduced copies.

H. The Contractor shall install at a location designated by the Engineer, one (1) Dell (no substitution) Intel Core 2 Duo 2.0 gigahertz or greater notebook computer equipped with, at a minimum, 15.0-inch wide aspect SXGA LCD display, 8X DVD +/-RW Burner, 1.0 GB of DDR2-667 SDRAM memory, a 60-gigabyte hard drive, one 56K V.92 modem and integrated 10/100 Ethernet and one Dell Laser Jet printer. The computer shall be equipped with Microsoft Windows XP, Norton Antivirus 2007, Microsoft Office 2007, or latest version. The computer shall be equipped with a surge protector, leather carrying case and all necessary cables. All licenses and warranties shall be in the name of the Contractor. The Contractor shall be responsible for installation of the computer in working order. Full e-mail and DSL internet services shall be provided and maintained by the Contractor for the Engineer's use throughout the construction period. The Contractor shall maintain ownership at the completion of the Contract.

I. The Contractor shall be responsible for the cost of the internet service and all long distance and local calls made from the Engineer's/Department's field office.

J. A sign shall be furnished on the outside of the Engineer's/Department's field office. The sign shall be 3 feet x 4 feet x 3/4 inch thick marine plywood with white background and black letters. The sign shall read:

FIELD OFFICE
NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
TELEPHONE (include number when available)

K. The Contractor shall maintain service contracts and pay all costs for service, repair and parts for the duration of the project, for the furnished items listed below. The items listed below shall become the property of the Department upon completion of the project.

1. Duplicating machine

2. Facsimile machine

3. Computer and accessories

L. The Contractor shall supply and replenish as necessary, all expendables for the duration of the project for the following furnished items:

1. Duplicating machine toner, paper, etc.

2. Facsimile machine paper, toner cartridges, etc.

3. First aid supplies

4. Drinking water and disposable cups

5. Computer paper, toner cartridges, etc.

6. Paper towels and tissues.

M. Upon final acceptance of construction by the Department, the Contractor shall remove and assume possession of all of the items furnished by the Contractor (except as otherwise noted), less expendables, for the Office Trailer. The Contractor shall not make claim for any loss or damage to these items resulting from theft, vandalism, or normal wear and tear associated with the use of the items or due to the environment associated with a construction site.

N. The Contractor shall pay all costs and fees associated with supplying electric, telephone and internet services to the office trailer and shall pay all utility bills for the duration of the project, including power necessary for heat and air conditioning.

O. The Contractor shall provide janitorial services for the Office Trailer. These cleaning services shall, at a minimum, consist of sweeping the floors and emptying the wastepaper baskets on a daily basis, and mopping the floors on a weekly basis. The janitorial services shall be provided during the normal hours of operation for construction.

P. The Contractor shall install four private telephone lines in the Office Trailer for the exclusive use of the Engineer. Telephone jacks shall be located as directed by the Engineer. The Contractor shall furnish and install two telephones, two line type, each with speakerphone capability. The third telephone line shall be dedicated and connected to the facsimile machine. The fourth telephone line shall be dedicated and connected to the modem of the computer. The Contractor shall pay all fees, activation and installation charges associated with the telephone service and shall pay all monthly charges and usage charges (local, long distance and toll calls) for the duration of the project. The Contractor shall arrange for and pay all fees for an internet service provider selected by the Engineer.

Q. Two months after the acceptance of construction by the Department or when ordered by the Engineer, whichever is sooner, the Office Trailer together with equipment and facilities furnished by the Contractor (except for those items above which will become the property of the Department) shall revert to the Contractor who shall remove them and leave the site in a satisfactory condition, as approved by the Engineer. The Contractor shall remove and properly dispose of the temporary parking area, stairs, platforms, plywood skirt, supports, telephone poles, electrical facilities and poles, garbage cans, dumpsters, etc. and remove the Office Trailer from the project site. The area will be restored to preexisting condition to the satisfaction of the Department and the Engineer.

1.6 FIRST AID

Contractor shall furnish and keep on the site, at each location where work is in progress, a completely equipped first aid kit and shall provide ready access thereto at all times when personnel are employed on the Work.

1.7 UNIFORM GUARD SERVICE

It is anticipated that a roving watchman will not be necessary on this Contract. However, should the Contractor elect to leave any trench or excavation open after normal working hours, then the Department will require that a watchman be stationed at the site for all of the nonworking hours until backfilling is complete.

1.8 PROTECTION OF WORK AND MATERIALS

A. Protection Requirements:

1. During the progress of the Work and up to the date of Final Completion, the Contractor shall be solely responsible for the care and protection of all Work and materials covered by the Contract. In order to prevent damage, injury or loss, actions shall include, but not be limited to, the following:

   a. Store apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with the progress of the Work or the work of any others.

   b. Provide suitable storage facilities for all materials which are subject to injury by exposure to weather, theft, breakage, or otherwise.

   c. Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.

d. Clean up daily all refuse, rubbish, scrap materials, and debris caused by Contractor's operations, to the end that at all times the site of the Work shall present a safe, orderly and workmanlike appearance.

e. Provide barricades and guard rails around openings, for scaffolding, for temporary stairs and ramps, around excavations, elevated walkways and other dangerous areas as deemed necessary by the Department.

2. The Contractor shall protect the existing Work and material from damage by his/her workmen and shall be responsible for repairing any such damage at no additional cost to the Department.

3. The Contractor shall protect trees, shrubbery and other natural features or structures from being cut, trimmed or injured during completion of the Work, except as required to complete the Work, as specified herein and as shown on the Contract Drawings.

4. All Work and materials shall be protected in accordance with the requirements of the Contract Documents and as specified and directed by the Department.

B. Maintenance of Egress:

1. During the course of construction Work, the Contractor shall maintain and keep free of debris, materials or equipment points of egress at the facility.

C. Protection of Existing Structures:

1. Underground structures

a. Underground structures are defined to include, but not be limited to, all sewer, water, gas, and other piping, manholes, wells, electrical and signal conduits, and other existing subsurface work located within or adjacent to the limits of the Work.

b. All underground utilities known to the Engineer are shown on the Drawings. This information is shown to assist the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete.

c. Contractor shall explore ahead of his/her trenching and excavation Work and shall uncover all obstructing underground structures sufficiently to determine their

location, to prevent damage to them and to prevent interruption of the services which such utilities provide. If the Contractor damages an underground utility, he/she shall restore it to its original condition at his/her expense.

d. Necessary changes in the location of the Work shall be submitted to the Engineer for approval to avoid unanticipated underground utilities.

e. All utilities shall be protected at all times and the Contractor shall repair any damages caused by him/her at no additional cost to the Department.

2. Surface Structures: All existing surface facilities, including but not limited to guard rails, posts, fences, guard cables, signs, poles, markers, and curbs, which are temporarily removed to facilitate installation of the Work shall be replaced and restored to their original condition at Contractor's expense.

D. Protection of Products:

1. Control traffic to prevent damage to equipment, materials and surfaces.

2. Provide covering to protect equipment and materials from damage.

E. Protection from Flood:

1. The Contractor shall not allow any areas of the Work to flood. The Contractor shall keep all existing and new facilities within his/her Work area free of all accumulations of water.

1.9 STAGING AREAS, PARKING, STORAGE AND WORK AREAS

A. Contractor's Staging Areas:

1. The Contractor's staging areas shall be as submitted and approved by the Engineer.

2. The Contractor shall be responsible for repairs to existing fencing, grading, placing and maintaining crushed stone surfacing throughout staging areas or any other work area as required.

3. After the completion of the construction work, as determined by the Department, the staging area shall be leveled, drained, graded and restored by the Contractor, as directed by the Department.

4. The Contractor shall provide a drainage system, approved by the Engineer, such that no ponding of water shall occur in the staging area and adjacent areas.

B. Parking, Storage and Work Areas:

1. The Contractor shall maintain suitable parking and storage areas for his/her use acceptable to the Department and the Engineer on and/or off the project site.

2. Contractor shall utilize the area designated by the Department as his/her specified work areas.

3. The Contractor will be required to arrange his/her work and dispose of his/her materials in such manner as to cause the least interference with the work and storage of materials of other Contractors working within the same area.

4. No Contractor shall claim exclusive occupancy of areas within or adjacent to the limits of his/her work under this Contract. The Department and its employees and the Contractors for other contracts shall also have access to these areas.

5. The Contractor shall modify any storage areas to cause minimum disturbance to existing occupants of the facility, and shall comply with the directions of the Department. At the completion of the Work, the surfaces of the land used for storage areas shall be restored by the Contractor to the satisfaction of the Department and the Engineer.

1.10 SECURITY

A. Contractor shall safely guard all Work, materials, equipment and property from, loss, theft, damage and vandalism. Contractor's duty to safely guard property shall include the Department's property and other private property from injury or loss in connection with the performance of the Work.

B. Contractor shall make no claim against the Department for damage resulting from trespass.

C. Contractor shall make good all damage to property of Department and others arising from failure to provide adequate security.

D. If existing fencing or barriers are breached or removed for purposes of construction, Contractor shall provide and maintain temporary security

fencing equal to the existing in a manner satisfactory to the Engineer and Department.

E. Maintain the security program throughout construction until the date of Substantial Completion and occupancy precludes need for the Contractor's security program.

F. As required by the Engineer, all Contractor's employees shall be issued identification badges which shall be displayed at all times.

1.11 CONTRACTORS' FIELD OFFICES

A. Contractor shall furnish and maintain a field office for their use during the period of construction. Contractor shall provide their own telephone service and shall have readily accessible, at the field office, copies of the Contract Documents, latest approved Shop Drawings and all project-related correspondence, Change Orders, etc.

B. The Contractor's field office shall be located in the designated staging area as approved by the Engineer.

C. Contractor shall provide a Contractor's field office with the minimum facilities specified. Provide all required storage and work sheds.

1. Field Office and Furnishings:

   a. Acceptable appearance, weatherproof building with lockable door.

   b. Telephone service.

   c. Six protective helmets for visitor's use.

   d. Exterior identifying sign.

   e. Company sign no larger than 4 feet by 8 feet.

2. Remove office and sheds upon Final Completion unless otherwise approved by Engineer.

1.12 ACCESS TO PROJECT SITE

Access route shall be as designated by the Department and as shown on the Drawings. Access to the site shall be limited to the hours of operation as specified herein. The Contractor shall arrange and limit all vehicle movements, material deliveries, etc., to the prescribed hours of operation. Exception to this provision shall only be made with the express written permission of the Department.

1.13 CONTRACT LIMITS

A. The lands upon which the Work is to be performed, rights of way for access thereto, and such other lands which are designated for the use of the Contractor are presented on the Contract Drawings. For the purposes of this Contract, the Contract Limits shall be as depicted on the Drawings.

B. For the purpose of providing and connecting to utilities and related services (telephone, electric, etc.), as well as to complete the required work, it will be necessary for the Contractor to undertake work outside the Contract Limits. Such work areas shall be presented to the Engineer for written approval prior to undertaking said work. The Contractor shall be required to apply for and obtain all permits and approval from the utility companies, Town of North Hempstead, County of Nassau and State of New York.

C. The Contractor shall restore any and all existing above ground and below ground structures within the Contract Limits and on public and privately owned property which are removed, damaged or in any way altered by the Contractor. The existing structures shall be restored to existing conditions as part of completion of the Work.

D. Access to the portion of the site where work is taking place shall be restricted at all times to authorized Contractor, Department and Engineer personnel.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01560

ENVIRONMENTAL CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall furnish all labor, materials, equipment and incidentals necessary to perform all Work required for environmental protection in accordance with all federal, state and local laws and regulations, and as directed by the Department. For the purpose of these Specifications, environmental protection is defined as the retention of the environment in its natural state to the greatest extent possible during the Work. Environmental protection includes protection of air, water and land resources, and involves elimination of noise, dust, vapors, solid waste management and management of other pollutants.

B. The Contractor shall provide and maintain methods, equipment, and temporary construction, as necessary to provide controls over environmental conditions at the construction site and adjacent areas. Remove physical evidence of temporary facilities at completion of Work.

C. All waste resulting from Work activities shall be removed and disposed of at an approved facility at no additional cost to the Department in accordance with applicable federal, state and local laws and regulations, and the requirements of the Contract Documents. The Contractor, prior to requesting final acceptance of the Work, shall remove such materials from each work area.

D. Disposal in and adjacent to the site of any debris, wastes, effluents, trash, garbage, oil, grease, chemical, etc., resulting from the Work will not be permitted. If any waste material is placed in unauthorized areas, the Contractor shall remove the waste and restore the area to its original condition. If necessary, soil contaminated from such unauthorized disposal operation shall be excavated, disposed of as directed by the Department, replaced with general fill, compacted and seeded or paved in accordance with these Specifications at no additional cost to the Department.

E. The Contractor shall take all necessary measures to control the release of odors and vapors. These measures will be employed at the Contractor's expense following approval by the Engineer.

F. The Contractor shall take all necessary measures, as approved by the Engineer, to minimize interference with or disturbance of fish and wildlife.

G. The Contractor shall not pollute any surface waters or groundwater with fuels, oils, bitumens, calcium chloride, acids, insecticides, herbicides or other harmful materials.

H. Related Work Specified Elsewhere:

1. Section 02112, Soil Erosion and Sediment Control.

1.2 NOISE CONTROL

A. Contractor's vehicles and equipment shall be installed and operated such as to minimize noise to the greatest degree practicable. Noise levels shall conform to the latest OSHA standards and local codes. In no case will noise levels be permitted which interfere with work of others or nearby residential areas.

1.3 DUST CONTROL

A. The Contractor shall take all necessary measures to prevent the migration of dust off-site due to the Work activities. No oils, calcium chloride or contaminated liquids other than potable water shall be used for dust control.

1.4 PEST AND RODENT CONTROL

A. Contractor shall provide rodent and pest control as necessary to prevent infestation of construction or staging areas.

1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.

1.5 WATER CONTROL

A. The Contractor shall schedule and conduct all Work in a manner that will prevent the erosion of soils and release of soils and water from the Work area. See Section 02112, Soil Erosion and Sediment Control.

B. Contractor shall provide methods to control surface water and water from excavation structures to prevent damage to the Work, the site, or adjoining properties.

1. Control fill, grading and ditching to direct water away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff courses so as to prevent any erosion, damage or nuisance.

C. Provide, operate and maintain equipment and facilities of adequate size to control surface water.

D. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas and in conformance with all environmental requirements.

E. Any discharge of drainage water shall comply with New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) requirements found at 6 NYCRR Part 750. Contractor shall be responsible for obtaining any SPDES permits required for such discharges.

1.6 POLLUTION CONTROL

A. The Contractor shall provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.

B. The Contractor shall provide equipment and personnel and perform emergency measures required to contain any spillages and to remove contaminated soils or liquids resulting from the Contractor's operations.

1. Excavate and dispose of any contaminated earth off-site, and replace with suitable compacted fill and topsoil.

C. The Contractor shall take special measures to prevent harmful substances from entering public waters.

1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary waste or storm water disposal structures.

D. The Contractor shall provide systems for control of atmospheric pollutants.

1. Prevent toxic concentrations of chemicals.

2. Prevent dispersion of harmful pollutants into the atmosphere.

E. All Contractor's equipment used during construction shall conform to all current federal, state and local laws and regulations.

1.7 EROSION CONTROL

A. The Contractor shall plan and execute construction work and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.

1. Hold the areas of bare soil exposed at one time to a minimum.

2. Provide temporary control measures such as berms, dikes and drains, and as specified on the Drawings.

B. Periodically inspect earthwork to detect any evidence of the start of erosion and apply corrective measures as required to control erosion.

C. See Section 02112, Soil Erosion and Sediment Control.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION 01652

SAMPLING PLAN

PART 1 - GENERAL

1.1 DESCRIPTION

A. This Section specifies requirements for sampling and analysis of environmental samples including, but not limited to, baseline groundwater monitoring well samples, waste characterization and endpoint excavation samples.

B. The Contractor shall prepare and submit a site-specific Sampling Plan (SAP) in accordance with the requirements of this section of the Specifications and as directed by the Department.

C. The SAP shall provide a comprehensive description of the procedures to be used for collection and analysis of soil samples, and collection and analysis of samples of all waste generated and requiring characterization during the Work. The SAP shall include, but not necessarily be limited to, procedures for sample collection, labeling, preservation, storage, custody requirements and shipping; sample analysis including analytical methods and quality assurance/quality control; and data reduction, validation and reporting.

D. In preparing and submitting the SAP, the Contractor shall comply with the submittal requirements specified in Section 01330, Submittal Procedures.

1.2 PLAN CONTENT

A. The SAP must include, at a minimum, the information specified below, presented in the sequence it appears below:

1. The number and type of each sample to be collected and analyzed. The SAP shall include a chart reflecting the number of samples to be collected, matrices, sample containers, holding times, time from which holding times shall be measured, preservation techniques, analytical protocols to be used and anticipated QA/QC samples to be collected and analyzed.

2. The list of analytes to be identified and quantified for each analysis.

3. Any special handling procedures that may be required. In identifying analytical protocols, the statement "ASP" is insufficient. The Contractor shall designate by method number the specific

protocol contained in the NYSDEC Analytical Services Protocol (ASP) which shall be used.

4. In accordance with ASP requirements, a table identifying the frequency and types of all required quality control samples including trip blanks, rinse blanks, field blanks, matrix spikes, matrix spike duplicates and matrix spike blanks.

5. The matrix specific detection limits for each of the analytes and matrices listed. (This value should be in the range of 1/5 the specific limit of concern.)

6. List of all field sampling and monitoring equipment, including manufacturers and model numbers, and equipment maintenance and calibration procedures, including the recommended frequency for calibration of all on-site equipment.

7. Description of sample collection methods for each sample matrix, including sample containers, sample custody, sample packaging, storage and shipping procedures.

8. Description of all equipment decontamination procedures.

9. The SAP shall include an organizational chart and identify a designated, qualified Quality Assurance (QA) Officer. The SAP shall include a copy of the QA Officer's résumé and signature page for the QA Officer. The SAP and all revisions shall be signed by the QA Officer prior to submission to the Engineer. The QA Officer shall be within the same geographical area as the project and independent of the analytical laboratory. Additional requirements of the QA Officer are provided below.

10. The SAP shall include the name(s) and qualifications of the laboratory(s) to be used for this project for chemical analyses. The Contractor shall be required to obtain approval from the Engineer for all laboratories to be used on this project.

11. The SAP must state that prior to any deviations from the agreed program, the Engineer shall be notified and the deviation accepted by the Engineer. However, such an acceptance does not limit the full responsibility of the Contractor to meet all requirements of the Contract Documents.

1.3 PLAN REQUIREMENTS

A. Sample Collection and Analysis:

1. Within the SAP the Contractor shall include all applicable information with regard to sample collection for each of the matrices of concern.

2. Samples collected as part of the Work shall be analyzed in such a manner that the resulting data meets and supports data use requirements. The data shall be reported in a manner that assures that the precision, accuracy, representativeness, comparability and completeness requirements included in the approved SAP are achieved.

3. The SAP shall include sufficient direction and detail that on-site personnel can perform all on-site activities, including instrument calibration, instrument maintenance, instrument use, sample collection, sample shipment, and data documentation and reporting.

4. Samples shall be collected as specified and as directed by the Department.

5. Waste generated on-site shall be sampled and analyzed in accordance with the approved SAP. The number of samples, sample collection methodologies, sample analysis methods and rationale for characterizing all waste shall be provided in the SAP and shall be the responsibility of the Contractor. The Contractor shall be responsible for all sampling and analyses as may be required by the disposal facilities. Results of the analyses shall be provided to the Engineer prior to removal of waste from the site.

B. Monitoring:

1. The manufacturer-supplied owner's manual for all instrumentation to be used by the Contractor shall be included in the SAP.

2. In a separate section of the SAP, the Contractor shall provide a step-by-step description of the calibration and maintenance procedures for all instrumentation, including the frequency for each procedure and separate forms to be completed each day to document calibration of equipment and recording of monitoring results.

3. The Contractor's approved QA Officer shall be responsible for calibration, maintenance and operation of all instrumentation.

1.4 GROUNDWATER SAMPLING

A. MW-5, MW-6 and MW-9D are existing monitoring wells. MW-10R and MW-11R are proposed monitoring wells to be installed by the Contracor and must be installed prior to conducting baseline sampling and conducting any remedial activities. Contractor shall collect groundwater samples from monitoring wells MW-5, MW-6, MW-9D, MR-10R and , MR-11R prior to conducting any remedial activities at the site. All groundwater samples shall be analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) by USEPA Method 8260, TCL Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270, TCL pesticides by USEPA Method 8080, Target Analyte List (TAL) metals by USEPA Method 6010 and cyanide by USEPA Method 9010. Ground water samples shall be collected as follows:

1. Note the sample location in the field logbook.

2. Measure the depth of water and total depth using a decontaminated water level indicator and compute the volume of standing water in the well.

3. Remove three to five times the volume of standing water from the well. Collect field measurements including pH, conductivity, temperature, dissolved oxygen and turbidity from the well. Turbidity must be less than 50 NTUs prior to collection of a sample for metals analysis. Greater than 50 NTUs may require waiting a maximum of 24 hours for the turbidity to decrease.

4. Remove the laboratory precleaned sample containers from sample cooler, label container with an indelible marker, fill out Chain of Custody Form (see Section 1.9 and 1.10).

5. Obtain a sample by using a disposable polyethylene bailer. The order in which the samples are collected is: VOC, SVOC, Pesticides, metals and cyanide.

6. If the turbidity exceeds 50 NTUs, then the well should be sampled for all constituents except metals. The well can rest for a maximum of 24 hours until a turbidity reading is less than 50 NTUs, once less than 50 NTUs, the metals sample can be collected.

7. If it is determined in consultation with the Engineer and Department that filtering of the sample is necessary, first collect an unfiltered sample in a sample container, replace the cover on the sample container and label the sample. Next, pour an appropriate amount of the remaining sample from the bailer into a second sample container through a filter medium (0.45 microns) to remove

particulates from suspension. Replace the cover on the sample container and label the sample. The turbidity of both the filtered and unfiltered sample will be recorded at the time of collection.

8. Gently pour the sample into the sample container taking care not to spill on outside of bottle or overfill container and replace cover on the sample container. Samples for volatile organic analyses, will have no air space in the sample vial prior to sealing. This is done by filling the vial such that there is a meniscus on top. Carefully, slide the septum, Teflon® side down, onto the top of the vial and cap the vial. Check for bubbles by turning the vial upside down and tapping it lightly. If bubbles appear, reopen the vial, remove the septum and add more samples (or resample). Replace the septum, recap and check for bubbles. Continue until vial is bubble-free.

9. Return sample container to sample cooler.

B. The samples shall be sent to the laboratory for analysis via overnight shipment. The laboratory shall analyze the samples via standard turnaround time. The results of the analysis shall be telecopied or telephoned to the Contractor, who shall report the results to the Engineer within 4 hours after receipt.

C. Sampling methods shall be in accordance with NYSDEC ASP-1 Superfund CLP Category B or equivalent reporting and deliverables shall be required. Appropriate site-specific laboratory QA/QC sampling, including, but not limited to, matrix spike, matrix spike duplicates and trip blanks, in accordance with NYSDEC ASP requirements, shall be included as part of the sampling program.

1.5 EXCAVATION ENDPOINT SOIL SAMPLING PROGRAM

A. Excavation endpoint samples shall be collected from the excavation areas as follows:

1. One sample shall be collected from the top of each sidewall for every 30 linear feet of sidewall.

2. Once sample shall be collected from the excavation bottom for every 900 square feet of bottom area.

B. The samples shall be sent to the laboratory for analysis via overnight shipment. The laboratory shall analyze the samples within 48 hours. The results of the analysis shall be telecopied or telephoned to the Contractor, who shall report the results to the Engineer within 4 hours after receipt.

C. Samples shall be collected with a disposable polyethylene scoop and analyzed for Target Compound List pesticides (Method 8082) in accordance with NYSDEC ASP Method 95-1. Superfund CLP Category B or equivalent reporting and deliverables shall be required. Appropriate site-specific and laboratory QA/QC sampling, including, but not limited to, matrix spike, matrix spike duplicates and trip blanks, in accordance with NYSDEC ASP requirements, shall be included as part of the sampling program.

D. Soil samples shall be collected as follows:

1. Samples shall be collected with a dedicated disposable polyethylene scoop and placed directly into laboratory supplied containers.

1.6 DRY WELL ENDPOINT SOIL SAMPLING PROGRAM

A. One excavation endpoint sample shall be collected from the bottom of the on-site dry well after closure.

B. The sample shall be sent to the laboratory for analysis via overnight shipment. The laboratory shall analyze the samples within 48 hours. The results of the analysis shall be telecopied or telephoned to the Contractor, who shall report the results to the Engineer within 4 hours after receipt.

C. Samples shall be collected with disposable or decontaminated sampling equipment and analyzed for Resource, Conservation and Recovery Act (RCRA) Metals (Method 6010/7471), total petroleum hydrocarbons (Method 8015M), volatile organic compounds (Method 8260), semivolatile organic compounds (Method 8270) and Target Compound List pesticides (Method 8082) in accordance with NYSDEC ASP Method 95-1. Superfund CLP Category B or equivalent reporting and deliverables shall be required. Appropriate site-specific and laboratory QA/QC sampling, including, but not limited to, matrix spike, matrix spike duplicates and trip blanks, in accordance with NYSDEC ASP requirements, shall be included as part of the sampling program.

D. Soil samples shall be collected as follows:

1. Samples shall be collected with a dedicated or decontaminated sample collection device as determined by the Contractor and as approved by the Engineer, and placed into laboratory supplied containers.

1.7 TANK EXCAVATION ENDPOINT SOIL SAMPLING PROGRAM (If Required)

A. If there is no evidence of a discharge, soil samples for laboratory analysis should be taken immediately after tank removal as follows:

1. If there is no groundwater in the excavation, discrete center line soil samples from the bottom of the excavation shall be taken at a frequency equal to the total length of the tank divided by five (minimum of one sample), provided that samples are spaced equidistantly and that the outermost samples obtained are no greater than 2.5 feet from each respective end of the tank. If the total length of a tank in feet is not evenly divisible by five, one additional sample should be obtained for any fraction remaining.

2. If there is groundwater in the excavation, soil samples should be taken as follows:

   a. If the contents of the tank had a density less than or equal to water, one sample biased based upon field screening to the suspected location of greatest contamination, should be taken near or above the water table from each excavation sidewall for every 30 linear feet of sidewall (minimum of one sample per sidewall), except that, for heating oil tanks of 550-gallon capacity or less, one sample, biased to the suspected location of greatest contamination, shall be taken from one excavation sidewall near or below the water table. Seasonal fluctuations in the water table can submerge and smear product over a range of several feet. A sample of the water in the excavation should also be collected.

   b. If the contents of the tank had a density greater than water, grab samples should be taken of the excavation at a depth from 0 to 2 feet beneath the tank on 4-foot centers across the length of the excavation. These samples should be field screened with an appropriate tool or test kit. The four samples with the highest field screening results should be submitted for the appropriate laboratory analysis. A sample of the water in the excavation should also be collected.

   c. If the tanks contained mixed substances such that some contaminants had a specific gravity of more than one and some contaminants had a specific gravity of less than one (for example, No. 6 fuel, waste oil potentially contaminated with chlorinated solvents), samples shall be taken pursuant to Section 1.6.A.2.a.b. above.

d. Soil samples taken from below the water surface should be taken using appropriate sediment sampling methods.

B. If there is evidence of a discharge, a minimum of five soil samples shall be taken, consisting of four sidewall and one bottom sample for each 15 linear feet of trench. The samples shall be biased based upon field screening toward the suspected location of greatest contamination.

C. The samples shall be sent to the laboratory for analysis via overnight shipment. The laboratory shall analyze the samples within 48 hours. The results of the analysis shall be telecopied or telephoned to the Contractor, who shall report the results to the Engineer within 4 hours after receipt.

D. Samples shall be collected with disposable or decontaminated sampling equipment and analyzed for Resource, Conservation and Recovery Act (RCRA) Metals (Method 6010/7471), total petroleum hydrocarbons (Method 8015M), volatile organic compounds (Method 8260), semivolatile organic compounds (Method 8270) and Target Compound List pesticides (Method 8082) in accordance with NYSDEC ASP Method 95-1. Superfund CLP Category B or equivalent reporting and deliverables shall be required. Appropriate site-specific and laboratory QA/QC sampling, including, but not limited to, matrix spike, matrix spike duplicates and trip blanks, in accordance with NYSDEC ASP requirements, shall be included as part of the sampling program.

E. Soil samples shall be collected as follows:

1. Samples shall be collected with a dedicated or decontaminated sample collection device as determined by the Contractor and as approved by the Engineer, and placed into laboratory supplied containers.

1.8 DECONTAMINATION STATION SAMPLING PROGRAM

A. One baseline composite sample shall be collected from the area where the decontamination station is to be built and one composite soil sample shall be collected after the pad has been dismantled.

B. Samples shall be sent to the laboratory for analysis via overnight shipment. The laboratory shall analyze the samples within 48 hours. The results of the analysis shall be telecopied or telephoned to the Contractor, who shall report the results to the Engineer within 4 hours after receipt.

C. Samples shall be collected with disposable or decontaminated sampling equipment and analyzed for Resource, Conservation and Recovery Act (RCRA) Metals (Method 6010/7471), total petroleum hydrocarbons (Method 8015M), volatile organic compounds (Method 8260), semivolatile

organic compounds (Method 8270) and Target Compound List pesticides (Method 8082) in accordance with NYSDEC ASP Method 95-1. Superfund CLP Category B or equivalent reporting and deliverables shall be required. Appropriate site-specific and laboratory QA/QC sampling, including, but not limited to, matrix spike, matrix spike duplicates and trip blanks, in accordance with NYSDEC ASP requirements, shall be included as part of the sampling program.

D. Soil samples shall be collected as follows:

1. Samples shall be collected with a dedicated disposable polyethylene scoop, and placed directly into laboratory supplied containers.

1.9 SAMPLE DESIGNATION

A. Sample bottles (preserved, if necessary), labels, shipping containers, trip blanks, and field blank water shall be provided by the analytical laboratory.

B. Sample containers to be submitted for analysis shall be labeled with the following information:

1. Site identification code;

2. Sample type(media) identification code;

3. Sample location identification code and field quality control identification code (if applicable);

4. Date and time of collection;

5. Field handling (e.g., filtration);

6. Type of preservative added (if applicable); and

7. Initials of sampling technician.

C. QC identifiers shall be as follows:

1. Field Replicate = FR

2. Field Blank = XX

3. Matrix Spike and Matrix Spike Duplicate = MS/MSD

4. Matrix Spike Blank = MB

5. Trip Blank = TB

D. A record of sequentially numbered samples for each media with corresponding sample designations and locations shall be kept in the project log book, which shall be provided to the Engineer upon request.

1.10 FIELD SAMPLE HANDLING AND SHIPMENT

A. All samples shall be collected and handled according to the appropriate analytical protocols for each matrix. The types of containers, volumes needed and preservation techniques for the proposed testing parameters shall be identified in the SAP.

B. All samples shall be delivered to the approved laboratory(s) within 24 hours of collection and shall be preserved appropriately from the time of sample collection. The following sample packing and shipping procedures shall be followed for samples requiring chemical analysis.

1. Prepare cooler(s) for shipment.

   a. Tape drain(s) of cooler shut;

   b. Affix "This Side Up" arrow labels and "Fragile" labels on each cooler; and

   c. Place mailing label with laboratory address on top of cooler(s).

2. Arrange sample containers in groups by sample number.

3. Verify that all bottle labels are completed correctly. Place clear tape over bottle labels to prevent moisture accumulation from causing the label to peel off.

4. Arrange containers in front of assigned coolers.

5. Seal sample containers within plastic zip-lock bags to prevent leakage.

6. Place approximately 2 inches of vermiculite or other packaging material at the bottom, sides and top of the cooler to cushion the sample containers.

7. Arrange containers in the cooler so that they are not in contact with the cooler or other samples.

8. Fill remaining spaces with vermiculite or other packaging material.

9. Ensure all containers are firmly packed in vermiculite or other packaging material.

10. If ice is required to preserve the samples, ice cubes should be packaged in double zip-lock bags, and placed on top of the vermiculite or other packaging material.

11. Sign chain of custody form (or obtain signature) and indicate the time and date it was relinquished to carrier, as appropriate.

12. Separate copies of chain of custody forms. Seal proper copies within a large zip-lock bag and tape to inside of cooler lid. Retain copies of all forms.

13. Close lid and latch.

14. Secure each cooler using custody seals.

15. Tape cooler shut on both ends.

16. Relinquish to courier service as appropriate. Retain airbill receipt for project records. All samples will be shipped for "Next Day" delivery.

17. Telephone laboratory contact and provide the laboratory with the following shipment information:

    a. sampler's name;

    b. project name;

    c. number of samples sent for each matrix sampled; and

    d. airbill number.

1.11 NOTIFICATION OF CHANGES

A. After approval of the SAP, the Engineer must be notified by the Contractor in writing, a minimum of 14 calendar days prior to making any proposed changes or within 24 hours of making any unavoidable changes to the SAP. All changes shall require the approval of the Engineer.

1.12 LABORATORY REQUIREMENTS

A. All laboratory analyses, and in particular all references to New York State Superfund analytical chemistry, shall be in accordance with the 1995 or most current edition of the NYSDEC Analytical Services Protocol (ASP). It is the Contractor's responsibility to obtain the services of a laboratory

familiar with this document, and all procedures and deliverables pertaining to New York State Superfund work. All analyses must be performed by a laboratory currently certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) and Contract Laboratory Program (CLP) in all categories.

B. The name, qualifications and certifications of the laboratory shall be provided in the SAP.

1.13 QA OFFICER REQUIREMENTS

A. The Contractor's project Quality Assurance (QA) Officer must have a minimum of a bachelor's degree in chemistry or natural sciences with a minimum of 20 credit-hours in chemistry.

B. The QA Officer must be proficient in analytical methodology, data quality and interpretation, sampling plan development, quality control procedures and auditing techniques.

C. The QA Officer shall assist the Contractor in the development of the sampling and analytical portion of the SAP, perform field, laboratory and sampling audits, interface with the analytical laboratory to make requests and resolve problems, interface with the data validator and develop a project specific data usability report.

D. The QA Officer shall sign off on the site-specific SAP and all revisions.

1.14 DATA EVALUATION REQUIREMENTS

A. All data generated as part of this project shall be evaluated by the QA Officer. The QA Officer is required to identify to the Engineer in writing any and all problems or potential problems with regard to the validity of the data generated. The QA Officer shall provide with each required submittal to the Engineer a statement which evaluates the quality, validity and usability of the data provided with respect to the intended use.

1.15 DELIVERABLES

A. At a minimum, 2-day laboratory turnaround shall be provided for all sample analyses.

B. All sampling and monitoring results shall be submitted to the Engineer in the form of typed electronic summary tables. The summary tables shall provide the identification name of each location that each sample was collected from, the sample identification number, the date and time each sample was collected and the results of the analysis for each parameter. Electronic versions of the summary tables must be submitted.

C. Final analytical reports shall be Superfund CLP Category B deliverables or equivalent and shall be provided to the Engineer within 28 days from receipt of the sample by the laboratory, unless directed otherwise by the Department.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01653

WORK PLAN

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Contractor shall prepare and submit a site-specific Work Plan in accordance with the requirements of the Contract Documents.

B. In preparing and submitting the Work Plan the Contractor shall comply with the submittal requirements specified in Section 01330, Submittal Procedures.

1.2 PLAN CONTENT

A. The Work Plan shall include, but not necessarily be limited to, the following:

1. Drawings to scale showing the proposed locations and dimensions of all facilities, including the office trailers and sanitary facilities; fencing; parking areas; site access and egress routes; areas where existing debris will be moved to; staging areas for excavated soil; storm water management facilities; and storage areas for plastic sheeting, general fill, etc.

2. A detailed progress schedule for performance of tasks required to fulfill the Contract requirements. The schedule shall at a minimum identify the dates of all required submittals, start dates and completion dates for the following activities: notifications; mobilization to the site; consolidation of debris; delivery of the project trailers; construction and preparation of staging and storage areas; dry well closure; excavation of soil; installation of storm water drainage features; installation of asphalt cover and restoration of neighboring residential property; garage decontamination; floor sealing; site restoration; and demobilization from the site. Refer to Section X, Standard Specifications, Specification 00001, Progress Schedule, for additional requirements.

3. Identification of all permits, approvals, licenses, notifications, etc., required to complete the Work.

4. An organization chart including subcontractors. The responsibilities of each individual in the organization shall be clearly defined in terms of project activities including, but not limited to, project management and coordination; scheduling and schedule control; quality control; sampling, measurement, analysis, and data management; and performing specific construction activities. In addition, the previous experience of each individual in the project organization shall also be submitted for review and approval. Credentials of new operators, quality control personnel, and supervisory engineering and technical staff shall be furnished to the Engineer for approval.

5. Procedures for characterization and management of all waste generated, including used plastic sheeting, personal protective equipment, etc.

6. Manpower, procedures and equipment to be used for site preparation, including protection of wells and other structures, utilities and facilities to remain in place.

7. Manpower, procedures and equipment to be used for consolidation of debris and other material.

8. Manpower, procedures and equipment to be used for sedimentation and erosion control, control of odors, vapors and dust, management of construction waters, transporting waste, containing and covering waste, sheeting, shoring and bracing.

9. Manpower, procedures and equipment for dry well closure and installation of storm water drainage features.

10. Manpower, procedures and equipment to be used for removal of contaminated soil, including excavating and storing, the material.

11. Manpower, procedures and equipment for installation of asphalt cover and restoration of neighboring residential property.

12. A mobilization and demobilization plan.

13. For environmental compliance, a site-specific Noise Control and Monitoring Plan. This plan shall include, but not be limited to, expected noise level, sources of noise, proposed noise control, and types and locations of monitoring devices.

14. Manpower, procedures and equipment to be used for waste transportation and disposal.

15. Manpower, procedures and equipment for garage decontamination and floor sealing activities, including wash water containment procedures.

16. The proposed source of gravel and general fill and any other materials to be delivered to the site by the Contractor.

17. Letters of Commitment shall be obtained by the Contractor from all waste haulers and from all transfer, treatment, storage and disposal facilities to which the Contractor intends to ship any and all waste and other materials generated by the Work. The letters of commitment shall specifically identify the types and quantities of waste that the facility will be able to accept from the Contractor, the permit numbers for all facilities at which the waste will be accepted and all waste characterization requirements. In the event that a facility (such as a privately owned treatment works) is prohibited from issuing a letter of commitment without a sample of the waste, a conditional type letter will be acceptable. Such a conditional letter shall specifically state what types and quantities of waste the facility will accept. In addition, the following information shall be submitted:

    a. For each waste hauler

        1) Name and federal and state identification numbers.

        2) Address.

        3) Name of responsible contact for the hauler.

        4) Telephone number for the contact.

        5) List of types and sizes of all transport vehicles and equipment to be used.

        6) A description of proposed transportation route, method and procedures for hauling waste material, including type of vehicles that will be used for each type of waste.

        7) Copies of any and all necessary permits and authorizations for each type of waste transported.

    b. For each transfer, treatment, storage and disposal facility, the Contractor shall submit the following information.

1) General Information:

a) Facility name and federal and state identification numbers
b) Facility location
c) Name of responsible contact for the facility
d) Telephone number for contact
e) Signed letter of commitment to accept waste as specified in this Contract
f) Unit of measure utilized at facility for costing purposes

2) Copies of all permits, licenses, letters of approval, and other authorizations to operate, held by the proposed facility as they pertain to receipt and management of waste derived from this Contract.

3) The Contractor shall identify the unit(s) that the facility will use to manage the waste.

4) The Contractor shall provide the date of the proposed facility's last compliance inspection by all federal, state and local government agencies.

5) List of all active (unresolved) compliance orders (or agreements), enforcement notices, or notices of violation issued to the proposed facility.

18. Description of security operations.

19. Description of procedures to be used to delineate and control access and egress from the facility.

20. A sample of the decontamination certificates to be provided by the Contractor in accordance with the requirements of the Specifications.

21. A description of the procedures and equipment to be used to identify and protect aboveground and underground utilities and structures.

1.3 NOTIFICATION OF CHANGES

A. After approval of the Work Plan, the Engineer must be notified by the Contractor in writing a minimum of 14 calendar days prior to making any proposed changes or within 24 hours of making any unavoidable changes to the Work Plan. All changes shall require the approval of the Engineer.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01654

CONSTRUCTION QUALITY ASSURANCE/ CONSTRUCTION QUALITY CONTROL PROGRAM

PART 1 - GENERAL

1.1 SCOPE

A. All aspects of the Work shall be subject to a Construction Quality Assurance/Construction Quality Control (QA/QC) program.

B. Refer to Section 01652, Sampling Plan, for all QA/QC requirements associated with environmental samples (e.g., endpoint samples) to be collected during the Contract. All other Work and testing shall be covered by the Construction QA/QC Plan described herein.

C. All work and materials shall be tested as specified in these Contract Documents, and only work and materials which comply with these specifications and pass the required tests shall be accepted. Any work and/or materials which fail to satisfy the requirements of these specifications shall be reworked, repaired or removed and replaced, and retested, as appropriate, at no additional cost to the Department.

D. The Contractor shall retain the services of an independent testing laboratory(s) to perform testing required to be performed by the Contractor. Where applicable, the laboratory shall meet the "Recommended Requirements for Independent Laboratory Qualifications" latest edition, published by the American Council of Independent Laboratories. The Contractor shall submit a copy of a report regarding the latest inspection of the proposed laboratory facilities conducted by the Materials Reference Laboratory of the National Bureau of Standards. The report shall specifically include any deficiencies or remedies resulting from the inspection. The selection of the independent testing laboratory shall be submitted to the Engineer for review and approval.

E. The Contractor shall bear all costs associated with testing required to be performed by the Contractor in accordance with these Specifications. The Contractor may perform additional testing as the Contractor deems appropriate for the Contractor's own information and shall bear all costs associated with the additional testing.

F. In addition to testing performed by the Contractor, the Department may retain the services of an independent testing laboratory(s) to perform testing and furnish certified results for all the tests to be conducted by the

Engineer. The Department shall pay all costs associated with testing to be conducted by the Engineer except as follows:

1. In the event that the Engineer is required to sample and test any aspect of the Work more than the initial sampling and testing, and one resampling and retesting, the Contractor shall bear all costs relating to the Department's independent testing laboratory for any second or subsequent resampling and retesting of the specific work in question. The costs associated with any second or subsequent resampling and retesting required by the Engineer shall be determined based on the standard charges of the laboratory in place for the project and shall be deducted from the monies due the Contractor from the next payment request.

G. The specific tests, procedures and frequencies of tests to be performed by the Contractor and, if applicable, the Engineer are enumerated in the pertinent specification sections of the Contract Documents.

H. The Contractor shall provide access to and assist the Engineer, the Department's independent testing laboratory or Department's representatives in the taking and securing of samples, tests, and any related items as specified, as required or as appropriate in the opinion of the Engineer.

I. The Contractor shall schedule and/or make available all materials which are required to be tested prior to their incorporation into the Work in order to allow ample time for sampling, testing (including retesting as appropriate) and receipt of results. The Contractor shall not consider compliance with the sampling, testing, subsequent resampling and retesting requirements, and any related items as specified herein as grounds for hardship or delay, or as the basis for a claim.

1.2 CONTRACTOR'S QUALITY CONTROL

A. General - The Contractor shall furnish for approval by the Engineer, the Contractor's Construction Quality Assurance/Quality Control (QA/QC) Plan within 5 calendar days after the notification that the Bidder is the apparent low Bidder. The Plan shall identify personnel, procedures, instructions, records and forms to be used. If the Contractor fails to submit an acceptable QA/QC Plan within the time herein prescribed, the Engineer may refuse to allow construction to start until such time as the Contractor submits an acceptable plan.

B. The Contractor's Construction Quality Assurance/ Quality Control Plan shall include as a minimum, the following:

1. A description of the quality control organization, including chart showing lines of authority and acknowledgment that the Contractor's QC staff shall report to the Contractor's Superintendent or someone higher in the Contractor's organization.

2. The name, qualifications, duties, responsibilities and authorities of each person assigned a QC function.

3. A copy of a statement signed by an authorized official of the Contractor's firm which describes the responsibilities and delegates the authorities of the QA/QC Site Manager.

4. Procedures for scheduling and managing submittals, including those of subcontractors, off-site fabricators, suppliers and purchasing agents.

5. Quality control methods and procedures for each specific test. The name, address and qualifications of each proposed testing laboratory and the intended project-specific function of each laboratory shall be provided. Approval from the Engineer shall be required for all testing laboratories used on the project.

6. Description of all instrumentation and equipment to be used for testing on-site, including manufacturers and model numbers, calibration procedures and qualifications of technicians.

7. Description of quality assurance for installation of the various components of the Work, manufacturing, fabrication and delivery of raw materials; transportation handling and storage materials; earth work (surface preparation, trench anchorage); panel placement; field seaming; corrective measures and documentation.

8. Reporting procedures, including proposed reporting formats.

C. Acceptance of Plan - Acceptance of the QA/QC Plan by the Engineer is required prior to mobilization on-site. Acceptance is conditional and will be predicated on satisfactory performance during the construction.

D. Notification of Changes - After acceptance of the QA/QC Plan by the Engineer, the Contractor shall notify the Engineer in writing of any proposed change. Proposed changes are subject to acceptance by the Engineer.

1.3 QUALITY ASSURANCE/QUALITY CONTROL ORGANIZATION

A. QA/QC Site Manager – The QA/QC Site Manager shall be responsible for overall management of the QA/QC Plan and have the authority to act in all QA/QC matters for the Contractor. This person shall demonstrate the ability to perform correctly the duties required to the satisfaction of the Engineer and shall be physically at the project site whenever work is in progress and will be in charge of the Contractor's Quality Control program for this project. All of the Contractor's submittals for approval shall be reviewed and modified or corrected as needed by the QA/QC Site Manager or authorized assistants and approved correct prior to forwarding of such submittals to the Engineer.

B. Personnel - The personnel of the QA/QC staff shall be fully qualified by experience and technical training to perform their assigned responsibilities and shall be directly hired by and work for the Contractor.

C. The QA/QC Site Manager shall be responsible for certifying that all submittals are in compliance with the Contract requirements.

1.4 EXECUTION

A. Contractor Construction Quality Control is the means by which the Contractor shall be assured that the construction complies with the requirements of the Drawings and Specifications. The controls shall be adequate to cover all construction operations, including both on-site and off-site operations, and will be keyed to the proposed construction sequence. The controls shall include the following:

1. Preparatory Inspection - This shall be performed prior to beginning any definable feature of work. It shall include a review of Contract requirements; a check to assure that all materials and/or equipment have been tested, submitted and approved; a check to assure that provisions have been made to provide required testing; examination of the Work area to ascertain that all preliminary work has been completed; and a physical examination of materials, equipment and sample work to assure that they conform to approved shop drawings or submittal data, and that all material and/or equipment are on hand.

2. Initial Inspection - This shall be performed as soon as a representative portion of the particular feature of work has been accomplished and shall include examination of the quality of workmanship and a review of testing for compliance with Contract requirements, use of defective or damaged materials, omissions and dimensional requirements.

3. Follow-up Inspection - These shall be performed daily to assure continuing compliance with the Contract requirements, including control testing, until completion of the particular feature of work. Such inspection shall be made a matter of record in the QA/QC documentation. Final Follow-up Inspections shall be conducted and deficiencies corrected prior to the addition of new features of work.

+ + + END OF SECTION + + +

SECTION 01656

CONTRACTOR'S EQUIPMENT AND TOOLS

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall provide all equipment and experienced personnel necessary to complete the Work. The Contractor shall provide all materials, tools, equipment, accessories, fuel, power, and all other materials and service necessary for the satisfactory completion of all Work.

B. The Contractor shall maintain the equipment in good operating condition for the life of the Contract. In the event that, during the course of the Work, the equipment, judged on the basis of Work completed to date is considered unsatisfactory to the Department, the Contractor shall, within 48-hours, unless otherwise approved by the Department, replace the unsatisfactory equipment with equipment which is satisfactory to the Department.

C. The Contractor shall not be reimbursed for time lost due to breakage and/or maintenance of equipment.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

+ + END OF SECTION + +

SECTION 01657

STORAGE OF MATERIALS AND EQUIPMENT

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall place and store all equipment and materials to be used and incorporated in the Work so as not to injure or hinder any part of the Work and so that free access can be had at all times to the site, facilities and Work areas. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to personnel entering the site and in areas approved by the Department.

B. The Contractor may store, at his/her expense, any apparatus, materials, supplies and equipment in such orderly fashion at the site as will not unduly interfere with the Work at the site. The Department shall not assume any liability for the security of said equipment.

C. The Contractor shall not store any apparatus, materials, supplies or equipment within the on-site building except as otherwise stated or upon written approval of the Engineer. No such storage shall take place within any easement or at any locations outside the contract limits.

D. The Contractor shall take appropriate measures to ensure that no materials are stockpiled adjacent to excavation areas.

E. The Contractor shall ensure that all containers used in the completion of Work are covered, stored on pallets as appropriate and labeled during the completion of Work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01658

EQUIPMENT DECONTAMINATION

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Work covered by this Section consists of the decontamination of equipment.

B. The Contractor shall furnish all labor, equipment, materials, supplies, facilities, power and incidentals needed for construction of a decontamination pad for the decontamination of equipment as specified and as directed by the Department.

C. The Contractor shall minimize the use of water for decontamination purposes to the extent practicable.

D. All decontamination waste liquids and solids shall be collected, managed and disposed of in accordance with applicable federal, state and local laws and regulations.

E. Refer to Section X, Specification 00003, Minimum Requirements for Health and Safety for additional equipment decontamination requirements.

1.2 SUBMITTALS

A. The Contractor shall submit the following as part of the Health and Safety Plan:

1. A description of decontamination methods consisting of:

   a. The proposed equipment and methods to be used in the equipment decontamination procedures including dusting, brushing, water use, power requirements and detergents to be used.

   b. Drawings showing construction details of the decontamination pad, spill prevention methods, and required storage methods and volumes for wastewater.

2. A certificate signed by the Contractor stating that each vehicle shall be free of contamination prior to entering the site.

3. A sample of the decontamination certificate, to be signed and submitted by the Contractor, for each construction vehicle leaving the site.

PART 2 - PRODUCTS

2.1 EQUIPMENT/MATERIALS

A. All decontamination equipment, materials and supplies necessary for the performance of the Work shall be supplied by the Contractor.

B. A decontamination pad(s) shall be constructed as necessary to support equipment loads in a manner that shall not compromise the impermeability of the pad. The decontamination pad shall be impermeable and sloped in such a way that decontamination water collects in a sump. Decontamination water collected in the sump shall be removed as necessary so that overflow is prevented. Water collected in the sump shall be managed and disposed in accordance with the Contractor's approved plans.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. Contractor shall be required to collect one five-point composite soil sample (0-6" below the area where the decontamination pad is to be built) prior to the construction of the decontamination pad and after the decontamination pad has been removed. Refer to Section 01652, Sampling Plan, for additional sampling requirements. Should the sample results indicate contamination caused by the operation of the decontamination station, defined by an increase in concentrations from pre to post construction samples, the Contractor shall excavate, handle, transport and dispose of all contaminated soil and re-sample the area in accordance with the Contract Documents, as directed by the Engineer and at no additional cost to the Department.

B. Contractor shall minimize use of wash waters used for decontamination purposes.

C. All decontamination wash waters and other wastes shall be managed and disposed of by the Contractor in accordance with federal, state and local laws and regulations.

D. All safety equipment and other equipment used during performance of the Work shall be either decontaminated and salvaged, or contained and disposed of in accordance with applicable regulatory requirements.

E. The station shall at a minimum include shovels, brushes, power washers, a steam generator, detergent solutions and provisions to collect decontamination wastewaters.

F. At the end of each work day the Contractor shall remove all wastewater, precipitation and other materials which accumulate in the decontamination pad.

3.2 DECONTAMINATION OF EQUIPMENT, TOOLS AND FACILITIES

A. The Contractor shall erect decontamination facilities at location(s) selected by the Contractor and approved by Engineer so that all heavy equipment is clean prior to leaving the site.

B. All equipment used for excavation and other earthwork activities shall be decontaminated prior to:

1. Crossing areas of the site which do not require remediation or have already been remediated;

2. Handling clean fill materials; and

3. Leaving the site.

C. The Contractor shall not allow equipment to leave the site with water leaking or mud dripping or caked to the equipment. All equipment leaving the site shall be dry except during rainy or snowy weather, or with the Engineer's written consent for other exceptions.

D. Dry brushes shall be used to decontaminate excavators, trucks, trailers and drill rigs. Trailers and trucks shall not be decontaminated using jet washers or steam generators unless approved by the Engineer. Any dry decontamination must be performed in accordance with the activity cessation thresholds for dust as specified in the Contractor's HASP.

E. Final decontamination of equipment other than excavators, trucks, trailers and drill rigs shall consist of using a hot water, powered or steam cleaning system (steam generator) capable of effectively removing all soil, residues and other debris adhering to equipment. Additives to the wash water shall be used when necessary and approved by the Engineer to enhance decontamination to levels acceptable to the Engineer.

F. After completion of the Work, the Contractor shall remove and dispose of the decontamination pad in accordance with applicable federal, state and local laws and regulations. Approval from the Engineer shall be required prior to removal of the decontamination pad from the site. The Contractor shall remove any material from beneath the decontamination pad which is

visibly contaminated as a result of the Contractor's operations as directed by the Department and at no additional cost to the Department.

+ + END OF SECTION + +

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Contractor shall maintain and provide the Engineer with project record documents as specified below except where otherwise specified or modified in the Contract Documents.

1.2 MAINTENANCE OF DOCUMENTS

A. Maintain in Contractor's field office in clean, dry, legible condition complete sets of the following: Drawings, Specifications, Addenda, approved Shop Drawings, Samples, Photographs, Change Orders, other Modifications of Contract, Test Records, Field Orders, and all other documents pertinent to Contractor's Work.

B. Provide files and racks for proper storage and easy access. File in accordance with filing format of Construction Specification Institute (CSI) unless otherwise approved by Engineer.

1. Make documents available at all times for inspection by Engineer and Department representative.

2. Record documents shall not be used for any other purpose and shall not be removed from the office without Engineer's approval.

1.3 RECORDING UPDATED INFORMATION

A. General:

1. Label each document "PROJECT RECORD" in 2-inch high printed letters.

2. Keep record documents current, and updated at least monthly.

3. Do not permanently conceal any Work until required information has been recorded.

B. Drawings: Legibly mark to record actual construction including:

1. Elevation of completed work in relation to datum.

2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.

3. Field changes of dimensions and details.

4. Changes made by Change Order or Field Order.

5. Details not on original Drawings.

C. Specifications and Addenda: Legibly mark up each Section to record:

1. Changes made by Change Order or Field Order.

2. Other matters not originally specified.

D. Shop Drawings: Maintain as record documents and legibly annotate Drawings to record changes made after review.

1.4 FINAL SUBMITTAL OF RECORD DOCUMENTS

A. General

1. Upon completion of all Work and before requesting final payment, Contractor shall provide mylar reproducibles of the Record Drawings showing all deviations from the Contract Documents. Two sets of paper prints shall be submitted to Engineer for review and approval.

2. Contractor shall revise the required Record Drawings in accordance with Engineer's comments and resubmit mylar reproducibles and two additional sets of paper prints of the revised plans for Engineer's review and approval if requested by Engineer.

3. All plans showing final elevations and the locations and dimensions of Work shall be sealed and signed by a New York State-licensed surveyor and a New York State – licensed Professional Engineer employed by the Contractor. An electronic copy of the plans shall be submitted on compact disk to the Engineer in AutoCAD 2002 (or alternate version approved by the Engineer) and PDF format.

4. Engineer's checking and approval of plans will apply to content only. Contractor shall be responsible for the accuracy and completeness of its Work.

5. Engineer will not approve Contractor's request for final payment until the required plans are received and approved.

6. Shop drawings will not be deemed acceptable as as-built drawings.

B. Submittal:

1. At completion of project, deliver record documents to Engineer.

2. Accompany submittal with transmittal letter containing:

   a. Date.

   b. Project title and number.

   c. Contractor's name and address.

   d. Title and number of each record document.

   e. Certification that each document as submitted is complete and accurate.

   f. Signature of Contractor, or his/her authorized representative.

3. The Contractor shall stamp and endorse each Record Drawing with the following certification:

RECORD DRAWINGS OF WORK
"AS-BUILT"
[DATE]

[CONTRACTOR]
[ADDRESS]
[ADDRESS]

TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS REPRESENT THE ACTUAL IN-PLACE CONDITIONS OF THE PROJECT.

CONTRACTOR: _____

SIGNED: _____ TITLE: _____

CONTRACT: _____ DATE: _____

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01760

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 FINAL CLEANING

A. At the completion of the Work, the Contractor shall remove all rubbish from and about the location of the Work, and all temporary structures, construction signs, tools, scaffolding, materials, supplies and equipment which he/she or any of his/her Subcontractors may have used in the performance of the Work. Contractor shall broom clean paved surfaces and rake clean other surfaces of grounds.

B. Contractor shall thoroughly clean all materials, equipment and structures; all marred surfaces shall be touched up to match adjacent surfaces and burned-out lights replaced as required; all glass surfaces cleaned and floors cleaned and polished so as to leave Work in a clean and new appearing condition.

C. Remove spatter, grease, stains, fingerprints, dirt, dust, labels, tags, packing materials and other foreign items or substances from interior and exterior surfaces, equipment, signs and lettering.

D. Remove paint, clean and restore all equipment and material nameplates, labels and other identification markings.

E. Contractor shall maintain cleaning until project, or portion thereof, is occupied and final accepted by the Department.

1.2 INSPECTIONS

A. Refer to Section VIII, General Conditions, Article 13 for information related to final inspection and acceptance of the Work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

DIVISION 2 – SITE WORK

SECTION 02111

EXCAVATION, REMOVAL AND HANDLING OF HAZARDOUS AND NON-HAZARDOUS MATERIALS

PART 1 –GENERAL

1.1 SCOPE OF WORK

A. Contractor shall excavate, handle and store contaminated soil as shown, specified and required to complete the work. The work shall consist of excavation of approximately 285 cubic yards of pesticide-contaminated surface soil (0-1.5' bgs) from beneath the on-site asphalt parking lot, and 25 cubic yards of pesticide-contaminated surface soil (0 – 1.5' bgs) from the off-site residential property. In addition, Contractor shall conduct all other excavation work required to complete the project in accordance with this specification.

B. Excavation limits are depicted on the Drawings.

C. Related Work Specified Elsewhere:

1. Section 01050 - Field Engineering
2. Section 01330 - Submittal Procedures
3. Section 01652 – Sampling Plan
4. Section 01658 – Equipment Decontamination
5. Section 02120 – Demolition and Removals
6. Section 02130 – Waste Transportation Disposal
7. Section 02200 - Backfill and Compaction
8. Section 03300 - Cast-in-Place Concrete
9. Section 15051 - Buried Piping Materials and Installation

D. All dewatering, sheeting and shoring, and other work necessary to complete the required excavation work shall be conducted by the Contractor in accordance with these Specifications.

E. Work shall follow the sequence of construction presented in the Drawings.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01330, "Submittal Procedures":

1. Initial Site Survey

2. Intermediate Site Survey

3. Record Drawings

B. Shop Drawings:

1. Submit for approval shop drawings and design calculations of sheeting and bracing systems for excavations deeper than ten (10) feet, as applicable. Information supplied shall include, as a minimum, type and size of sheeting to be used, extent of sheeting and tip and top elevations.

2. Shop drawings and calculations shall be prepared and signed by a Professional Engineer licensed in the State of New York.

3. Submit plans of open cut excavations showing side slopes and limits of the excavation at grade, as applicable, where not shown on the Drawings.

1.3 QUALITY ASSURANCE

A. Permits and Regulations: Contractor shall perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

B. Design Criteria:

1. All steel work for sheeting, shoring, bracing and other related work shall be in accordance with the provisions of the AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings," except that field welding will be permitted.

2. Contractor shall be wholly responsible for installing and operating the system used to accomplish the sheeting and bracing shown on the Drawings, or otherwise required.

C. Reference Standards: Comply with applicable provisions and recommendations of the following except as otherwise shown or specified.

1. ASTM A328, Steel Sheet Piling.

1.4 JOB CONDITIONS

A. Existing Structures:

1. Shown on the Drawings are certain utilities and surface and underground structures located on or adjacent to the Work. This information has been obtained from existing records. It is not guaranteed to be correct or complete and is shown for the convenience of the Contractor. Contractor shall explore ahead of the required excavation to determine the exact location of all structures and utilities. They shall be supported and protected from injury by the Contractor. If they are broken or injured, they shall be restored immediately by the Contractor at no additional cost to the Department.

2. Prior to execution of the Work, the Contractor shall check and verify governing dimensions and elevations. The Contractor and Engineer shall jointly inspect the condition of adjoining structures. Photographs and records shall be made of any prior settlement or cracking of structures, pavements, and the like, that may become the subject of possible damage claims.

B. Existing Utilities:

1. Locate existing underground utilities in the areas of Work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.

2. Should uncharted or incorrectly charted piping or utilities be encountered during excavation, consult the Department in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the Engineer.

3. Do not interrupt existing utilities serving facilities occupied and used by the occupants of the facility or others, except when permitted in writing by Engineer.

C. Protection of Persons and Property:

1. Barricade open excavations occurring as part of this Work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

2. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by Contractor's operations.

3. Consult Engineer and obtain his/her approval before removing or disturbing pipes, structures, or other facilities that are encountered on the line of the excavation.

4. Structures, utilities, sidewalks, pavements and other facilities removed or disturbed shall be replaced to their original condition, unless otherwise shown, specified or directed.

D. Dust Control: Contractor shall conduct all of his/her operations and maintain the area of his/her activities, including sweeping and sprinkling of roadways, so as to minimize creation and dispersion of dust. In addition, Contractor shall be responsible for controlling dust caused by his/her operation of vehicles and equipment, clearing or for any reason whatever.

E. Odor Control: As an odor abatement measure, cover, at the end of each work day, all areas of organic or odorous material which were exposed during excavation with a minimum 6-in and a maximum 24-inch deep layer of clean fill. Excavated organic or odorous material shall be immediately removed off-site and shall not be stockpiled on-site. Such material shall be properly characterized and disposed of off-site in accordance with all applicable federal, state and local regulations.

F. Roadways and Walks: Unless otherwise approved by the Engineer, excavated material and materials of construction shall be so deposited, and the Work shall be so conducted, as to leave open and free for vehicular traffic a roadway not less than 10 feet in width. All hydrants, valves, and other facilities which may require access during construction shall be kept accessible for use. During the progress of the Work, Contractor shall maintain such roadways in satisfactory condition and the Work shall at all times be so conducted as to cause a minimum of inconvenience to the occupants of the facility and pedestrians.

PART 2 – PRODUCTS

2.1 SHEETING, SHORING, AND BRACING

A. Wood Sheeting: Temporary Work: New or used timber meeting the requirements for Douglas Fir Dense Construction grade or Southern Pine No. 2 Dense S3.

B. Steel Sheeting: Temporary Work: Steel conforming to ASTM A28. Steel for soldier piles, wales and braces may be new or used and shall conform to ASTM A36.

C. Used materials shall be in good condition, not damaged or excessively pitted.

PART 3 – EXECUTION

3.1 INSPECTION

A. Contractor shall provide Engineer with sufficient time and means to examine the areas and conditions under which excavating, filling and grading are to be performed. Work shall not proceed until all unsatisfactory conditions have been corrected in a manner acceptable to the Engineer.

3.2 EXCAVATION

A. General:

1. Contractor shall perform all excavation required to complete the Work as shown and specified. All material excavated shall be non-classified. It shall include all materials such as earth, sand, clay, gravel, hardpan, boulders, organic materials, rock, rubbish and all other materials within the excavation limits.

2. Excavations shall be open type, shored and braced where necessary to prevent injury to workmen and to new and existing structures or pipelines.

3. All excavations shall be made in the dry.

4. All equipment shall be decontaminated and free from debris, caked soil, contamination, and any other foreign materials prior to mobilization to the site. Equipment utilized during the remediation shall be decontaminated in accordance with the Contractor's Health and Safety Plan prepared for the project as well as the requirements outlined by Section 01658, Equipment Decontamination.

B. Hazardous Materials Excavation:

1. Excavation shall be made to the grades and extents shown on the Drawings. Excavation shall be performed in a manner that will limit spills and the potential for contaminated material to be mixed with

uncontaminated material. An excavation log describing visible signs of contamination encountered shall be maintained for each area of excavation. Excavation logs shall be prepared in accordance with ASTM D5434.

2. Excavation shall be accomplished by methods which preserve the undisturbed state of subgrade soils.

3. Excavation equipment shall be satisfactory for carrying out the work in accordance with the Specifications. Earth shall not be plowed, scraped, or dug with machines so near to the finished subgrade as to result in excavation of, or disturbance of material below grade.

4. When excavation has reached final depths, the Engineer shall be notified and will inspect conditions. If materials and conditions are not satisfactory to the Engineer, the Engineer will issue instructions as to the procedures for correction of the unsatisfactory condition.

5. Endpoint sampling shall be required as outlined in Section 01652, Sampling Plan. Backfill and compaction shall not be conducted in any excavation until satisfactory endpoint sample results and surveyed excavation drawings are approved by the Engineer. If endpoint sample analyses indicate that contamination remains at levels exceeding soil cleanup criteria at the off-site residential property, additional material shall be excavated to the depths and extents specified by the Engineer and the Department. Additional endpoint sampling will be required at the frequency specified for excavation endpoint sampling to document the effectiveness of the remediation.

6. During final excavation to subgrade level, take precautions required to prevent disturbance of material.

C. Pipeline Excavation:

1. Pipe trenches shall not be excavated below the pipe bottom except where unsuitable material is encountered.

2. Trench width shall be minimized to greatest extent practical but shall conform to the following:

   a. Sufficient to provide room for installing, jointing and inspecting piping, but in no case wider at top of pipe than pipe barrel outside diameter plus 2 feet.

   b. Enlargements at pipe joints may be made if required and approved by Engineer.

c. Sufficient for sheeting, bracing and sloping.

d. Sufficient to allow thorough compacting of sand adjacent to bottom half of pipe.

e. Do not use excavating equipment which requires the trench to be excavated to excessive width.

D. Unsuitable Excavation:

1. If any over excavation occurs through error of the Contractor or for the Contractor's convenience, the over-excavated material shall be disposed of off-site, in accordance with all applicable federal, state and local laws and regulations, as well as the requirements of these Contract Documents, at no additional cost to the Department. The over-excavation shall be refilled at the Contractor's expense with concrete, select fill or other material satisfactory to the Engineer.

2. If Contractor fails to properly dewater the excavation or trench, or disturbs the subgrade or otherwise fails or neglects to conduct the excavation work in a manner that provides surface of subgrade in proper condition for construction, the Contractor shall remove all disturbed material and replace it with concrete, select fill, or other approved material at his own expense. The condition of the subgrade shall meet with the approval of the Engineer before any work is placed thereon.

3. If, in the opinion of the Engineer, the material, in its undisturbed natural condition, at or below the grade of the excavation indicated on the Drawings is unsuitable for foundations, or if organic or silty soil extends below excavation depth, it shall be removed and be replaced with select fill or other suitable material. Suitable material excavated from the site shall be used before select fill from an outside source is permitted.

3.3 DEWATERING

A. Due to the relatively shallow depth of excavation for this project, it is not anticipated that groundwater will be encountered. However, should dewatering be required, the following requirements would apply.

B. The Contractor shall provide all diking, sheeting and dewatering as required to lower the groundwater in excavations to a level sufficiently below the bottoms of these excavations and to maintain such level so that the excavation of contaminated soil can be completed. Dewatering shall

be accomplished by wells, open sumps, or other methods approved by the Engineer. There shall be no additional compensation for any dewatering done or additional compensation for equipment and materials used in connection therewith under this contract. Prior to commencing excavation, the Contractor shall submit to the Engineer for approval his/her proposed plans for dewatering the excavation. Lowering of ground water to the injury or detriment of other structures shall be part of the Contractor's risk and responsibility. Any structure injured or damaged as a result of the lowering of the ground water shall be repaired or replaced to the satisfaction of the Department at the expense of the Contractor and at no additional cost to the Department.

C. No additional compensation will be given to the Contractor because of damage from flooding caused by groundwater or surface waters rising above ground elevations.

D. The Contractor shall be responsible for adhering to all provisions of necessary dewatering permits at no additional costs to the Department. Groundwater shall not be permitted to be discharged into surface waters without proper approval from regulatory agencies.

E. All discharges from dewatering activities to surface waters, wetlands or storm sewers shall be free of sediment. Care shall be taken not to damage or kill vegetation by excessive watering or by damaging silt accumulation in the discharge area. If discharges are sediment laden, techniques shall be employed to remove sediment prior to discharge. A sedimentation basin shall be constructed and used as specified, where necessary, to protect vegetation and to achieve environmental objectives. Any sediment collected in these devices shall be transported and disposed of off-site in accordance with all applicable federal, state and local regulations. The discharge of groundwater shall comply with all applicable federal, state and local regulations including, but not limited to, New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) regulations found at 6 NYCRR Part 750. Contractor shall be responsible for obtaining any SPDES permits required for each discharge.

3.4 SHEETING, SHORING AND BRACING

A. General:

1. Sheeting, shoring and bracing shall be used where necessary to prevent injury to workmen, structures, or pipe lines. Jetting for sheeting installation is prohibited.

2. All municipal, county, state and federal ordinances, codes, regulations and laws shall be observed. All trenches shall be shored with the minimal protection of sheeting listed in OSHA Regulations, 29 CFR, Part 1926, Subpart P - Excavations, Trenching and Shoring.

3. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

4. Unless otherwise shown, specified or ordered, all materials used for temporary sheeting shall be removed when work is completed. Such removal shall be made in a manner not injurious to the structure or its appearance or to adjacent Work.

5. The clearances and types of the temporary sheeting, insofar as they affect the character of the finished Work, will be subject to the approval of the Engineer, but the Contractor shall be responsible for the adequacy of all sheeting, shoring, bracing and other related Work.

6. Safe and satisfactory installation of the sheeting shall be the entire responsibility of the Contractor.

B. Removal of Sheeting and Bracing:

1. Remove sheeting and bracing from excavation, unless otherwise ordered in writing by the Engineer. Removal shall be done so as to not cause injury to the Work. Removal shall be equal on both sides of excavation to ensure no unequal loads on piping or structures. Use of vibratory extractors is prohibited.

3.5 HAZARDOUS MATERIALS STORAGE

A. Excavated material shall be placed in temporary storage or taken off-site for disposal immediately after excavation. Temporary storage areas shall be located within the property line of the Fumex Sanitation Site and shall be delineated by the Contractor in the approved Work Plan. Storage units shall be in good condition and constructed of materials that are compatible with the material or liquid to be stored. Each storage unit shall be clearly labeled with an identification number and a written log shall be kept to track the source of contaminated material in each unit.

B. Storage of excavated material outside the designated soil staging areas is prohibited without prior written approval by the Engineer.

C. The following methods of storage are acceptable:

1. Stockpiles

a. Excavated materials shall be stockpiled in the areas noted in the Contractor's Work Plan.

b. Stockpiles shall be constructed to isolate stored contaminated material from the environment. The maximum stockpile height shall be 10 feet. Each stockpile shall be labeled with an identification number identifying the material stored within the stockpile.

c. Diversion measures shall be employed, as depicted on the Drawings, to prevent storm water run-on and run-off.

d. A geomembrane cover shall be used to prevent precipitation from entering the stockpile and emissions and dust from escaping. The minimum thickness of the membrane cover shall be 0.25 mm (10 mils). Control measures such as wetting the stockpile surfaces shall be employed to suppress dust. Only potable water shall be used for this purpose.

2. Roll-off Units

a. Roll-off units may be used for temporary storage in lieu of stockpiling the material.

b. Roll-off units used to temporarily store contaminated material shall be watertight. A cover shall be placed over the units to prevent precipitation from contacting the stored material. Liquid which collects inside the units shall be removed and disposed of in accordance with all applicable federal, state and local laws and regulations.

D. Storage and handling of hazardous waste contaminated soil must comply with all applicable NYSDEC hazardous waste regulations (6 NYCRR Part 371-376).

+ + END OF SECTION + +

SECTION 02112

SOIL EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included: Erosion control shall include all work, materials and measures necessary to control soil erosion and sediment control resulting from construction operations, prevent flow of sediment from the construction site, and contain construction materials (including excavation and backfill) within protected working areas. Contractor shall propose all soil erosion and sediment control work specified herein as part of its approved Work Plan.

1.2 QUALITY ASSURANCE

A. The contractor shall comply with the requirements of the NYSDEC as they relate to erosion control.

PART 2 - PRODUCTS - Not Used

PART 3 – EXECUTION

3.1 INSTALLATION

A. Proper treatment and disposal of water from dewatering operations shall, at a minimum, require the use of a sedimentation/filtration system as necessary to remove suspended matter and other possible contaminants such as spilled fuel, lubricants, etc.

B. The design and operation of settling basins and/or filters shall be sufficient to protect the environment in accordance with all pertinent NYSDEC regulations. It shall be the responsibility of the Contractor to maintain compliance at all times during dewatering operations. In addition, care shall be taken not to damage or kill vegetation by excessive water discharge or by silt accumulation in the discharge area.

C. Settling basins, plastic filter fabrics, hay bales or other erosion and sediment control measures approved by the NYSDEC shall be used where necessary to protect vegetation, wetlands and wetlands buffer

zones and to prevent sediment from either surface runoff or the dewatering operations from entering catch basins, surface waters, etc.

D. All soil erosion and sediment control practices are to be installed prior to any major soil disturbance and maintained until permanent protection is established. No soil erosion or sediment control devices shall be removed unless directed by the Engineer.

E. Contractor shall prevent tracking or flowing of sediment onto public rights-of-way. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately and collected for off-site transportation and disposal in accordance with all applicable federal, state and local regulations.

F. The Contractor shall take necessary measures to maintain dust control. Dirt haul roads shall be sprinkled with water or given a surface of crushed stone or wood chips as required. Vehicles shall be cleaned, as necessary, prior to using public streets. Paved roads shall be sprinkled with water.

G. All soil erosion and sediment control devices shall be located in the field as outlined in the Contractor's approved Work Plan or as directed by the Engineer. The contract drawings are not intended to show the location and details for all such devices but are to be used as a reasonable guide.

H. Any changes to the approved soil erosion and sediment control plans will require the submission of soil erosion and sediment control plans to the Engineer and the Department for reapproval. The revised plans must meet all current State soil erosion and sediment control practices. No extension of the Contract time will be given to the Contractor should resubmission be required.

I. Contractor shall obtain all required permits.

J. Upon completion of construction work and after final grading and when permanent stabilization has been established, hay bales, silt fences and other controls will be removed by the Contractor. However, no soil erosion devices shall be removed without written permission of the Engineer.

K. All unsuitable excavated material will be removed from the site by the Contractor in accordance with the Contract Documents or as ordered by the Engineer.

L. Conduit outlets and catch basin inlets must be protected prior to start of construction.

M. The Contractor shall provide a detailed sequence of construction operations for review and submittal to the Engineer as part of the Contractor's Work Plan.

N. The Contractor shall meet the Engineer on-site to define those areas which will require soil erosion and sediment control facilities, discuss their construction and thereafter provide detailed plans for review of such facilities by the Engineer and the Department.

O. All soil erosion and sediment control practices shall be left in place and maintained, including silt and sediment removal, until construction is completed, area is stabilized and the Engineer so directs.

P. All dewatering operations must discharge directly into a sediment trap. Sediment filters shall be installed in accordance with the drawings and the details of design and construction shall be prepared and submitted by the Contractor to the Engineer and the Department for review.

Q. The Contractor shall restrict his/her operations to the areas of construction as shown on the Drawings. Any encroachment outside the areas of construction shall be the Contractor's responsibility and he/she shall assume all costs for repairing any damage caused by his/her operations.

+ + END OF SECTION + +

SECTION 02120

DEMOLITION AND REMOVALS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. General:

a. Contractor shall furnish all labor, materials, equipment and incidentals required for demolition, removals and disposal work shown, specified and required to complete the project.

b. The work under this section shall include, but not be limited to, demolition and removals of existing structures, materials, equipment, and work necessary to perform the Work as specified. The Work includes, but may not be limited to, masonry, piping, mechanical, structural, plumbing, electrical, asphalt, concrete, and other elements as shown, specified, or required to complete the Work.

c. Demolitions and removals specified or required under other Sections shall conform to the requirements of this Section.

d. Contractor shall be responsible for any damage to public sidewalks and/or roadways abutting or adjacent to the demolition properties resulting from the execution of the demolition work. The Contractor shall be responsible for the repair/replacement in kind of existing sidewalks and pavement in accordance with authorities having jurisdiction, including, but not limited to, Nassau County, and as directed by the Department. The cost of repair or replacement shall be considered incidental to the work and the Contractor shall obtain all permits and pay any fees.

B. Removal and Disposal of Asbestos-Containing Materials:

1. As specified by Section 02140, Garage Decontamination, and as shown on the Drawings, a portion of the floor in the on-site building is to be power washed. Prior to all power washing activities, the Contractor shall remove and dispose of all asbestos-containing materials (e.g. floor tile) in the area of the work).

2. The Contractor shall provide all labor, equipment and materials necessary to remove and dispose of all asbestos-containing materials present in the areas identified for power washing.

3. An asbestos material survey was conducted by Testing Mechanics Corporation. Based upon the results of inspection, sampling and analysis, it was determined that certain materials which will require removal as part of the garage decontamination contain asbestos-bearing materials greater than one percent (1%). The report entitled "Report of Asbestos Bulk Sampling" prepared by Testing Mechanics Corporation delineates the location of all asbestos-containing floor tile which will require removal. The report is included in the Limited Site Data Report. Failure to review the report prior to submitting a bid shall not relieve the Contractor of the obligation to remove the asbestos-containing materials at no additional cost to the Department.

4. Reference Data:

   a. The Limited Site Data Summary Report, Report of Asbestos Bulk Sampling.

C. Removal and Disposal of Underground Storage Tank

1. The Contractor shall provide all labor, materials, supplies, services, equipment, power facilities and incidentals necessary to remove and dispose of the underground storage tank (UST) and associated piping from the area identified on the Drawings.

2. A geophysical survey was performed by Hager-Richter Geoscience, Inc. Based on the results of the geophysical survey, it was concluded that an UST may be located at the facility. The location of the potential UST is depicted on the Drawings. The presence of the UST has not been confirmed. For the purposes of bidding, it is assumed that the tank is 2,000 gallons in size. Contractor is to determine whether the UST exists, has been emptied and closed (i.e., filled with sand or concrete), and if necessary, remove and dispose of subject tank in accordance with all applicable Federal, State and local regulations.

1.2 REFERENCES

A. American National Standards Institute (ANSI) - ANSI A10.6 "Safety Requirements for Demolition for Construction and Demolition Operations."

B. United States Environmental Protection Agency (USEPA): National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule (40 CFR Part 61).

C. Occupational Safety and Health Administration (OSHA) – Asbestos Regulations (29 CFR Part 1926.1101).

D. New York State Department of Labor (NYSDOL): Industrial Code No. 56.

1. The NYSDOL has issued a Variance (File No. 602-95), subject to conditions, for the portion of the Work involving asbestos containing materials. A copy of the Variance is included in the Limited Site Data Report.

E. Occupational Safety and Health Administration (OSHA) – Lead Exposure in Construction, Interim Final Rule (29 CFR Part 1926.62).

F. New York State Department of Environmental Conservation: 6 NYCRR:

1. Part 360, Solid Waste Management Facilities;

2. Part 364, Waste Transporter Permits;

3. Part 370, Hazardous Waste Management Systems – General;

4. Part 371, Identification and Listing of Hazardous Wastes;

5. Part 372, Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities; and

6. Part 373, Hazardous Waste Management Facilities.

7. Part 612 – 614, Petroleum Bulk Storage.

8. Part 595 – 599, Chemical Bulk Storage.

G. American Petroleum Institute Recommended Practice 1604 - Removal and Disposal of Used Underground Petroleum Storage Tanks.

H. American Petroleum Institute Recommended Practice 2015 - Cleaning Petroleum Storage Tanks.

I. Nassau County Department of Health, Article XI, Toxic and Hazardous Materials Storage, Handling and Control

J. Nassau County Fire Commission, Fire Prevention Ordinance, Article III, Flammable and Combustible Liquids.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Section 00003, Minimum Requirements for Health and Safety.

B. Section 01652, Sampling Plan.

C. Section 02130, Waste Transportation and Disposal.

D. Section 02140, Garage Decontamination.

E. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

F. Section 02200, Backfill and Compaction.

1.4 JOB CONDITIONS

A. Protection:

1. Contractor shall execute the demolition and removal Work to prevent damage or injury to adjacent structures, existing building services, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.

2. Contractor shall provide shoring, bracing and support to prevent movement, settlement, or collapse of existing adjacent structures or facilities. The Department assumes no responsibility for the actual condition of the structures or facilities adjacent to the Work.

3. Closing or obstructing of roadways and passageways adjacent to the Work by the placement or storage of materials will not be permitted, and all operations shall be conducted with a minimum interference to vehicular or pedestrian traffic.

4. Contractor shall erect and maintain barriers, lights, and other required protective devices.

5. Contractor shall repair damages caused by his operation to facilities to remain, or to any property belonging to the Department, utilities, or occupants of the facilities.

6. Contractor shall design, erect, install and maintain temporary partitions and enclosures required to eliminate dust, noise and debris from impacting adjacent properties, buildings and occupants.

7. The Work shall comply with the applicable provisions and recommendations of ANSI AIO.2, Safety Code for Building Construction, all governing codes and as hereinafter specified.

8. Contractor shall exercise precautions for fire prevention. Burning of debris shall not be permitted.

9. Existing structures on the site may not be structurally sound and may be unsafe for occupancy. Contractor shall enter structures at his own risk.

B. Scheduling:

1. Contractor shall carry out all operations so as to avoid interference with operations of the Department and local utility companies and to minimize impact on nearby residents.

2. Any structures, equipment, utilities, facilities, etc., removed without proper authorization, shall immediately be replaced to the satisfaction of the Engineer at no cost to the Department.

C. Notification: At least 48 hours prior to commencement of a demolition or removal, Contractor shall notify the Engineer in writing of his proposed schedule therefor. No removals shall be started without the permission of the Engineer.

D. Explosives: Do not bring explosives on site. No explosives will be permitted for this Project.

1.5 PERMITS AND REGULATIONS

A. The Contractor shall prepare all submittals and obtain all necessary permits and approvals for the Work. The Contractor shall obtain permits and approvals, pay all fees, and maintain all insurance as required by federal, state and local agencies, including Nassau County for completion of the Work.

B. The Contractor shall perform all Work in strict compliance with all applicable requirements of governing and public agencies and authorities having jurisdiction.

C. The Contractor shall provide all required notifications to federal, state and local agencies prior to the Work. Copies of all notifications shall be transmitted to the Engineer at the time of issuance by the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL

A. Disposition of Materials and Equipment:

1. All materials and equipment removed from existing work that is not wanted by the Department shall become the property of the Contractor.

2. Contractor shall dispose of all materials, equipment, debris, and all other items not to remain as property of the Department, off the site at NYSDEC approved disposal areas and in conformance with all existing applicable laws and regulations of Nassau County, NYSDEC and any other regulatory agency having jurisdiction.

B. Pollution Controls:

1. The Contractor shall prevent the release of vapors, odors and dust during demolition and removal activities. The Contractor shall comply with governing regulations pertaining to environmental protection. Monitoring for vapors, odors and dust shall be performed in accordance with the Minimum Requirements for Health and Safety provided in Section X, Standard Specifications, SPEC 00003.

2. Dirt and dust controls shall be applied immediately after razing and before removal from the site.

3. Clean adjacent structures, facilities, and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the Work.

C. The Contractor, Department, and Engineer shall jointly survey the condition of the nearby structures prior to the execution of the work. Photographs and records shall be made of any prior settlement or cracking of surrounding structures, and the like, that may become the subject of possible damage claims.

D. The Contractor shall be responsible for supplying all photographic equipment, film, negatives, prints, film developing, print holders and miscellaneous film folders for recording preconstruction conditions. Three sets of preconstruction photograph documents shall be assembled. Two shall be transmitted to the Engineer and Department and one set shall be retained by the Contractor.

3.2 REMOVALS AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

A. Removal and disposal of asbestos-containing materials in the areas identified to be demolished under this contract shall include at a minimum, the following:

1. Prior to the removal of any asbestos-containing materials or performance of any other work under this contract , the Contractor shall engage the services of a licensed asbestos handling contractor to remove and legally dispose of all asbestos-containing materials and a certified independent asbestos sampling and analysis laboratory. Approval by the Department of the asbestos handling contractor and the independent laboratory shall be required prior to proceeding with any asbestos-related work.

2. Prior to the removal of any asbestos containing materials, the Contractor shall provide all required notifications to federal, state and local agencies having jurisdiction. Copies of all notifications shall be transmitted to the Engineer at the time of issuance by the Contractor.

3. Handling, removal and off-site disposal of asbestos-containing materials shall be in accordance with all applicable federal, state and local regulations, rules and laws including, but not limited to, the standards referenced in Part 1 of this Section. Certification of the treatment, removal and disposal of asbestos-containing materials, accompanied by copies of all waste disposal manifests showing that the asbestos-containing materials were properly disposed and results of air sampling performed during the asbestos project, shall be filed with the Engineer and appropriate regulatory agencies prior to the commencement of any other work under this Contract.

4. Only a licensed asbestos-handling contractor, approved by the regulatory agencies having jurisdiction shall be employed by the Contractor to remove and dispose of asbestos-containing materials.

5. Air sampling, monitoring and analysis shall be performed by an independent testing laboratory during all phases of the asbestos project (pre-abatement, abatement and post-abatement) in accordance with all applicable federal, state and local regulations, rules and laws including, but not limited to, the standards referenced in Part 1 of this Section.

   a. All analyses shall be performed by a laboratory currently certified by the New York State Department of Health Environmental Laboratory Program (ELAP) and Contract

Laboratory Program (CLP) in all categories. The Contractor shall be required to obtain the Engineer's approval of the testing laboratory prior to the removal of asbestos-containing materials.

b. During abatement activities, if air samples collected outside of the work area indicate airborne asbestos fiber concentrations at or above 0.01 fiber per cubic centimeter, or the background level, whichever is greater, work shall stop immediately for inspection and repair of barriers. Cleanup of surfaces outside of the work area shall be performed by the Contractor at no additional cost to the department prior to the resumption of abatement activities.

c. The post-abatement (Clearance Air) monitoring results shall be considered satisfactory when every sample demonstrates an airborne concentration of asbestos fibers of less than 0.01 fiber per cubic centimeter, or the background level, whichever is greater. If initial post-abatement monitoring results do not meet this requirement, the Contractor shall reclean and the independent testing laboratory retest the work site until satisfactory clearance air-monitoring results have been achieved throughout the entire work site, at no additional cost to the Department.

6. The Contractor shall include in their Bid price all costs associated with performing the Work in accordance with all applicable federal, state and local regulations, rules and laws, including, but not limited to, costs necessary for permit fees; costs for handling, removal, testing, transporting and disposal of asbestos-containing materials; costs associated with decontamination procedures and engineering controls; air sampling, monitoring and analysis costs for all phases of the asbestos project.

3.3 REMOVAL OF UNDERGROUND STORAGE TANKS

A. All Work shall be performed in accordance with all applicable federal, state and local laws and regulations. The Contractor shall obtain all permits and approvals required to perform the Work. The Work shall be performed in accordance with all approved submittals and plans.

B. At least 48-hours prior to commencement of the Work, Contractor shall notify Engineer in writing of his/her proposed schedule. No removals shall be started without the approval of the Department.

C. Contractor shall give special attention to the buildings and structures that are in close proximity of the Work and shall implement all necessary measures to prevent damage to property, including, but not limited to, sheeting, shoring, etc. Damage to building or structures from the work shall be repaired at the Contractor's expense.

D. Contractor shall give special attention to subsurface and overhead utilities that are in close proximity to the Work, and shall implement all necessary measures to prevent damage to property. Damage to subsurface and overhead utilities from the work shall be repaired at the Contractor's expense.

E. Closing or obstructing roadways, sidewalks and passageways adjacent to the Work by the placement or storage of materials shall be conducted with minimum interference to vehicular or pedestrian traffic.

F. Contractor shall clear all designated areas, as directed by the Engineer, prior to proceeding with any aspects of the Work. Contractor shall remove from the site and satisfactorily dispose of all trees, brush, vegetation and ground cover as necessary to perform the Work. Burning of cleared materials is expressly forbidden.

G. Prior to the removal of the UST, Contractor shall be responsible for the removal any liquids which may be present in the UST. The Contractor shall transport off-site and dispose of all extracted liquids in accordance with the approved Work Plan.

H. After removal of the UST, Contractor shall collect end-point soil samples from the tank grave, as directed by the Engineer, in accordance with the approved Sampling Plan. Contractor shall provide split samples to the Engineer as directed by the Department. Contractor shall erect temporary structures, as necessary, to safely access the excavation for sampling.

I. The Contractor shall expose and remove any existing pipe runs from the UST to the terminus of the pipes. Pipes shall be removed and staged for disposal. Any product contained within the pipes will be containerized for proper off-site disposal.

J. Results of analyses shall be provided to the Engineer within 24 hours of sample receipt by the laboratory. Contractor shall keep excavation open until satisfactory endpoint sampling results are achieved. Contractor shall be responsible for all structural support, bracing, shoring, backfilling, etc., necessary to prevent damage, including collapse of the excavation. If backfill or other structural support is added to the excavation to prevent collapse, while waiting for the test results, removal and disposal of the backfill or other structural support will be required if the Engineer determines that deeper excavation is necessary. If deeper excavation is not required, backfill that meets the requirements of Section 02200,

Backfill and Compaction shall remain. Any other structural supports shall be removed.

K. There shall be no claims for change in Contract Time or Contract Price as a result of the Engineer's review of the result of the sample analyses and for additional excavation and sampling of soil that may be required.

L. After acceptance of excavation work by the Engineer, the Contractor shall restore all disturbed areas in-kind. The Work shall include, but not necessarily limited to furnishing and placing backfill, compaction, grading and landscaping as specified herein and as directed by the Engineer.

3.4 STRUCTURAL DEMOLITION

A. All demolition shall be conducted in accordance with applicable federal, state and local laws and regulations, including safety and health standards.

B. The Contractor shall take precautions to protect public and adjacent properties from flying or falling debris. No blasting or burning will permitted on the demolition site or any adjoining property.

C. The Contractor shall take precaution to protect existing groundwater monitoring wells throughout the performance of the Work. Any damage to existing monitoring wells resulting from the Work shall be corrected by the Contractor at no additional cost to the Department. Repair or replacement of damaged well(s) shall be solely at the Department's discretion.

D. The Contractor shall demolish and remove all exterior pipes within the areas identified to be demolished under this Contract.

E. The Contractor shall remove the existing concrete slabs and asphalt pavement necessary to perform the work as shown, regardless of thickness or composition. The Contractor shall be responsible for any waste characterization analysis required by the disposal facility. The concrete and asphalt shall be tested, containerized, stored, labeled, transported and disposed off-site, in accordance with applicable federal, state, and local laws and regulations.

3.5 CLEANUP

A. Contractor shall remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the Work, all materials, equipment, waste, and debris of every sort shall be removed and the premises shall be left, clean, neat and orderly. Waste generated during demolition shall be removed from the site within 24 hours of the time it is generated.

+ + END OF SECTION + +

SECTION 02130

WASTE TRANSPORTATION AND DISPOSAL

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to label, sample, test, manifest, transport and dispose of all waste and materials generated by the Work, and designated for removal from the site by the Department, and any other materials as shown on the Contract Drawings and as directed by the Department.

B. Labeling, sampling, testing, manifesting, transporting and disposing of waste shall be performed in accordance with all applicable federal, state and local laws and regulations, including NYSDEC hazardous waste regulations (6 NYCRR Parts 370-376) and the requirements of the disposal facility.

C. The Contractor shall prepare and issue all notifications, and apply for and obtain all permits and approvals required to complete the Work. All fees for licenses, permits, tolls, approvals, taxes, etc. shall be the responsibility of the Contractor.

D. The Work shall be performed in accordance with all the approved plans.

E. Materials removed from the site shall be transported directly to facilities which have received prior approval of the Department.

F. Related work specified elsewhere.

1. Section 1652, Sampling Plan

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

A. The Contractor shall provide all required notifications to federal, state and local agencies prior to transporting material off site. Copies of all notifications issued by the Contractor shall be transmitted to the Engineer at the time of issuance.

B. Hazardous materials removed from the site shall not be combined with non-hazardous material. Additionally, material characterized as hazardous waste shall not be combined with any other material.

C. The Contractor shall be responsible for all sampling and analyses required for disposal. All sampling shall be conducted with the Engineer present. The Contractor shall be required to obtain approval from the Department of the sampling and analytical methods and the analytical laboratory to be used (refer to Section 01652, Sampling Plan). The results of all analyses shall be submitted to the Engineer prior to removal of any material from the site. The time and date of collection and sample identification numbers shall be clearly indicated on the results of analyses furnished to the Engineer.

D. The Contractor shall complete all required manifest forms and bills of lading as required by applicable laws and regulations for transportation and disposal of materials off-site. The Department shall obtain the EPA-required generator identification number for the site, if necessary. The Contractor shall provide all required manifests and bills of lading to the Engineer along with all requested backup documentation. The Engineer shall sign manifests and bills of lading for the Department. However, the Contractor shall be responsible for assuring that all notifications, labeling, documentation, sampling, analysis, transportation and disposal requirements of the disposal facility, and federal, state and local requirements are complied with and properly documented. Waste manifests submitted to the Department and Engineer shall be furnished with a certification signed by the Contractor stating that all requirements of the disposal facility, and federal, state and local governments are complied with.

E. In accordance with the approved Work Plan, the Contractor shall provide letters of commitment from all disposal facilities to the Engineer. The letters of commitment shall state that the facility is able to accept the waste which the Contractor intends to ship to the facility.

F. Vehicles used to haul materials shall be designed, equipped, operated and maintained to prevent leakage, spillage or airborne emissions during transport. The containers shall be lined with 10-mil polyethylene sheeting prior to loading. All vehicles shall be decontaminated as specified in Section 01658, Equipment Decontamination, including truck tires and undercarriages, prior to leaving the site. The Contractor shall be responsible for supplying all labor, materials, equipment and supplies for decontaminating the vehicles used and shall be responsible for disposal of wastes resulting from decontamination.

G. Prior to departure from the site of each vehicle transporting waste, a decontamination certificate signed by the Contractor's site superintendent shall be submitted to the Engineer. The certificate shall include:

1. The date and time of departure and the vehicle license number;

2. A statement that no contaminated soil or other contaminated material is adhered to the vehicle body, tires or undercarriage and no soil will be tracked off site onto public roadways;

3. A statement that the vehicle container is lined with plastic sheeting and/or is not leaking or dripping liquids;

4. A statement that the contents of the vehicle are covered or completely enclosed so as to prevent any releases of vapors or particulate matter; and

5. The route of transport and location where the waste is being transported to.

H. Certified weigh tickets showing the weight of the vehicle at the time of arrival and departure from the disposal facility shall be provided as a prerequisite to payment for all material transported off-site. The weight tickets shall be signed and dated by a representative of the Contractor certifying to the accuracy of all measurements, the date and time of arrival and departure of each vehicle, the disposal location and the vehicle identification number.

+ + END OF SECTION + +

SECTION 02140

GARAGE DECONTAMINATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to power wash the garage area as shown on the Drawings, contain all washwater and transport and dispose of all decontamination generated waste off-site in accordance with all applicable federal, state and local regulations.

2. The work will include, but not necessarily be limited to, consolidation and removal of debris, power washing the concrete floor of the garage with water and an appropriate detergent, containing all generated wash water, and properly transporting and disposing off-site of all generated wash water.

3. The Contractor shall examine the areas and conditions under which Work shall be performed. The Contractor shall correct all conditions detrimental to proper and timely completion of the Work and shall not proceed until unsatisfactory conditions have been corrected.

4. At all times during decontamination activities, the Contractor shall provide equipment and facilities to remove all generated wash water. The Contractor shall be responsible for excavating and backfilling in accordance with these Specifications any soil contaminated due to improper containment of wash water at no additional expense to the Department.

5. Contractor shall take all precautions necessary to protect interior features of the garage area designated to remain from damage during garage decontamination activities. Any interior walls or other interior features which suffer water or physical damage due to the Contractor's activities shall be replaced to the satisfaction of the Engineer at no additional cost to the Department.

B. Related Work Specified Elsewhere.

1. Section 02120, Demolition and Removals.

2. Section 02130, Waste Transportation and Disposal.

3. Section 01330, Submittal Procedures

1.2 SUBMITTALS

A. Decontamination Procedure: Submit for approval the following in accordance with Section 01330, Submittal Procedures:

1. Contractor shall submit a decontamination procedure to the Engineer for approval. The decontamination procedure shall specify all procedures, equipment, materials and manpower which will be utilized to decontaminate the garage. The detergent and procedures and equipment to be utilized for containing washwater must be specified.

PART 2 – PRODUCTS

2.1 DETERGENT

A. Detergent for power washing activities shall be mild acid solution or environmentally safe detergent as approved by the Engineer.

PART 3 – EXECUTION

3.1 DECONTAMINATION ACTIVITIES

A. The Contractor shall remove, transport and properly dispose of off-site all trash, tires, concrete debris, wood debris, rebar, construction and demolition debris, concrete, asphalt and other waste materials, if present, prior to the performance of decontamination activities.

B. Any equipment and machinery designated to remain on-site shall be temporarily relocated to facilitate decontamination of the garage. Otherwise, equipment and machinery shall be properly transported off-site for disposal. The Contractor shall obtain the approval from the Engineer prior to moving or disposing of any equipment or machinery that is found present in the garage.

C. The entire concrete area shall be swept to remove all loose debris, which shall be properly disposed of off-site.

D. Any floor tiles within the work area, including those containing asbestos, shall be removed in accordance with Section 02120, Demolition and Removals, prior to decontamination.

E. The entire concrete area shall be scrubbed with an appropriate decontamination solution and power washed with potable water to remove the decontamination solution. The entire area shall be scrubbed with the decontamination solution and power washed at least twice.

F. The Contractor shall take all precautions necessary to contain all generated wash water for subsequent off-site transportation and disposal.

+ + END OF SECTION + +

SECTION 02150

DRY WELL CLOSURE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to properly close one existing dry well located in the asphalt parking lot at the Project Site. Work includes, but is not limited to, power washing and sealing one floor drain, removal and disposal of standing liquids within the existing dry well, removal of sludge and soil from the bottom of the dry well, power washing the dry well, collection and analysis of an endpoint sample from the bottom of the dry well and backfilling the dry well.

2. Closure of the dry well must be conducted in accordance with all applicable federal, state and local regulations. Specifically, closure must be conducted in accordance with the NCDH's "Floor Drain and Dry Well Closure Procedures" and the approved Underground Injection Control (UIC) Program Closure Plan

3. The work shall include removal of all materials regardless of type, character, composition, weight, size or condition.

4. All waste generated during completion of the Work shall be managed in accordance with Section 02130, Waste Transportation and Disposal, and all applicable federal, state and location regulations.

4. The Work shall include all temporary means to manage and control storm water discharge, and prevent siltation and sedimentation of existing storm water management systems during the performance of the Work.

5. The Contractor shall examine the areas and conditions under which Work shall be performed. The Contractor shall correct all conditions detrimental to proper and timely completion of the Work and shall not proceed until unsatisfactory conditions have been corrected. The Contractor shall immediately notify the Engineer of

any perceived differences in existing conditions which may impact the Work.

6. At all times during closure activities, the Contractor shall provide equipment and facilities to remove all generated wash water. The Contractor shall be responsible for excavating and backfilling, in accordance with these Specifications, any soil contaminated due to improper containment of wash water at no additional expense to the Department.

7. Contractor shall take all precautions necessary to protect interior features of the garage area designated to remain from damage during garage closure activities. Any interior walls or other interior features which suffer water or physical damage due to the Contractor's activities shall be replaced to the satisfaction of the Engineer at no additional cost to the Department.

8. The Contractor shall protect the dry well during performance of the Work as necessary to prevent structural failure.

B. Related Work Specified Elsewhere.

1. Section 01330, Submittal Procedures

2. Section 01652, Sampling Plan

3. Section 01653, Work Plan

4. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

5. Section 02120, Demolition and Removals.

6. Section 02130, Waste Transportation and Disposal.

7. Section 02200, Backfill and Compaction.

1.2 SUBMITTALS

A. Closure Procedure: Submit for approval the following in accordance with Section 01330, Submittal Procedures:

1. Contractor shall submit a closure procedure to the Engineer for approval. The procedure shall specify all procedures, equipment, materials and manpower which will be utilized to close the floor

drain within the on-site building and the dry well located within the parking lot. The detergent and procedures and equipment to be utilized for containing washwater must be specified. This procedure shall be submitted as part of the Contractor's Work Plan (refer to Section 01653)

1.3 PERMITS AND REGULATIONS

A. The Contractor shall prepare all required submittals and obtain all necessary permits and approvals and pay all fees for the Work as required by federal, state and local agencies, including the Town of North Hempstead, Nassau County and the United States Environmental Protection Agency.

B. The Contractor shall perform all Work in strict compliance with all applicable requirements of governing authorities having jurisdiction.

C. The Contractor is advised that all excavation work shall be in strict compliance with Occupational Safety and Health Administration (OSHA), Title 29, Code of Federal Regulations 1926, Subpart P: Excavation and Industrial Code Rule 23 as established by the New York State Department of Labor.

D. The Contractor is advised that the Department has prepared a UIC Program Closure Plan for the floor drain and dry well closure. This plan has the approval of the Nassau County Department of Health and the United States Environmental Protection Agency. All Work must be conducted in compliance with the requirements of this specification as well as the approved closure plan. The Department will be responsible for the preparation of a closure report documenting successful closure of the floor drain and dry well. The Contractor shall provide the Engineer with all waste disposal records and endpoint sample results required to complete the closure report, as required by other specification sections provided.

1.4 MANAGEMENT OF LIQUID WASTE

A. The Contractor shall be responsible for collecting, managing and disposing of all water and liquid waste resulting from the construction activities and present within the dry well at the beginning of construction. This includes, but is not limited to, water resulting from maintaining excavations, cleaning the dry well and floor drain and any storm water.

B. At all times during construction, the Contractor shall provide equipment and facilities to remove all water entering excavations from any sources. All excavations shall be kept dry so as not to impede construction or result in damage or loss of integrity of any complete Work.

C. The Contractor shall provide and maintain pumps, sumps, suction and discharge lines, dikes, berms or other controls as necessary to convey liquids away from the excavations. Control devices shall not be removed until disturbed areas are restored or as approved by the Engineer.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FLOOR DRAIN AND DRY WELL CLOSURE

A. The Contractor shall notify the Nassau County Department of Health at least 5 days prior to any field work related to closure of the floor drain and dry well at the site.

B. The contractor shall locate the floor drain within the garage at the on-site building. The floor drain and drainage piping leading to the discharge point of the dry well shall be power washed. Prior to power washing the floor drain and drainage piping, the Contractor shall install 10-mil polyethylene plastic sheeting in the bottom of the dry well to minimize migration of the washwater to the soil below. The plastic sheeting shall be removed and disposed of by the Contractor after power washing of the floor drain and dry well is complete, the liquid is removed and approval is obtained from the Department.

C. The floor drain shall be sealed at the surface of the garage floor with a minimum of five inches of concrete.

D. Existing underground drainage piping associated with the floor drain and building roof drains which discharge to the existing dry well shall be removed during the excavation of contaminated soil from the parking area at the site as shown on the Drawings, as specified by Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials, and as directed by the Department.

E. The Contractor shall remove the cover, frame, stack, dome, debris, asphalt and soil in the vicinity of the dry well to completely expose the top of the dry well.

F. The Contractor shall remove the dome, top slab and/or "stack" of the dry well, including the manhole rims and covers, if present, to provide an open excavation which extends from ground surface to the bottom of the dry well.

G. All liquids and sludge shall be removed from the dry well to the existing sediment surface and placed immediately into liquid tight storage containers. In power washing the floor drain, the Contractor shall minimize the generation of wastewater and maximize the capture of the wash water. Any damage or contamination caused by the improper capture of wash water shall be corrected by the Contractor at no additional expense to the Department.

H. The interior walls of the dry well shall be power washed by the Contractor as directed by the Department. The Contractor shall collect, characterize, remove and dispose of all soil, sludge, sediment, debris, wastewater, wash water and residuals from within the dry well. In power washing the dry well, the Contractor shall minimize the generation of wastewater and maximize the capture of the wash water.

I. Soil and sediment, including any debris, sludge and liquid shall be removed from the dry well after completion of power washing activities. Excavation of the soil beneath the dry well shall be accomplished as specified by Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials, to the horizontal extent of the inside of the rings of the dry well. Excavation shall continue until the point where further excavation may compromise the structural integrity of the ring structure.

J. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, including collapse of the dry well.

K. An endpoint sample shall be collected from the bottom of the excavation, as specified by Section 01652, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Engineer, the Department and, as applicable, the United States Environmental Protection Agency and the Nassau County Department of Health. There shall be no claims for changes in Contract Time or Contract Price as a result of the Engineer's, Department's, United States Environmental Protection Agency's or Nassau County Department of Health's review of endpoint sample results. Should the Contractor backfill the dry well prior to the approval of the end point sample results to maintain the integrity of the dry well, such work is at the Contractor's risk. Should additional excavation be required, all such backfill will be removed and handled, as directed by the Engineer, at no additional cost to the Department.

L. Once the Contractor has obtained approval of the endpoint sample results, the dry well shall be backfilled. Restoration at grade shall be as depicted on the Drawings and as specified elsewhere herein to provide an impermeable cap. If the dry well and dome are in suitable condition to

receive traffic load, as determined by the Engineer, the dry well shall be backfilled, dome replaced, opening in dome covered with a suitable concrete cover and site restored. Otherwise, backfill and compaction shall take place in accordance with Section 02200, Backfill and Compaction.

M. The Contractor shall give special attention to the buildings and structures that are in close proximity of the Work and shall implement all necessary measures to prevent damage to property. Damage to buildings or structures from the Work shall be repaired at the Contractor's expense.

N. The Contractor shall completely secure any open dry well and excavation at the conclusion of the Work or at the end of the day, whichever is sooner. Open dry wells and excavations shall be covered with at a minimum, 20-mil high-density polyethylene secured with sandbags. The cover shall be weather-tight and prevent infiltration of storm water and drainage water, and prevent the release of vapors and odors. The cover shall be positioned to shed precipitation, storm water runoff and drainage water. Open dry wells and excavations shall be barricaded with safety fencing, signs and other means as required by federal, state and local laws and regulations.

O. The Contractor shall prevent the release of vapors, odor and dust originating during excavation of the dry well, removal of liquid, sediment and soil form the dry well, loading materials and any other operations required by this Contract.

+ + END OF SECTION + +

SECTION 02200

BACKFILL AND COMPACTION

PART 1 - GENERAL

1.1 SUMMARY

A. Scope:

1. Contractor shall perform all backfilling and compacting of earth materials as shown, specified, and required.

2. All necessary preparation of subgrade shall be included.

B. Sources of Materials:

1. General fill materials shall be obtained from off-site excavation work and/or off-site sources.

2. Select fill materials shall be obtained from off -site excavation work and/or off-site sources.

3. Nonfrost susceptible fill material shall be obtained from off-site sources.

4. Crushed stone materials shall be obtained from off-site sources.

5. Topsoil, except for topsoil stripped from the work areas, shall be obtained from off-site sources.

C. Related Work Specified Elsewhere:

1. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials

2. Section 03300, Cast-in-Place Concrete

3. Section 15051, Buried Piping Materials and Installation

D. Tests:

1. Materials used for soil layers shall be subject to examination and tests as may be required before acceptance and during the duration of this Contract.

2. Any material may be tested and no materials for which laboratory tests are required shall be used by the Contractor until notification of acceptance and then only as long as its quality remains equal to that of the accepted sample.

3. Material rejected as the result of laboratory tests shall not be resampled or retested, unless otherwise directed by the Engineer.

4. Results of the test of any material may be compared with records of similar materials in actual service, and when such service record is unsatisfactory, use of the material shall not be allowed even though the tests are satisfactory.

5. The Contractor shall prequalify soils to be used for the project. The prequalification process will require that the Contractor identify suitable material for use for the project. The Contractor shall obtain prequalification samples from each source and each soil stockpile of no less than one for every 1,000 cubic yards. The stockpile pre-qualification samples shall be obtained at two opposite locations to expose the core of the stockpile and allow the taking of representative samples or as approved by the Engineer. The Contractor shall have at least two samples (one for Engineer, remainder for Contractor) of material taken at each sampling location by an approved soils testing laboratory. The sampling shall be conducted in the presence of the Engineer. Each sample furnished to the Engineer shall be at least 50 pounds in weight and shall be tested by the Engineer, at his/her discretion, for conformance testing of the prequalification process. The Contractor shall have each "Contractor Sample" tested by the approved soils testing laboratory as prescribed below. The Contractor shall submit certified copies of the test results and test methods to the Engineer for review and approval. If the test results are acceptable, the Contractor may proceed with the use of the prequalified source and the prequalification stockpile material may be incorporated into the work. If the test results are not acceptable, the Contractor shall modify the proposed source as required to provide soil which satisfies the requirements of these Specifications and the Contractor shall repeat the prequalification process (using alternative material) as described above until acceptable test results are achieved. The Contractor shall not utilize unacceptable prequalification stockpiles in the prosecution of the work.

6. Prequalification testing of materials by the Contractor for approval of sources shall include, but shall not be limited to the following:

   a. Grain size distribution tests shall be performed in accordance with ASTM D422, including hydrometer analysis.

b. The soil shall be characterized in accordance with ASTM D2487.

c. The soil texture shall be characterized by United States Engineer of Agriculture Method Textural Classification.

d. The organic matter of the soil shall be determined by ASTM Method D2974.

e. Soluble salts analysis shall be performed in accordance with the recommended chemical soil test procedure for the North Central Region: North Central Publications 221 – Soluble Salts 1.2.

f. Cation exchange shall be performed in accordance with USEPA Method 9081.

g. Soil pH analysis shall be performed in accordance with ASTM D4972.

h. In-place Moisture/Density relationship tests shall be performed in accordance with ASTM D3017 and ASTM D2922 (Standard Proctor).

i. Chemical Analysis – Target Compound List (TCL) volatile organic compounds (VOCs); TCL semivolatile organic compounds (SVOCs); TCL pesticides; TCL polychlorinated biphenyls (PCBs); Target Analyte List (TAL) metals; and cyanide. Sample collection and analysis shall be in accordance with NYSDEC Analytical Services Protocol most recent revision.

7. Upon receipt, the Engineer shall review the data and shall be the sole judge as to the acceptability of the material. The results of the sample analysis described in Section 1.D.6.i. of this section shall meet the requirements of the New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives Found at 6 NYCRR Part 375.6.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01330, "Submittal Procedures:"

1. Independent Testing Laboratory: Prior to conducting the required tests, the Contractor shall submit, to the Engineer, for approval, the

name of the independent test laboratory which will facilitate the required testing.

2. Samples and Test Results:

   a. At least 2 weeks prior to the date of anticipated use, the Contractor shall submit, to the Engineer, for approval, a representative sample of all off-site material required. The Contractor shall notify the Engineer in writing of the source of each sample.

   b. The Contractor shall provide, along with the above samples, the required test results, excluding the field density test.

3. Manufacturer's Data: Submit for approval manufacturer's specifications, performance characteristics and operating instructions for the compaction equipment.

1.3 QUALITY ASSURANCE

A. Reference Standards: Comply with applicable provisions and recommendations of the following except as otherwise shown or specified.

1. ASTM D 422, Particle-Size Analysis of Soils.

2. ASTM D 1556, Density Soil in Place by the Sand-Cone Method.

3. ASTM D 1557, Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, using 10-pound (4.54 kg) Rammer and 18-inch (457 mm) Drop.

B. Tests:

1. An independent testing laboratory shall be employed by the Contractor to perform the required tests.

2. Required tests:

   a. Select Fill Samples: Gradation, ASTM D 422.

   b. Compacted Select Fill: Compaction, ASTM D 1557.

   c. Optimum Moisture: Maximum density curve for each soil used for backfill.

   d. Field Density Tests on each lift of backfilled material: ASTM D1556, ASTM D2167 or ASTM D2922.

1.4 JOB CONDITIONS

A. Dust Control: Contractor shall conduct all of his/her operations and maintain the area of his/her activities, including sweeping and sprinkling of roadways, so as to minimize creation and dispersion of dust. In addition, Contractor shall be responsible for controlling dust caused by his/her operation of vehicles and equipment, clearing or for any reason whatever.

B. Odor Control: As an odor abatement measure, cover, at the end of each work day, all areas of organic or odorous material which were exposed during excavation with a minimum 6-in and a maximum 24-inch deep of clean fill. Excavated organic or odorous material shall be immediately removed off-site and shall not be stockpiled on-site.

C. Roadways and Walks: Unless otherwise approved by the Engineer, excavated material and materials of construction shall be so deposited, and the Work shall be so conducted, as to leave open and free for vehicular traffic a roadway not less than 10 feet in width. All hydrants, valves, and other facilities which may require access during construction shall be kept accessible for use. During the progress of the Work, Contractor shall maintain such roadways in satisfactory condition and the Work shall at all times be so conducted as to cause a minimum of inconvenience to the Owner and Pedestrians.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR ALL FILL MATERIAL

A. All fill material from off-site sources shall be free of refuse and vegetable matter, frozen material and other objectionable material.

B. Excavated materials meeting these requirements and the requirements stipulated below for the type of fill material shall be used when approved by the Engineer. Otherwise, the Contractor shall excavate, haul and place material from approved off-site sources. No material excavated from the Fumex Sanitation Site remedial activities shall be reused.

C. All materials shall be subject to inspection by the Engineer. Material from off-site sources not meeting the above specifications shall not be accepted. All costs associated with reprocessing of rejected material shall be borne by the Contractor.

2.2 SOIL MATERIALS

A. Select Fill: Well graded granular material or bank run gravel, free from organic matter. Not more than 80 percent by weight shall pass through a No. 40 sieve; not more than 10 percent by weight through a No. 200 sieve; and 100 percent shall pass a 3-inch square sieve.

B. General Fill: Soil materials for general backfill and fill shall be free of organics, clay, debris, waste, frozen materials and other deleterious matter and shall conform to the following gradation.

Sieve Size	Percent Passing by Weight
4-inch	100
No. 40	0-70
No. 200	0-15

C. Non-frost Susceptible Fill:

1. Non-frost susceptible fill shall be subbase course, Type 4, Item No. 304.03 in accordance with the New York State Department of Transportation.

2. Fill shall be installed beneath concrete foundation slabs, concrete decking and pavement as shown on the plans or directed by the Engineer.

D. Crushed aggregate: Shall consist of crushed stone or crushed gravel conforming to the following gradation:

Sieve Size	Percent Retained on Sieve
3/4-inch	85-100 (throughout)

E. Unsuitable Material: All soils not meeting the requirements of Paragraphs A through D, and all organic materials.

PART 3 - EXECUTION

3.1 INSPECTION

A. Contractor shall provide Engineer with sufficient time and means to examine the areas and conditions under which excavating, filling, and grading are to be performed. Work shall not proceed until all unsatisfactory conditions have been corrected in a manner acceptable to Engineer.

3.2 BACKFILL AND COMPACTION

A. Fill excavations as promptly as Work permits, but not until completion of the following:

1. Acceptance by Engineer of all Work within the excavation, including approval of endpoint sampling results, if applicable.

2. Inspection, testing approval, and recording of locations of underground utilities, connections, branches, structures and other facilities.

3. Removal of temporary shoring and bracing, and backfilling of voids with satisfactory materials.

4. Removal of trash and debris.

5. Completion of endpoint sampling and successful analytical results, if applicable.

B. Excavation shall be kept dry during backfilling operations. Backfills around piping and structures shall be brought up evenly on all sides.

C. All backfill shall be placed in layers not exceeding 6 inches in thickness, and each layer shall be compacted as specified below.

D. All structures and pipe trenches shall be backfilled with the type of material listed below except where shown otherwise on the Contract Drawings.

Type of Backfill	Location
Select Fill	Replacement of unsuitable material removed below bottom of footings and slabs of structures, below pipe beddings, and where shown on the Drawings.
Non-frost Susceptible Fill	In locations shown on the Drawings.
Crushed Stone or Gravel	In locations shown on the Drawings.
General Fill	In all locations not enumerated above.

E. Backfill above and adjacent to pipe, and adjacent to buildings and walls shall be compacted by light weight equipment, such as "walk behind" vibratory plate compactors. Heavy self propelled compactors shall not be used until the following criteria are met:

1. A minimum of 18 inches of compacted backfill has been placed above the top of the pipe.

2. Area to be compacted is a minimum distance of 3 pipe diameters away from the adjacent pipe.

3. Area to be compacted is a minimum of 10 feet from building walls.

F. "Jumping jack" hammers shall not be used.

G. Compaction Density Requirements:

1. Unless otherwise noted, the degree of compaction required for all types of fill shall be 95 percent in accordance with ASTM D 1557 (Modified Proctor Test). Material shall be moistened or aerated as necessary to provide the moisture content that will facilitate obtaining the specified compaction.

2. Non-frost-susceptible fill shall be compacted with a vibratory plate compactor or vibratory rolling compactor. Three complete passes shall be made on each 6-inch thick loose layer. Such pass shall overlap the adjacent previously compacted area a minimum of 20%. Density requirement for non-frost-susceptible fill will be considered satisfactory upon completion of compaction.

3. The Contractor shall notify the Engineer a minimum of 24 hours prior to starting any compaction operation.

4. Field density tests shall be made by an independent testing laboratory employed by the Contractor to determine the actual density attained in each layer of fill. No fill shall be placed over a layer which has not been tested and approved. Should these tests indicate that the density of any layer of fill or portion thereof is below the required density, the particular layer or portion thereof shall be reworked until the required density has been obtained. Field density test procedures shall conform with ASTM D2167, ASTM D1556, or ASTM D2922. All final test results shall be submitted to the Engineer for review. At least one test per lift or one test per 50 yards placed shall be performed, whichever is greater.

5. The moisture content of the fill material shall be at or slightly below the optimum moisture content for the soils being utilized during the entire time when the compactor is working on the fill. If, in the opinion of the Engineer, the fill is too dry for proper compaction, the Contractor shall spray the fill with a sufficient quantity of clean water to bring the fill layer to the proper moisture content. No compactive effort shall be made if the fill is significantly above the optimum moisture content, unless specifically approved by the Engineer.

6. No fill material shall be placed, spread or compacted while the ground or fill is frozen or thawing or during unfavorable weather conditions. When work is interrupted, fill operations shall not be resumed unless the moisture content and density of the fill are as previously specified. The fill surface must be made smooth and free from ruts or indentations at the end of any working day when any significant precipitation is forecast and/or at the completion of the compaction operations in that area, in order to prevent saturation of the fill material.

H. Contractor shall repair, at no additional cost to the Department, after settlement that occurs. He/she shall make all repairs and replacements necessary within 30 days after notice from the Engineer.

3.3 GRADING

A. Uniformly grade areas within limits of the Work, including adjacent transition areas. Smooth subgrade surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Turfed Areas: Finish areas to receive topsoil to within not more than 1-inch above or below the required subgrade elevations.

C. Slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/4-inch when tested with a 10-foot straightedge.

D. Compaction: After grading, compact subgrade surfaces to the depth and percentage of maximum density required.

++ END OF SECTION ++

SECTION 02429

DRAINAGE STRUCTURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included: Contractor shall furnish all labor, materials, equipment and incidentals necessary to provide all precast concrete drainage structures including leaching pools and similar structures as shown, specified, and otherwise required to complete the Work.

B. General: Structures shall conform in shape, size, dimensions, materials, and other respects to the details shown on the Drawings.

C. Related Work Specified Elsewhere:

1. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials
2. Section 02200, Backfill and Compaction
3. Section 03100, Concrete Formwork
4. Section 03200, Reinforcing Steel
5. Section 03300, Cast-in-Place Concrete
6. Section 04100, Mortar
7. Section 05540, Castings

1.2 QUALITY ASSURANCE

A. General:

1. The Contractor shall give the Engineer 24 hours written notice plus travel time prior to the commencement of any manufacturing process or testing procedures for precast concrete leaching pools.
2. At the point of manufacture and after delivery to the site, the Engineer reserves the right to inspect and test all precast concrete products.
3. In addition, at the place of manufacture of precast concrete products, the Engineer reserves the right at all times:

a) To inspect the materials, the processes of manufacture, and the records of analysis and tests.

b) To select test specimens.

4. All precast concrete leaching pools delivered to the site shall be clearly marked at the factory with the date of manufacture and the manufacturer's identification. Omission of this information may be cause for rejection of the leaching pools.

B. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

1. ASTM C 32, Sewer and Manhole Brick (made from clay or shale).

2. ASTM C 139, Concrete Masonry Units for Construction of Catch Basins and Manholes.

3. ASTM C 140, Sampling and Testing Concrete Masonry Units.

4. ASTM C 207, Hydrated Lime for Masonry Purposes.

5. ASTM C 478, Precast Reinforced Concrete Manhole Sections.

1.3 SUBMITTALS

A. Samples: Submit for approval samples of brick, block and accessories, if any, for the structures.

B. Shop Drawings: Submit for approval Shop Drawings showing design and construction of all precast concrete including, but not limited to, the following:

1. Size and spacing of steel reinforcement.

2. Wall and slab thicknesses.

3. Concrete cover over steel reinforcement.

4. Concrete mix design including design compressive strength.

5. Leaching pool frame dimensions.

6. Height of frame and leveling course.

7. Grade elevation at each catch basin.

8. Certificates of compliance with the referenced specifications.

PART 2 - PRODUCTS

2.1 PRECAST PRODUCTS

A. Where shown or otherwise approved by the Engineer, precast concrete shall be used for items such as drainage manholes, etc. Layout and details shall be as shown and specified. Design shall be adequate to withstand all loads imposed including earth pressure, vehicle loads and construction loading.

B. Drainage manholes shall be of sufficient strength to safely support an AASHTO H-20 loading. All steel reinforcement shall meet the requirements as specified in Section 03200, Reinforcing Steel. All concrete shall meet the requirements of Section 03300, Cast-in-Place concrete.

C. Drainage manholes shall be provided with circular openings at the proper locations and elevations for all pipe connections. The space around each pipe connection shall be sealed with mortar. Mortar shall be as specified in Section 04100, Mortar, except Portland cement shall meet the requirements of ASTM C 150, Type II.

2.2 MISCELLANEOUS METALS

A. Metal frames, covers, grates, troughs, steps and similar required items shall be provided as shown and in accordance with Section 05540, Castings.

PART 3 - EXECUTION

3.1 PREPARATION

A. All excavation and shoring required for the construction of drainage structures shall be performed in accordance with Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

B. Excavation shall be to the required depth. Over-excavated areas shall be backfilled with select fill material properly compacted as specified in Section 02200, Backfill and Compaction.

3.2 INSTALLATION

A. Set drainage structures at the proper elevation with proper bearing on a suitable foundation. Catch basins shall be level and oriented to receive all incoming and outgoing pipes.

B. Brick stacks shall be used for all precast structures where required. They shall be a maximum of 12 inches in height, constructed on the top surface on which the frame will be placed. The brick stack shall bring the frame to the proper grade.

C. Brick shall be satisfactorily wet when being laid and each brick shall be laid in mortar so as to form full bed, end and side joints in one operation. The joints shall not be wider than 3/8-inch, except when the bricks are laid radially, in which case the narrowest part of the joint shall not exceed 1/4-inch.

D. An approved watertight joint shall be provided for each pipe entering and exiting each leaching pool.

+ + END OF SECTION + +

SECTION 02485

SOD

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope: The contractor shall furnish all labor, materials and equipment necessary to install sod. The limits of sod will be determined by the Engineer. Disturbance of grass areas shall be kept to a minimum during construction.

B. Related Work Specified Elsewhere:

1. Section 02200, Backfill and Compaction.

1.2 SUBMITTALS

A. General: Submit shop drawings in accordance with Section 01330, Submittal Procedures, and the Contract Documents.

B. The Contractor shall submit certificates of materials compliance before delivery of material for the following items:

a. Sod - seed mix

b. Fertilizer

c. Limestone

PART 2 - PRODUCTS

2.1 SUBSOIL PREPARATION

NOTE: This specification applies only if additional topsoil will be deposited over existing soil.

A. General: The areas to which these specifications apply and on which topsoil is to be spread shall be as indicated on the drawings or as otherwise specified. Equipment, labor and materials necessary for preparation of the specified areas shall be furnished by the Contractor.

B. Soil Testing: The chemical analysis for topsoil or subsoil shall be made by the soil testing service of the New England state universities, which shall

be considered the official testing laboratory. Addresses of these services may be obtained from the Cooperative Extension Service office in the county and state in which the job is located, or a New England Sod Producer.

1. Sampling Method and Size of Samples. Soil samples should be representative of the area or soil stockpile. A minimum of 10 sub-samples taken to a depth of 6 inches should be collected from random spots over the area. For soil stockpiles, probe the piles at random locations and depths. Depending upon the test required, collect either 1 pint for chemical analysis or 1 quart for mechanical analysis. Place the samples in a suitable container and mail or deliver to the testing laboratory. If more than one sample is sent, identify each sample by name, number or letter and indicate what tests are required.

C. Grading: Grades on the areas to be top soiled which have been previously established in conformance with the drawings and/or other applicable specifications shall be maintained.

D. Liming: When a chemical and mechanical analysis shows that the subsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate recommended by the testing service. Liming material shall contain at least 50% total oxides (Calcium oxide plus magnesium oxide) and 50% of material must pass through a 100-mesh sieve with 98% passing through a 20-mesh sieve. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with the tillage operation described below.

E. Debris Removal: All debris and stones of 2 inches or more must be removed from the subsoil to a depth of 8 inches.

F. Tilling: After the areas to be top soiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the sub-grade shall be loosened by disking or rototilling to a depth of at least 3 to 4 inches to permit bonding of the topsoil to the subsoil.

G. Acceptance: Acceptance shall be given to the Contractor by the Department or Engineer upon satisfactory completion of each section or area as indicated on the drawings or as otherwise specified. No top-soiling or turfgrass sod installation work should proceed until this requirement is met.

2.2 TOPSOIL MATERIAL AND APPLICATION

NOTE: Topsoil on the existing site may often be used, standards as set forth in these specifications.

A. General: Unless otherwise specified by the Engineer, the Contractor shall furnish all topsoil, labor, material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract.

B. Soil: Texture of the topsoil shall be specified and approved by the Engineer.

Topsoil shall be free of tree roots, stumps, building material, and trash, and shall be free of stones larger than 1-1/2 inches in any dimension. Topsoil shall be free of quackgrass rhizomes (Agropyron repens) and the nut-like tubers of nutsedge (Cyperus escu/entus).

Because some herbicides are non-selective and have a long residual life in the soil, it should be determined if the topsoil to be used was recently treated with herbicide. The herbicide material, rate of application and number of times applied should be determined before the soil is delivered. If the herbicide material is one that will affect the growth of turfgrass sod, the soil can be rejected.

All topsoil shall be tested as outlined in Section 1. No turfgrass sod shall be placed on soil which has been treated with soil sterilants or herbicides until sufficient time has elapsed to permit the dissipation of toxic materials. The Contractor shall assume full responsibility for any loss or damage to turfgrass sod arising from improper use of sterilants or due to his or her failure to allow sufficient time to permit dissipation of toxic materials, whether or not such sterilants are specified herein.

C. Grading: The topsoil shall be uniformly distributed on the designated areas. It shall be a minimum depth of 4 inches after firming. Spreading shall be performed in such a manner that turfgrass sod installation can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from top soiling or other operations shall be corrected in order to prevent the formation of depressions or crowns. Topsoil shall not be placed while in a frozen or muddy condition or when the sub-grade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed turfgrass sod installation.

D. Clean Up: After the topsoil has been spread and the final grades approved, the area shall be cleared of all grade stakes, surface trash and other objects that would hinder installation of turfgrass sod. Paved areas over which hauling operations are conducted shall be cleaned as soon as the job is completed.

E. Acceptance: Acceptance shall be given to the Contractor by the Department or Engineer upon satisfactory completion of each section or area indicated on the drawings or as otherwise specified.

2.3 SOD

A. Materials:

1. Sod shall be nursery grown and at least two years old. It shall be free of insects, grubs, fungus disease and noxious weeds and shall have a pH value of not less than 6.5.

2. The cultivated sod shall be 100% Merion grass sod.

3. Sod shall be a minimum of 1 inch thick and cut in uniform strips 1 foot by 4 feet minimum. Root development shall be capable of supporting sod during handling, transporting and laying. Sod shall not be installed in strips less than 1 foot in width.

4. Top growth shall be thick and matted. The turf shall be green and growing. Prior to cutting and transporting, the sod shall be well irrigated and have been recently mowed.

5. Native soil on the roots of the sod shall be maintained during process of transplanting.

6. Fertilizers shall be suitable commercial types.

B. Method:

1. The surfaces of the areas to be covered with sod shall be trimmed, topsoiled to a minimum depth of 4 inches and graded to 1 inch below finished elevation by cutting and/or filling, as required, and as directed by the Department.

2. The sod bed shall be raked and all foreign matter shall be removed and disposed of from the site.

3. Soil amendments and fertilizers shall be evenly spread over the prepared area and thoroughly raked in to incorporate it with the soil. Lime shall be incorporated in the soil at the rate of 50 pounds per 1,000 square feet and superphosphate at the rate of 25 pounds per 1,000 square feet.

4. Sod shall then be laid and set to the required grade on a reasonably moist bed with joints staggered. It shall be laid smoothly, edge to edge, and all openings plugged with sod. After laying, the sod shall be pressed firmly into contact with the bed by

tamping and rolling to eliminate all air pockets and produce a uniform, even surface true to grade.

5. Sod shall be planted within 24 hours from the time of cutting unless tightly rolled or stored (roots to roots) and the stacks kept moist. Storage for a period in excess of five days will, under no circumstance, be permitted. Should the completed sod surface become gullied, eroded, or otherwise damaged, the affected areas shall be re-sodded as required and at the Contractor's expense.

6. The Contractor shall be responsible for proper protection and maintenance of the sodded areas. Where sod fails to grow, the Contractor shall prepare and re-sod these areas at his/her expense. During dry weather the Contractor shall water the sodded area frequently enough to insure growth.

2.4 FERTILIZER AND LIME MATERIALS AND FINAL SOIL PREPARATION

NOTE: Specifications given in this section apply both to areas where topsoil has been added and to areas where soil from the existing site is used.

A. General: The Contractor shall furnish all labor, material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract.

B. Materials: Soil tests shall be made to determine requirements for both lime and fertilizer. Soil tests shall be conducted by the soil testing services of the New England state universities which shall be considered the official testing laboratory. (See Section 1).

1. Fertilizers: All fertilizers shall be uniform in composition and free-flowing. Fertilizer shall be delivered to the job site fully labeled according to applicable state fertilizer laws. Fertilizer application rates shall be determined by soil tests. Fertilizer shall be distributed uniformly over the area to be sodded with turfgrass.

2. Lime: Lime material shall be ground limestone and shall comply with existing state and federal regulations. Limestone shall contain at least 50% total oxides (calcium oxide plus magnesium oxide). Ground limestone shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 98 % will pass through a 20-mesh sieve. Lime shall be distributed uniformly over the entire area to be sodded with turfgrass. Lime should be worked into the soil to the depth of 3 to 4 inches.

3. Phosphorus: If a soil test indicates phosphorus is needed, apply to the area and work into the soil to a depth of 3 to 4 inches.

C. Grading:

1. Tillage: Lime and fertilizer shall be uniformly mixed into the top four inches of soil.

2. Final Grading: Any undulations or irregularities in the surface resulting from fertilizing, liming, or other causes shall be leveled prior to turfgrass sod installation. Areas damaged by flooding or erosion shall be reconstructed and all grades reestablished by the landscape contractor in accordance with the drawings and/or other applicable specifications.

3. Except for turfgrass sod-installing equipment, care should be taken to keep equipment off prepared areas. Particular care should be taken to avoid "COMPACTION" during the grading process. The use of clay soils for grading material and the utilization of heavy equipment for surface preparation will contribute to soil compaction.

D. Clean Up: Prior to turfgrass sod installation, the surface shall be free of stones, cleared of all trash, debris, roots, brush, wire, grade stakes and other objects that would interfere with establishment or maintenance operations.

E. Acceptance: Acceptance shall be given to the Contractor by the Department or Engineer upon satisfactory completion of each section or area as indicated on the drawings or as otherwise specified.

F. Contractor's Responsibility: Unless otherwise specified by the contract, the Contractor is responsible for maintaining the accepted areas which are to be sodded with turfgrass. The effective turfgrass sod installation date shall be specified in a written notice from the Contractor.

PART 3 - EXECUTION

3.1 SPECIFICATIONS FOR TURFGRASS SOD MATERIALS AND INSTALLATION

A. General: Unless otherwise stated, it is expected that the Contractor shall furnish all labor, material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract. All previously established grades shall be maintained in conformance with the drawings and/or other specifications.

B. Materials:

1. Turfgrass Sod Composition: Turfgrass sod shall be composed of Kentucky Bluegrass, fine fescue and perennial ryegrass in percentages acceptable to the Engineer. A shade tolerant sod shall be used in areas receiving less than six hours of sun per day.

2. Turfgrass Sod Quality: Turfgrass sod shall be of good quality, free of weeds, disease and insects and of good color and density.

3. Thickness of Cut: Turf shall be machine-cut at a minimum uniform soil thickness necessary for plant viability during the Harvest-Transport-Installation cycle. Where "washed turfgrass sod" is specified, soil must be removed as completely as possible using soil-extraction systems currently available.

4. Pad Size: Individual pieces of turfgrass sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. 4' wide by 50' rolls shall be used in the main lawn and where possible elsewhere.

5. Strength of Turfgrass Sod Sections: Standard size sections of turfgrass sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.

6. Replacement: The policy for replacement of turfgrass sod is dependent upon each individual farm. Most replacements extend only to the cost of the turfgrass sod involved, not labor or transportation expenses. Notification of defective turfgrass sod must be made within 24 hours of delivery. Failure to notify the turf farm within the specified time period can result in the farm's refusal to replace the turfgrass sod.

C. Installation:

NOTE: To help ensure proper turfgrass sod establishment, turfgrass sod should always be installed on areas that have been prepared in accordance with Section III of these specifications (specifications for Fertilizer and Lime Materials and Final Soil Preparations).

1. Moistening the Soil: After all grading has been completed, the soil shall be irrigated within 12 to 24 hours prior to laying the turfgrass sod. Turfgrass sod should not be laid on soil that is dry and powdery.

2. Starter Strip: The first row of turfgrass sod shall be laid in a straight line, with subsequent rows placed parallel to, and tightly against, each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the turf is not stretched or overlapped, and that all joints are butted tight in order to prevent voids, which would cause air-drying of the roots.

3. Sloping Surfaces: On sloping area where erosion may be a problem, turfgrass sod shall be laid with staggered joints and secured by pegging.

4. Watering: The Contractor, or agreed-upon party, shall be responsible for watering turfgrass sod immediately during and after installation to prevent drying. It shall then be thoroughly irrigated to a depth sufficient that the underside of the new turfgrass sod pad and soil immediately below the turfgrass sod are thoroughly wet (usually 1 inch of water is needed). The Contractor shall be responsible for having adequate water available at the site prior to and during installation of the turfgrass sod.

D. Acceptance: Acceptance of the installed turfgrass sod shall be on a daily basis within 14 hours of completion of an area or section, unless otherwise specified.

E. Disclaimer: The Contractor shall not be held liable for damages to turfgrass sod caused by de-icing compounds, fertilizers, pesticides, herbicides or other material not applied by him or her or under his or her supervision, nor for those caused by acts of God or vandalism.

F. Guarantee: The Contractor shall guarantee work covered by this specification.

G. Contractor's Responsibility: Unless otherwise specified, the Contractor shall be responsible for maintaining the accepted sodded turfgrass areas until the effective date for turf maintenance operations (specifications for Maintenance of Installed Turfgrass Sod) begins. The effective date shall be specified in a written notice from the Contractor.

3.2 SPECIFICATIONS FOR MAINTENANCE OF INSTALLED TURFGRASS SOD

A. General: Unless stated otherwise, it is expected that the Contractor shall furnish all labor material and equipment required to complete the work described herein in strict accordance with the drawings and/or terms of the contract. The Contractor shall supply adequate water to the site.

B. Time Limitation: Duration of maintenance responsibilities by Contractor shall be for 30 days or until otherwise specified in writing by the Department or Engineer.

C. Watering:

1. First Week: The Contractor shall provide all labor and arrange for all watering necessary for establishment of the turfgrass sod. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of at least 4 inches. Watering should also be done during the heat of the day to help prevent wilting.

2. Second and Subsequent Weeks: The Contractor shall water the turfgrass sod as required to maintain adequate moisture in the upper 4 inches of soil. Avoid application of too much water. Turfgrass sod should not be continually saturated. Depending on the sprinkler, as little as 20 to 30 minutes of water application may be sufficient; other sprinklers may require longer water application times.

D. Mowing: For bluegrass or bluegrass/fescue turfgrass sod, turfgrass height shall be maintained between 1 1/2 and 2 1/2 inches unless otherwise specified. Not more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. For bentgrass sod, initial turfgrass height shall be maintained as specified by the grower or installer. Not more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Height of bentgrass turf may be gradually reduced to the desired cutting height by weekly or more frequent lowering of the mower setting as specified by the grower or installer.

E. Disclaimer: The Contractor shall not be held liable for damages to turfgrass sod caused by de-icing compounds, fertilizers, pesticides, herbicides and other materials not applied by him or her or under his or her supervision nor those caused by acts of God or vandalism.

F. Guarantee: The Contractor shall guarantee work covered by this specification.

3.3 INSPECTION

A. Inspection of Turfgrass Sod: All turfgrass sod shall be subject to the inspection and approval of the Engineer before planting.

B. The Contractor shall notify the Engineer at least (5) days prior to the delivery date of the turfgrass sod. No more turfgrass sod shall be delivered to the job site on any day than can be placed and watered on that day.

C. Inspection of turfgrass sod by the Engineer may be made at the growing site, but such inspection will not preclude rejection after delivery to the job site. Any turfgrass sod so rejected shall be removed from the site immediately and replaced with acceptable turfgrass sod. Inspection of turfgrass sod shall include conformity to quantity, specified nomenclature, and health requirements, in conformance with the current edition of the Specifications for Sodding and Soil Preparation published by the New England Sod Producers' Association and as specified herein and on the drawings.

1. Quantity and Nomenclature: Turfgrass sod shall be furnished in the quantity and cultivars as specified in the plant list shown on the drawings. All turfgrass sod furnished by the Contractor shall be true to type or name as shown on the plans. Turfgrass sod for General Purpose Lawns shall be a mixture within the following ranges:

Bluegrass:	50 -100%
Fine Fescue:	0-30%
Perennial Ryegrass:	0-25%

D. Cultivars for General Purpose Lawns shall be equivalent to or better than cultivars named by New England Sod Producers' Association members or Turfgrass University personnel. Lawns which have less than 1/2 day of sun should contain at least 15% fine fescue. Perennial ryegrass may be included when high wear tolerance is required. Turfgrass sod for special purpose lawns shall consist of the cultivars as specified on the drawings.

+ + END OF SECTION + +

SECTION 02487

PLANTING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. This section provides for furnishing and planting of trees and includes provisions for planting of shrubs and small caliper trees that are removed, preserved and restored as described in other sections of this Specification.

2. The Contractor shall furnish all labor, materials, equipment, supplies and incidentals required for planting and maintaining, at a minimum, six (6) *Arbor vitae* trees, balled and burlapped as specified herein and as directed by the Department. The trees shall be, at a minimum, 4 feet in height. The trees shall be installed by the Contractor at an approximately 3-foot spacing.

B. Related Work Specified Elsewhere:

1. Section 02200, Backfill and Compaction.

1.2 QUALITY ASSURANCE

A. Nomenclature:

1. The common and scientific names of plants shall be in conformity with the approved names by Standardized Plant Names prepared by the American Joint Committee on Horticultural Nomenclature 1942 Edition or its successor as the American Association of Nurserymen's recognized authority on Botanical Nomenclature.

B. Standards:

1. Plants including root spread and ball size shall be in accordance with the current edition of "USA Standard for Nursery Stock," a code of standards sponsored by the American Association of Nurserymen as modified herein and as otherwise specified.

C. Inspection:

1. All trees and shrubs shall be subject to inspection and approval of the Department at the growing site, but approval and marking at the growing site shall not obligate the Department to pay for any tree or shrub until it has been delivered and planted at the planting site in a satisfactory condition. The removal of nursery stock rejected at the planting site and its replacement in compliance with specifications shall be made at no extra cost to the Department.

2. All plants shall be subject to inspection at any place and at anytime. The Contractor shall be represented at all inspections.

1.3 CERTIFICATIONS

A. Plant Material:

1. The Contractor shall be responsible for all certificates of inspection of plant materials which may be required by Federal, State or other authority to accompany shipment of plants. Certificates of Inspection shall be submitted to the Engineer for each shipment of plants at delivery.

2. Labeling shall be in accordance with normal nursery labeling practice except that the Contractor shall be required at any time to supply certification of positive identification of any plant species and/or variety in addition to those specified herein.

3. The Contractor shall submit certificates of material compliance before delivery of each type of fertilizer and the anti-desiccant to be supplied.

PART 2 - PRODUCTS

2.1 PLANTS

A. General:

1. Trees and shrubs 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. Plants shall be nursery grown unless otherwise specified and bear evidence of proper nursery care normal to current nursery practice.

B. Abbreviations:

Cal. - Indicates the caliper of the trunk of the tree
B.R. - Indicates plants to be dug with bare roots
B&B - Indicates plants to be balled and burlapped
B&P - Indicates plants to be balled and platformed
C.G. - Indicates container-grown plants
P.G. - Indicates pot-grown plants

C. Substitutions:

1. No change of quantity, size, kind or quality of plants as specified will be accepted except upon written approval by the Engineer.

D. Digging and Handling:

1. Plants shall be dug with care and skill immediately before shipment. No cold storage plants will be accepted unless approved by the Engineer. Plants stored temporarily shall be properly heeled in or otherwise protected from injury. Digging shall avoid all possible injury to, or loss of roots but roots cut shall be cleanly cut.

2. After plants are dug their roots shall be protected from injury such as caused by heat, sun, wind and freezing temperatures. All bare roots of trees, shrubs and vines shall be puddled at the time of digging unless otherwise approved by the Engineer. Puddling shall be done in a wet clay mixture, of a quality to adhere to all parts of the root system. Roots of bare root plants which have been thoroughly covered at the time of digging with an anti-desiccant will not require puddling. Bare roots shall be further protected by wrapping in wet straw, moss, burlap or other suitable material.

3. Burlap or other equivalent covers shall be placed over plants transported by open trucks or by open freight cars. Doors on closed trucks shall be kept closed to prevent drafts. Shipments made in boxcars or closed trucks shall be adequately ventilated to prevent "sweating." The heads of trees shall be tied in carefully to prevent fracturing or breaking the branches. Trunks and branches shall be adequately supported and padded to avoid scraping or bruising.

E. Trees and Shrubs:

1. Nursery grown trees shall have no cuts of limbs which are not healing and no cuts over 3/4 inch which have not completely callused over, no cut back crowns and no abrasions of the bark. The center leader

on all major trees shall be intact. Trees must have good fibrous root systems characteristic of the kind. The tops of deciduous trees shall be well formed structurally with reasonably straight trunks and normal spread of crowns.

2. Bare root trees shall not require earth adhering to the roots except as required for puddling.

3. Balled and burlapped 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 minimum three (3) ply sisal or equal. No balled tree will be acceptable if the ball is cracked or broken.

4. Balled and platformed trees shall be balled as specified for (B&B) trees. Platforms shall be square or octagonal shaped of a size slightly larger than the diameter of the bottom of the soil mass inserted under each ball by means of ties from the platform corners to the rope collar on top of the ball.

5. The quality of balled and burlapped shrubs shall be as specified for (B&B) trees herein. Shrubs shall have good fibrous root systems.

6. Trees and shrubs shall be a minimum of 4 feet tall.

F. Container Grown Plants:

1. The sizes of containers shall have a root ball twenty five (25) percent less in diameter and depth than that specified for B&B material. A fifteen (15) percent tolerance will be allowed in diameter and depth provided that the volume of the resultant root ball is no less than the volume of the root ball as specified. This specification is intended to determine the size of the root ball produced from a container and is not to be construed as a determination of the actual dimensions of the container.

2. Container grown plants shall exhibit a well-rooted condition which is evidenced by the firmness of the ball. The outside of the ball shall be well netted with healthy working roots which have not been restricted. Plants shall have been adequately hardened off before shipment.

3. Containers shall be of such a shape as to permit easy removal of the plant and shall be rigid enough to maintain the shape of the ball. NO plant will be accepted if the ball is cracked or broken.

2.2 TOPSOIL

A. The topsoil shall consist of a fertile, friable, natural top soil of loamy character, without admixtures of subsoil, uniform in quality and shall be free from refuse of any nature, hard clods, stiff clay, sods, hard pan, pebbles larger than 3/4 inch in diameter, coarse sand, noxious weeds, sticks, brush, or other rubbish.

B. The topsoil shall be taken from a well-drained, arable site, preferably one which has been under cultivation at least 5 years previous to the time of removal.

C. The topsoil shall contain not less than 5 percent nor more than 20 percent organic matter, as determined by loss on ignition of oven-dried samples. The samples shall be thoroughly oven-dried to constant weight at a temperature of 221°F.

D. The Hydrogen Ion value of all topsoil shall be not less than 5 and not more than 7. After the testing of the samples of material, if the loam is found to be unsatisfactory for the intended use, the Department may require that the Contractor, without additional compensation, add to the top soil proposed by him for use, lime, particular fertilizer or particular humus, as directed in order to make the topsoil suitable.

E. Mechanical Analysis: The sieve analysis on an oven-dried sample shall be as follows:

Sieve Size	% Passing by Weight
1 inch	100
1/4 inch	97-100
#100	40-70
#200	minimum 20%

2.3 FERTILIZER

A. Composition:

1. The fertilizer shall be a slow release type contained in polyethylene, perforated bags with micropore holes for controlled feeding. The bags shall contain four (4) ounces of soluble fertilizer analysis 16-8-16 minimum per unit to last for eight (8) years. Minimum guaranteed analysis shall be a fertilizer containing nitrogen, phosphoric acid and potash in the ratio of 16-8-16 with approximately one-half the nitrogen in the ammonium form and one-half in the nitrate form.

2. Fertilizer on mulch shall be a mixed granular commercial fertilizer containing nitrogen, phosphoric acid and potash in the ratios of 10-6-4 as specified in Section titled "Seeding."

B. Packaging:

1. Fertilizer packets shall be packed in the manufacturer's standard containers weighing not over one hundred (100) pounds each with the name of the material, net weight of contents and the manufacturer's name and guaranteed analysis appearing on each container.

2.4 MULCH

A. Wood Chips:

1. Wood chips for mulching plants may be either hardwood or softwood chips as produced by any standard chipping machine. No leaves, young green growth, wood shavings, sawdust or foreign materials which are injurious to plant growth shall be mixed with the chips. Chips shall be 1/8-inch nominal thickness with fifty (50) percent having an area of not less than one (1) square inch nor more than size (6) square inches.

B. Peat Moss:

1. Peat moss shall be composed of the partly decomposed stems and leaves of any or several species of sphagnum moss. It shall be free from wood, decomposed colloidal residue and other foreign matter. Acidity range: 3.5 pH to 5.5 pH. Water absorbing ability shall be minimum 1100% by weight on an oven-dry basis.

C. Bedding Mulch:

1. Shall be composed of shredded cedar bark of medium chip size installed over a weed block unless otherwise directed by the Engineer.

2. Product and Manufacturer:

a. Western Decorative by Far West Forests, Fair Oaks, California.

b. Or equal.

D. Weed Block:

1. Shall be Horticulture Fabric made of ultra violet resistant woven Polypropylene weighing 3.3 ounces per square yard.

2. Product and Manufacturer:

a. Horticulture Fabric style 31211 (Ground cover) by N.Y.P. Corporation Elizabeth New Jersey.

b. Or equal.

2.5 WATER

A. Water shall be from fresh water sources and free from soil, acids, alkalis, salt or any other substance injurious to plant growth.

2.6 PROTECTION OF PLANTS

A. Stakes for Supporting Trees:

1. Stakes for supporting trees shall be of white or red cedar wood. Cedar stakes of eight (8) to ten (10) feet long shall have a minimum diameter of two (2) inches. The maximum diameter of cedar stakes shall not exceed three (3) inches and shall have a minimum allowable deflection of 1/2 inch for every one (1) foot of length. All stakes shall be sound and free from insects and fungi. Length of stakes shall be as specified unless otherwise approved by the Engineer. Stakes shall be pointed.

B. Guy Stakes:

1. Guy stakes used to anchor guy wires which support trees shall be of the quality and sizes required for the operations calling for their use.

C. Wire:

1. Wires for guying plants shall be new annealed galvanized wire No. 12 & 10, AS&W. gauge as specified an/or as shown on the Drawings.

D. Jute Burlap:

1. Jute burlap for wrapping trees shall be in four (4) inch wide strips and weigh eight (8) ounces per square yard. Other material shall be as approved by the Engineer.

E. Paper Wrapping:

1. Paper for wrapping trees shall be waterproof paper 30-30-30 kinklecraft or equal in four (4) inch strips as approved by the Engineer.

F. Hose:

1. Hose for protecting the bark from the guy wires shall be good quality braided rubber or reinforced materials. Hose shall be at least 3/4" outside diameter.

G. Twine:

1. Twine for use in wrapping trees shall be jute twine not less then two (2) ply. Green plastic ties or masking tape as approved by the Engineer will be acceptable. Plastic ties shall be a minimum of 1/2 inch in width and shall have a smooth surface with the ability to stretch as the tree grows.

H. Anti-desiccants:

1. Anti-desiccants shall be emulsions which will provide a protective film over plant surfaces permeable enough to permit transpiration. Acceptable materials shall be wilt-pruf, vanex, or equal.

I. Tree Wound Dressing:

1. Tree wound dressing shall be antiseptic, waterproof, adhesive and elastic such as asphalt, gutta percha and certain oils with a fungicide and which remains tacky for four hours and retains elasticity after setting when tested under the heat of the hand. It shall not contain kerosene, coal tar, creosote or other material harmful to the living tissue of the trees.

PART 3 - EXECUTION

3.1 GENERAL

A. Planting Seasons:

1. Unless otherwise approved, deciduous material shall be planted between March 1 and May 1, and from October 15 to December 15. Evergreen material shall be planted from March 1 to May 15 and from

August 15 to December 15. Container grown plants shall be planted from March 1 to May 15 and between August 15 and December 15.

B. Obstructions:

1. In the event that rock or other underground obstructions are encountered in excavating plant pits, the pits shall be relocated as ordered by the Engineer.

2. In all locations where utilities are located plant pits shall be dug by hand as ordered by the Engineer.

C. Delivery:

1. The Contractor shall give notice to the Engineer at least forty-eight (48) hours in advance before delivering any plant material, unless otherwise approved. The Engineer shall be furnished a legible copy of the invoice for every shipment showing sizes and kinds of materials included.

D. Storage:

1. 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 project. Bare root plants which are not planted immediately upon receipt shall be heeled-in in trenches with the bundles opened, the plants spaced separately and all roots covered. Balled plants shall have their earth balls protected by earth, wet cloth, straw or may be heeled-in as ordered by the Engineer. Plants not protected as specified which have not been planted within two (2) calendar days of delivery shall be rejected unless otherwise approved by the Engineer.

3.2 GROUND PREPARATION

A. Layout:

1. 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 pits or planting beds are dug.

2. The Contractor shall be held responsible for the proper location of each tree. Any species of tree planted in the wrong location shall be replaced with a new tree in the next succeeding planting season.

B. Size of Pits:

1. Unless otherwise specified 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 (2) foot spread, pit diameter equal to root spread plus two (2) feet for root spreads of two (2) to four (4) feet; pit diameter one and one-half times the root spread for spread of roots over four (4) feet. The depth of all pits shall be adequate to permit a minimum of six (6) inches of planting soil under all roots and balls.

   a. In concrete and asphalt areas, the tree pit along various County Roads shall be a minimum length of forty eight (48) inches. The width shall be thirty six (36) inches.

   b. In grass areas the tree pits along various County Roads shall be a minimum forty eight (48) inches long and the widths shall be from the back of the curb to the edge of the sidewalk or where room allows, the width shall be a minimum of forty-eight (48) inches.

   c. Where undesirable material is encountered in digging the pits, the pits shall be enlarged as approved and backfilled with acceptable material. When planting in wooded areas the Contractor shall cut the existing vegetation or grub out an area twice the size of the plant pit as directed by the Engineer. In planting bed areas existing vegetation shall be removed as directed.

   d. Before excavating existing tree pits in locations where asphalt and/or stone block exist the Contractor shall, as directed by the Engineer, saw cut the asphalt, remove the stone block and reset the latter after trees are planted.

C. Drainage:

1. Where an impervious stratum of soil is encountered during the excavation of plant pits or planting beds, all such soil to a depth as approved shall be removed and backfilled with acceptable material.

D. Disposal of Excavated Materials:

1. Topsoil and subsoil excavation from tree pits and planting beds shall be disposed of off the site by the Contractor. Existing topsoil shall not be used for planting unless approved by the Department.

E. Planting Beds:

1. Unless otherwise specified the depth of planting beds for shrubs shall be eighteen (18) inches deep. Depth of beds shall be taken from existing grades. Backfill material for planting beds shall be as indicated on the Drawings.

F. Planting Soil:

1. Backfill soil for planting shall be topsoil except that for ericaceous plants backfill soil shall be topsoil and peat moss thoroughly mixed in the proportions of 2 to 1 respectively.

G. Fertilizer:

1. Fertilizer packets as described under "Materials" of this Specification, shall be placed in the plant pits prior to completion of backfilling. During the entire planting operation the Contractor will not be allowed to use any damaged packets and he shall ensure that all packets remain undamaged. The fertilizer packets shall be placed six (6) inches to eight (8) inches deep as follows:

a. Shrubs:

12 inches to 23 inches high	1 packet next to the ball
24 inches to 35 inches high	2 packets on opposite sides of the ball
3 feet to 6 feet high	3 packets equally spaced around the ball

b. Deciduous Trees:

1 inch to 1 3/4 inch caliper	2 packets on opposite sides of the ball
2 inches to 2 1/2 inches caliper	3 packets equally spaced around the ball
2 1/2 inches to 3 inches caliper	4 packets equally spaced around the ball
3 1/2 inches to 4 inches caliper	5 packets equally spaced around the ball
4 1/2 inches to 6 inches caliper	6 packets equally spaced around the ball

c. Evergreens (Excluding Ericaceous Plants [Rhododendrons, etc.]):

2 feet to 5 feet high	2 packets on opposite sides of the ball
6 feet to 7 feet high	3 packets equally spaced around the ball
8 feet to 11 feet high	4 packets equally spaced around the ball
12 feet to 17 feet high	5 packets equally spaced around the ball
18 feet to 20 feet high	6 packets equally spaced around the ball

d. Large Shrubs and Small Trees:

6 feet to 9 feet high	2 packets on opposite sides of the ball
10 feet to 14 feet high	3 packets equally spaced around the ball

3.3 SETTING PLANTS

A. General:

1. Plants shall be planted below existing grade as directed with a minimum saucer depth of three (3) inches and a maximum saucer depth of six (6) inches except as otherwise directed by the Engineer in grass areas and other areas where mulch will not be required. Saucer depth shall be in direct proportion to the size of plant. In planting beds, plants shall be planted three (3) inches below proposed grade. Ericaceous plants may be required to be planted at existing grade as directed by the Engineer. Backfill material may be either carefully placed into plant pits in layers of approximately four (4) inches in depth and firmly tamped before additional material is placed or backfill may be compacted by thorough watering. Regardless of which method is used backfill soil for all plants shall be watered three (3) times prior to mulching, to insure compaction of backfill, and backfill added as necessary.

B. Balled Plants (B&B, B&P, C.G.):

1. Root balls are to be planted with backfill carefully tamped or compacted by thorough watering under and around the sides of each ball to fill voids. As directed by the Engineer, burlap, cloth, rope and restraining ties shall be cut and pulled away from the tops of root balls

but not removed from the sides of root balls or pulled out from under root balls. Platforms shall be removed.

C. Bare Root Balls:

1. Roots of B&R 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.

D. Wrapping:

1. Unless otherwise directed, the trunks of all deciduous trees over one and one half (1 1/2) inches in caliper shall be wrapped immediately after planting unless otherwise approved. Wrapping shall extend beyond the point where hose and wires pass around the tree trunk. Wrapping shall be a single layer of burlap bandage wound spirally, starting from the base and overlapping one and one half (1-1/2) inches. The wrapping shall be tied in place with twine, green plastic ties or masking tape at about one (1) foot intervals.

E. Staking, Guying and Anchoring:

1. All trees shall be firmly staked or guyed at the time of planting as shown on the Standard Details on the Plans unless otherwise approved. Stakes shall be pointed and 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 a rubber hose to prevent chafing and injury to the trees. Guy wires fastened to guy stakes shall be tightened by driving the stakes, leaving the wires to be twisted for tightening during the period of establishment.

F. Pruning:

1. Pruning shall be done as specified and as directed by the Engineer. Deciduous trees and shrubs shall be pruned to reduce the vegetative growth by one third (1/3) of its total branching unless otherwise directed. Wood removed shall be inferior branches, competing branches, crossing branches and dead and damaged wood. The natural branching habit of the plant shall be adhered to at all times.

2. Container grown trees may be pruned at the time of potting to reduce the length of branches one third (1/3) to one half (1/2). Minor pruning may be required at the time of planting.

3. Trees used in street tree plantings, parking areas and playground areas shall have all branches removed up to a height of six (6) feet or as otherwise directed.

4. Tree wound dressing shall be applied on all pruning cuts exceeding one inch on deciduous trees.

G. Mulching:

1. Depth of mulch shall be three (3) inches. Mulch shall completely cover the areas of all plant pits, planting beds and/or entire planted areas. Mulch shall be wood chips.

2. After planting is completed and as directed by the Engineer, fertilizer (10-6-4) shall be broadcast on all mulch, except mulch on ericaceous plants, at the rate of 0.015 pounds of nitrogen per square foot.

3. The Engineer may direct that mulching be omitted from around plant pits within designated grass areas. Where so directed, the area over the plant pit shall be restored in accordance with Section Titled "Seeding" of this Specification.

H. Progress and Sequence of Planting:

1. All the provisions of Setting Plants shall be accomplished within seven (7) calendar days after the plant is set in the pit except that the Engineer shall take into consideration unexpected interruptions in work due to emergencies, storms, etc. severe enough to stop work. Scheduled non-work days such as weekends, holidays, etc. shall not be a reason for extending the seven (7) day limitation. The sequence of planting shall be as follows:

a. Wrapping, staking or guying and wiring.

b. Three (3) waterings to insure compaction of backfill and addition of backfill as necessary.

c. Mulching - If this sequence is not adhered to, and as a result the operations subsequent to setting and backfilling are not being accomplished within the specified time, the Engineer may stop all setting and backfilling of plants, and any other planting operations he may deem necessary, until such time as he is satisfied that the sequence of planting operations is again on schedule.

I. Restoration:

1. Areas disturbed by the planting operations shall be left in an orderly condition. Excess soil and rubbish shall be disposed of as directed. Grassed areas disturbed by planting operations shall be restored to a satisfactory condition which may include filling to grade, fertilizing and seeding.

3.4 CARE OF PLANTS

A. Care of Plants Prior to Satisfactory Completion of Planting:

1. The Contractor shall care for the planting which shall consist of keeping all plants in a healthy growing condition by watering, weeding, cultivating, pruning, spraying, tightening of guys, remulching and any other necessary operations as required until satisfactory completion of planting.

2. All plants shall be sprayed with an anti-desiccant. The anti-desiccant shall be applied according to the manufacturers directions to thoroughly cover all above ground parts. The time of application shall be as follows, unless otherwise approved.

   a. Evergreen - Apply within ten (10) days following planting.

   b. Deciduous - Spring planting - apply when leaves have reached at least seventy five (75) percent of mature size.
   - Fall planting - apply in October and November when the temperature is forty (40)°F or over.

3. All plants shall be watered at least once a week between April 1 and October 1 unless otherwise directed by the Engineer, until satisfactory completion of planting. Each watering shall provide not less than five gallons per square yard on plant pits and bed areas.

4. All dead and rejected plants shall be promptly removed from the contract site. In the event of the threat of serious damage from insects, diseases or rodents, the plants shall be treated by preventive or remedial measures currently approved for good horticultural practice. In the event "heeled-in" 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 of the Contractor and at no cost to the Department. The land for such

storage shall be provided for by the Contractor unless otherwise specified or approved.

5. Grass and weed growth shall be removed from all plant pits and planting beds as directed by the Engineer. Prior to final acceptance of the planting, the outer portions of tree pit saucers and all other disturbed areas, excluding planting beds, shall have acceptable evidence of grass growth unless otherwise directed by the Engineer. Seed used for this purpose shall be as specified under Section "Seeding" of this Specification or as approved by the Engineer.

B. Replacement Prior to Satisfactory Completion of Planting:

1. At the conclusion of the essential portion of the planting work, all plants in an unhealthy or badly impaired condition in the opinion of the Engineer, shall be removed. All planting to be completed or replaced shall be planted not later than the next succeeding planting season.

C. Final Inspection:

1. When, in the opinion of the Contractor, the planting is complete and ready for final inspection, he shall notify the Engineer who will arrange to give the entire work a thorough inspection. Before final payment will be made, any dead plants, defects or omissions noted on this inspection must be rectified by the Contractor.

3.5 PERIOD OF ESTABLISHMENT

A. Guarantee:

1. The Contractor shall guarantee the life of all plants for a period of one (1) year after the Engineer has made his final inspection and the planting has been confirmed in writing by the Engineer as having been satisfactorily completed. Any plant which is damaged, destroyed or dies from whatever cause except theft or vandalism during the above period shall be replaced not later than the next succeeding planting season as specified upon written notice to the Contractor from the Engineer. Plants that have died during the period of establishment shall be replaced and shall be guaranteed for an additional year.

B. Care of Plants and Replacement During Period of Establishment:

1. Due to planting seasons, the Contractor shall be required to replace any damaged, destroyed or dead plant within the two (2) planting

seasons during the "Period of Establishment" which may entail replacing the same plant twice after satisfactory completion of planting.

2. The Contractor shall be responsible for all work required to care for the plants properly and make necessary replacements during the period of establishment, including watering, mulching, pruning, restaking and replanting. He shall maintain during this period a sufficient labor force at all time to care for the plants in a proper manner and perform all necessary operations efficiently and expeditiously.

3. The Contractor shall be required to water all plant material a minimum of six (6) times during the period of establishment. Each plant shall receive five (5) gallons of water for each square yard of pit area. Watering shall be performed when plants are in active vegetative growth. If in the opinion of the Engineer unseasonable dry conditions exist, additional watering may be required as directed by the Engineer.

4. At the end of the "Period of Establishment" the Contractor shall remove and dispose of all stakes, wire, hose, and tree trunk wrapping from all trees as directed by the Engineer. All holes left due to removal of stakes shall be filled with topsoil. All of the above work shall be performed at no additional cost to the Department.

++ END OF SECTION ++

SECTION 02500

PAVEMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included: Under this section, the Contractor shall provide all labor, equipment and material necessary to furnish and install pavements complete in place, and as shown on the Drawings, specified herein and approved by the Engineer. Any pavement damaged or destroyed as a result of the contractors operations shall be replaced in accordance with details shown on the Drawings and these specifications.

In general, work to be included under this section shall include, but not be limited to, the following:

1. Pavements: Asphalt pavements
2. All pavement markings
3. Sawcutting existing asphalt or Portland cement concrete

B. Related Work Described Elsewhere:

1. Section 01330, Submittal Procedures
2. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials
3. Section 02200, Backfill and Compaction
4. Section 02529, Concrete Curbs, Handicap Ramps and Sidewalks
5. Section 03200, Reinforcing Steel
6. Section 03300, Cast-in-Place Concrete

1.2 QUALITY ASSURANCE

A. Standards:

1. Comply with standards specified herein and as listed in Section 01072, Reference Standards.

2. Referenced specifications: The New York State Department of Transportation Standard Specifications (NYS-DOT Specifications) for Construction and Materials, dated January 2, 1990, plus addenda when referred to, shall become part of this specification for materials and construction requirements. A referenced New York State (NYS) Pay Item Number shall serve to describe the required work for this project providing materials and construction conforming to all applicable requirements under the NYS-DOT Specifications for that New York State Item, except for measurement and payment. The measurement and payment section of the NYS-DOT Specification shall not apply. Where the referenced specification cites requirements differing from those included in these specifications, the more stringent, highest quality requirement shall govern.

B. Qualifications of manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Engineer.

1.3 SUBMITTALS

A. General: Submit shop drawings in accordance with Section 01330, Submittal Procedures and the Contract Documents.

B. Product data:

1. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements;

2. A completed materials list showing all items to be furnished and installed under this Section.

3. The temperature-viscosity relationship data for each lot of asphalt to be used on the project. This data shall take the form of a graph and shall cover the range of temperature and viscosity within which the asphalt may be used.

1.4 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this section before, during and after installation and to protect the installed equipment and materials of other trades.

B. Replacements: In the event of damage, the Contractor shall immediately make all repairs and/or replacements necessary, to the approval of the Engineer and at no additional cost to the Department.

PART 2 - PRODUCTS

2.1 ASPHALT PAVEMENT

A. Asphalt pavement courses for restoration of the public roadway (Herricks Road) shall be hot mix asphalt pavement conforming to material requirements of the following:

1. Surface course:
   N.Y.S. DOT Item No. 403.178902
   Asphalt concrete
   Type 6RA - top
   Thickness - 1 1/2"

2. Binder course:
   N.Y.S. DOT Item No. 403.138902
   Asphalt concrete
   Type 3 - Binder
   Thickness - 4"

3. Base course:
   N.Y.S. DOT Item No. 503.01
   Base course
   6x6W2.9xW2.9 Mesh Reinforced Concrete Foundation for Pavement
   Thickness – 10"

4. Subbase course:
   NYS DOT Item No. 304.03
   Subbase Course
   Type 2 – Dense Graded Aggregate Base
   Thickness – 6"

5. Tack coat and prime coat:
   N.Y.S. Item No. 407.01
   Tack coat - emulsified asphalt

B. Asphalt pavement courses for restoration of the on-site parking lot (asphalt cover) and other on-site asphalt shall be hot mix asphalt pavement conforming to material requirements of the following:

1. Surface course:
   N.Y.S. DOT Item No. 403.178902
   Asphalt concrete binder
   Type 6RA
   Thickness – 1 1/2"

2. Base course:
   N.Y.S. DOT Item No. 403.138902
   Asphalt concrete
   Type 3 - Binder
   Thickness - 4"

3. Subbase course:
   N.Y.S. DOT Item No. 304.14M
   Subbase course
   Type 4 - Dry Bound Dense Graded Aggregate
   Thickness - 6"

4. Tack coat and prime coat:
   N.Y.S. Item No. 407.01
   Tack coat - emulsified asphalt

2.2 OTHER MATERIALS

A. All other materials, not specifically described but required for proper and complete installation of the work of this Section, shall be as selected by the Contractor subject to the approval of the Engineer.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 ASPHALT PAVEMENTS

A. Asphalt pavements shall be constructed on approved compacted subgrades in accordance with the requirements of the referenced New York State DOT Specifications, for each Item Number specified under Part 2 of these specifications. These shall include all requirements for equipment, weather, placement, spreading, tolerances, temperature, protection, testing, and all related and incidental construction requirements for each component of the pavement structure.

B. Prior to the placing of roadway and pavement material, grade to the subgrade elevations and cross sections as required by the drawings. Thoroughly compact the subgrade and fill all depressions with select fill as specified in Section 02200, Backfill and Compaction.

C. Construct bituminous concrete roadways and other pavements consisting of the materials and thickness specified under Section 2.1. Conform to the lines, grades, cross sections and thickness indicated on the Drawings, or as ordered by the Engineer.

D. Where necessary to connect to existing pavement on or off the Site, grade to such pavement, properly prepare a subgrade and scarify, furnish materials and properly roll such connection to provide smooth, continuous access without depressions or undue grade. Surfacing course shall be installed after applying a tack coat on cutback of existing pavement, curbs, etc.

E. Construct roadways and pavements in manner to conduct water to curb gutters, standard inlets, and grassed swales.

F. Place no material until all the road and pavement fills are in place and consolidated to the satisfaction of the Engineer. Bituminous material shall be applied only to surfaces which are dry and clean of all dirt, dust and other foreign material and shall not be placed on frozen subgrade.

G. During the process of construction, maintain the road bed in such condition that it will be well drained at all times.

3.3 GUARANTEE

A. Unless otherwise specified, the pavement furnished under this section shall be guaranteed for a period of one year from the date of final acceptance thereof against defective materials, designs and workmanship. Upon receipt of notice from the Department of failure of any part of the pavement during the guarantee period, the affected part or parts shall be replaced promptly by and at the expense of the Contractor.

3.4 FINISH TOLERANCES

A. Finish all surfaces to the tolerances specified by NYSDOT Specifications

3.5 SAWCUTTING EXISTING PORTLAND CEMENT OR ASPHALT CONCRETE

A. The Contractor shall sawcut existing Portland cement concrete, asphalt concrete or other materials used in pavement preparatory to their removal to the lines shown on the Drawings and/or as directed by the Engineer.

B. The sawcut is to establish a neat, true joint line of required depth between the existing pavement retained and the abutting construction to be subsequently placed. All sawcuts shall be made parallel or perpendicular to the curbing.

C. The equipment to be employed shall be a rotary blade, power driven, water cooled concrete saw of an approved type and of sufficient capacity to efficiently accomplish the required work. The depth of the cut shall be to the full depth of the existing pavement. The cut shall be made plumb to a true line and in such manner as will permit removal of the existing concrete without damage or injury to the sawn face of the cut. Where necessary to obtain the required depth, the sawcutting shall be performed in stages. Additional sawcuts made to achieve the required depth shall not be measured for payment.

D. Any sawcut edges which are damaged during the course of the work and/or are jagged shall be resawcut to include all pavement damaged during the construction at the Contractor's expense to the satisfaction of the Engineer. The "sawtoothing" of the cut line will not be permitted.

3.6 MAINTENANCE AND ACCEPTANCE

A. The Contractor shall maintain all paved surfaces until the roads and parking areas have been accepted. The paved areas will not be accepted until after the Contractor has completed all phases of the work, including all necessary transportation, hauling and severe usage of the paved areas. The Engineer shall be the sole judge in this matter.

+ + END OF SECTION + +

SECTION 02529

CONCRETE CURBS, HANDICAP RAMPS, AND SIDEWALKS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included:

1. Contractor shall furnish all labor, materials, equipment and incidentals required to provide concrete haunches and sidewalks as shown and specified.

2. The types of Work Covered by these Specifications are conventionally formed haunches and sidewalks.

3. The thickness and extent of curbs and sidewalks are shown on the Drawings.

B. Related Work Specified Elsewhere:

1. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

2. Section 02200, Backfill and Compaction.

3. Section 03200, Reinforcing Steel.

4. Section 03251, Construction Joints.

5. Section 03300, Cast-in-Place Concrete.

6. Section 05540, Castings.

1.2 QUALITY ASSURANCE

A. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified: ASTM D1190, Concrete Joint Sealer, Hot Poured Elastic Type.

1.3 SUBMITTALS

A. Samples: Submit for approval samples, manufacturer's product data, test reports and materials certifications as required in referenced Sections for concrete work.

B. Certificates: Manufacturer's certification that sealer meets Specification requirements.

C. Shop Drawings: Submit for approval copies of dimensioned layout of the Work, showing pattern, expansion joints and reinforcing.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Reinforced Bars and Welded Wired Fabric: Deformed steel bars and smooth wire fabric shall comply with requirements of Section 03200, Reinforcing Steel. Furnish wire fabric in flat sheets, not rolls.

B. Concrete Materials: Comply with requirements of Section 03300, Cast-in-Place Concrete.

C. Expansion and Construction Joints: Comply with requirements of Section 03251, Construction Joints.

Handicap Ramps-Glass Fiber Reinforced Ceramic Cement

A. Provide units manufactured by E-Z Set Corp. or approved equal.

Forms

Provide forms consisting of a form facing material metal, plastic wood or other acceptable material that is nonreactive with concrete and will produce required finish surfaces. Use forms that do not require a release agent to prevent reaction with sealants.

Glass Fiber Reinforced Ceramic Cement (GFRCC)

A. Proprietary Ceramic Cement Blend.

1. Use only one brand, type and source of supply of cement throughout GFRCC production unless noted otherwise.

B. Aggregates

1. Proprietary blend

C. Water: Potable, free from foreign materials in amounts harmful to concrete.

D. Admixtures: conform to ASTM C260 for air entrapment, ASTM C494 for chemical admixtures, or ASTM C618 for fly ash or natural pozzolan admixtures, at manufacturer's option. Do not use admixtures that contain more than 0.1% chloride ions.

E. Coloring Agent

1. Conform to ASTM C979, ultraviolet resistant, high temperature stable, harmless to concrete set or strength.

2. The amount of coloring agent shall not exceed 10% of the cement weight.

Anchors and Subsystems

A. Each GFRCC panel is to be attached to the supporting concrete with a minimum of four ABS anchors in the top horizontal plane and in the preformed holes.

Fabrication

A. Fabricate GFRCC warning panels complying with manufacturing and testing procedures, quality control recommendations and following dimensional tolerances unless otherwise indicated.

B. Accurately construct forms mortar tight of rigid materials that will result in finished GFRCC warning panels conforming to profiles, lines and dimensional tolerances indicated within specified fabrication tolerances.

C. Dimensional Tolerances of Finished Units: Overall height and width measured at face adjacent to molds at time of casting:

1. Length, width and height of unit: Plus or minus 1/16-inch.

2. Angular deviation of plane of mold: 1/16-inch total.

3. Out of square (difference in length of two diagonal measurements) 1/8-inch.

4. Skin thickness: Plus 1/4-inch or minus 0.

5. Architectural Facing Thickness: Plus 1/8-inch or minus 0.

6. Tolerances of other dimensions not otherwise indicated: Plus or minus 1/16-inch.

D. Fabricate units straight smooth and true to size and shape with exposed edges and corners precise and square unless otherwise indicated.

E. GFRCC warning panels that are warped, cracked, broken, spalled, stained or otherwise defective will not be acceptable.

F. Provide ABS anchors necessary for securing GFRCC warning panels to supporting concrete.

G. Fabricate GFRCC warning panels and provide exposed surface finishes to match control sample.

H. Curing: Ensure sufficient strength for removing units from form.

I. Mark each GFRCC Warning Panel to correspond to identification mark on shop drawings. Mark each panel with casting date.

J. Source Quality Control: Establish a quality control program for manufacturing GFRCC panels to monitor glass content, spray rate, unit rate of slurry, product physical properties, and shear strengths, curing period and conditions, flexural yield strength and flexural ultimate strength in accordance with PCI MNL-130

K. The GFRCC Warning Panels shall meet or exceed the following requirements when dry tested:

1.	Flexural Ultimate Strength	2,500 psi
2.	Flexural Yield Strength	1,500 psi
3.	Tensile Ultimate Strength	1,300 psi
4.	Ultimate Compressive Strength	10,000 psi
5.	Glass Fiber Content	(Proprietary)

L. Provide detectable warning pattern on walking surface of panels to comply with appropriate ADA, Access Board or other regulations.

Product Delivery, Storage and Handling

A. Deliver glass fiber reinforced ceramic cement warning panels to worksite in such quantities and at such times to assure continuity of installation. Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses or damage.

B. Store units at worksite to prevent cracking, distorting, warping, staining or other physical damage and so that markings are visible.

C. Keep panels under cover and protected until installed.

D. Deliver ABS anchors in sufficient quantity for the work to be done before the start of construction.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

A. Preparation of the subgrade including compaction shall be complete for the full width of the Work:

1. Where the subgrade is constructed by excavation of existing grade, the top 6 inches of the subgrade shall be compacted to at least 90 percent of maximum density at optimum moisture content.

2. Where the subgrade is constructed on fill:

a. The existing grade shall be made smooth and compacted per Section 3.1.A.1.

b. The subgrade shall be brought to the final lines and grades utilizing select fill as specified in Section 02200, Backfill and Compaction.

3. Base: Base shall be provided as shown on the Drawings. The material shall be select fill as specified in Section 02200, Backfill and Compaction, and compacted as specified.

3.2 FORM CONSTRUCTION

A. Set forms to line and grade. Install forms over full length of curbs, gutters and sidewalks.

3.3 REINFORCEMENT

A. Locate, place, and support reinforcement as specified in Section 03200, Reinforcing Steel, unless otherwise shown. Size of reinforcement shall be as shown.

3.4 CONCRETE PLACEMENT

A. General: Comply with the requirements of Section 03300, Cast-in-Place Concrete, for mixing and placing concrete, and as specified.

B. Place concrete for curbs using methods which prevent segregation of the mix. Consolidate concrete along the face of forms with an internal vibrator.

C. For sidewalks, place concrete in one course, monolithic construction, for the full width and depth of walks.

3.5 JOINTS

A. General: Construct expansion, contraction, and construction joints with faces perpendicular to surface of the curb, gutter and sidewalk. Construct transverse joints at right angles to the Work centerline and as shown.

B. Contraction Joints: Provide these joints at 10 feet on centers for curbs and gutters and 4 feet on centers for sidewalks.

C. Construction Joints: Place joints at locations where placement operations are stopped for a period of more than 1/2-hour, except where such pours terminate at expansion joints.

D. Expansion Joints: Provide 1/2-inch expansion joint filler where Work abuts structures; at returns; and at 20-foot spacing for straight runs. If curb, gutter, and sidewalk are not poured monolithically, provide expansion joints where each abuts the other.

1. Place top of expansion joint material not less than 1/2-inch or more than 1-inch below concrete surface. Apply joint sealer on top of expansion joint material flush with concrete surface, and in accordance with manufacturer's instructions.

3.6 CONCRETE FINISHING

A. Smooth the exposed surface by screening and floating.

B. Work edges of sidewalks and transverse joints; and round to 1/4-inch radius.

C. Complete surface finishing by drawing a fine-hair broom across surface, perpendicular to line of traffic.

3.7 CURING

A. Protect and cure finished concrete curbs and sidewalks, complying with applicable requirements of Section 03300, Cast-in-Place Concrete.

3.8 REPAIR AND CLEANING

A. Repair or replace broken or defective haunches and sidewalk as directed by the Engineer.

B. Sweep work and wash free of stains, discolorations, dirt or other foreign material.

+ + END OF SECTION + +

SECTION 02900

MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included: This section includes the provisions of maintaining vehicular and pedestrian traffic and protection for both the public and the Contractor's employees from all damage to person and property until final acceptance of the project.

B. Maintenance and protection of traffic is the responsibility of the Contractor.

1.2 SUBMITTALS

A. The Contractor shall notify the Engineer at least 72 hours prior to the closing of any portion of a road as might be necessary to perform the work and shall adequately describe the detour to be followed.

B. Pursuant to paragraph 3.2.U of this section, the Contractor shall submit for approval by the Engineer, all persons or service contracts that he intends to utilize during non-regular working hours for providing watchmen patrol of the work site.

PART 2 - PRODUCTS

2.1 TRAFFIC DEVICES

A. All temporary signs, delineators, barricades, lighting, and other warning and guiding devices shall be as shown and specified in the New York State Manual of Uniform Traffic Control Devices and/or approved by the Engineer.

B. Unless otherwise specified, all materials used will remain the property of the Contractor.

PART 3 - EXECUTION

3.1 PREPARATION

A. The Contractor shall obtain, supply and pay for all required electrical energy, services, permits and certificates.

3.2 PERFORMANCE

A. Traffic shall be maintained over a reasonably smooth traveled way, which shall be marked by signs, delineations, and/or other methods so that a person who has no knowledge of conditions can safely and with a minimum of discomfort and inconvenience, travel the area under construction.

B. Adequate advance warning according to the New York State Manual of Uniform Traffic Control Devices (referred to as "Manual") must be provided whenever traffic is interfered with or lanes are closed. All signs, markings, signals, barricades, lighting devices, and flagger operations shall conform to the "Manual." All necessary traffic control devices shall be available and in place before the particular construction operations are started. In case of emergency construction where there is not sufficient time to prepare a traffic plan, the Contractor shall be responsible for following the guidelines set forth in the "Manual."

C. Access for emergency vehicles is of the utmost importance and provision shall be made by the Contractor to provide such access.

D. Adequate provisions shall also be made for business and commercial establishments, schools, and public buildings.

E. The Contractor shall generally maintain two-way traffic on streets where work is in progress and in no case shall he be permitted to work in adjacent streets.

F. The Contractor shall maintain within the work limits the entire pavement, drainage and sewage facilities, and other street elements unless otherwise specified. The traveled way shall be kept well drained, reasonably smooth, cleaned and hard at all times. Foreign objects, sand, rocks, spillage of materials shall immediately be removed and the area cleaned to the satisfaction of the Engineer. Spillage outside the work limits is the Contractor's responsibility and the Engineer will entertain no claim for work necessary to clean the areas affected. The Contractor shall be required to remove snow on those streets where roads are not passable by snow plows due to the Contractor's operation.

G. Traffic delays shall be kept to a minimum. A period of 5 minutes shall be considered the maximum time allowed for stopping traffic.

H. Detour signs, barricades, and other facilities shall be furnished and erected as called for on the approved plan and/or as directed by the Engineer. The route of the detour shall be clearly marked at the beginning and end with directions at intermediate points along its entire length.

I. The Contractor shall be responsible for notifying all interested agencies when detours or construction will interfere with the normal traffic flow. These agencies include, but are not limited to:

1. Local Police
2. Local fire departments
3. Local traffic departments and Department of Public Works
4. Sanitation companies

J. The Contractor will not be permitted to store spoil, materials, equipment, or supplies that will interfere with sight distances within thirty (30) feet of an intersection or areas where sight distance is critical.

K. When travel must be diverted from the accustomed traveled way on to some other area, the Contractor shall grade, repair, stabilize, and provide ramps if necessary to provide for the smooth flow of traffic. Upon completion of construction, the area utilized shall be restored to its original condition.

L. The Contractor shall construct and maintain, where called for on the plans or as directed by the Engineer, temporary bridges or bridging over excavations, obstructions, and newly laid pavements to provide access for pedestrian and vehicular traffic and access to fire hydrants. During construction, the Contractor shall take particular care to allow the ingress and egress of emergency vehicles from firehouses, police stations, hospitals, etc. Adequate provisions shall also be made for business and commercial establishments, schools, and for public buildings. Plating and/or bridging is required at all main intersections and heavily traveled crossings.

M. Street signs, route markers, and other signs that fall under public jurisdiction, i.e., bus stop, stop signs, parking signs, etc., shall be protected and maintained or removed, stored, cleaned, and replaced when ordered by the Engineer. The Engineer may also order that these signs be temporarily relocated and then reinstalled in their original location. If in the course of construction it becomes necessary to temporarily move a bus stop, the temporary site shall be approved by Nassau County.

N. The Contractor shall provide protection from damage to person or property by protective screens, fences, devices, or methods that are approved by the Engineer.

O. All signs, lights, barricades, and other materials installed to direct or warn the traveling public shall be maintained, repaired, and replaced by the Contractor. Vandalism or theft shall not preclude requirement and special attention shall be given to traffic maintenance and protection during

nonworking hours, weekends, holidays, and other periods or temporary shut down of work.

P. Materials, equipment, and workmanship for lighted barricades shall be in strict compliance with the National Electric Code and only a licensed electrician may perform the work.

Q. Signs or markers lost, damaged, or removed by the Contractor shall be replaced at no cost to the Department. Signs not to be replaced shall be cleaned and delivered to the Engineer.

R. Temporary reflectorized pavement markings shall be placed where existing markings are obliterated, whenever it is determined that the roadway would be void of traffic markings for 2 weeks or more, or as otherwise directed by the Engineer. The temporary markings shall provide the same number of through travel lanes as the previously existing markings.

S. Sheeting: Sheeting around excavations shall project 4 feet above the surface of the ground to form a tight barricade. Where this requirement cannot be met, the excavation shall be surrounded with a metal fabric supported by approved uprights, set at maximum 8-foot intervals.

T. Flagmen: Competent flagmen shall be provided by the Contractor when ordered by the Engineer or as directed by the specifications. These flagmen shall have no function other than the direction of traffic. They shall wear safety vests and shall direct traffic with a red flag as required by the New York State Manual of Uniform Traffic Control Devices.

U. Watchmen:

1. The Contractor shall provide watchmen service, during all nonworking hours for continuous patrol of the work site whenever excavations are left open overnight.

2. The watchmen will be responsible for making sure all signs, barricades, flares, and markers are up and in good condition.

3. Watchmen shall maintain daily logs of their patrols. Copies of these logs shall be made available to the Engineer.

4. In the event that any unusual or emergency condition arises, the watchmen shall immediately notify the Contractor, the Engineer and the appropriate regulatory agency or emergency agency for assistance.

5. The Contractor may apply to the Engineer for suspension of the watchmen service following construction but prior to completion of the work (when punch list items remain).

6. A deduction of five hundred (500) dollars per 8-hour shift will be made for watchmen services not provided when required. The money will be deducted from the sum agreed to in the Bid Breakdown for Traffic Maintenance.

++ END OF SECTION ++

SECTION 02920

SCREENED TOPSOIL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies requirements for subgrade preparation for and the supplying and spreading of screened topsoil.

1.2 DESIGN AND PERFORMANCE REQUIREMENTS

A. Base standards for weather conditions on reports on the weather radio band of the National Oceanic and Atmospheric Administration, Washington Science Center, Rockville, MD 20852, and on its publication entitled "Local Climatological Data with Comparative Data," published 12 times a year as a monthly and once a year as an annual.

1.3 ENVIRONMENTAL REQUIREMENTS

A. Perform operations only during the following weather conditions:

1. There shall be no frost in the ground and the topsoil temperature shall be above 32 degrees F.

2. There shall be no form of precipitation falling or forecast to fall within the next 2 hours. Following a period of precipitation, resume operations only after the soil has drained.

1.4 QUALITY ASSURANCE

A. Qualifications

1. The laboratory performing the laboratory testing of this Section shall be a certified testing laboratory in the State of New York and shall have experience in topsoil testing and shall perform all tests as specified in 2.1 and as outlined on Appendix B of this Section.

2. The entity and its workers performing the Work of this Section shall be experienced in landscaping and have been engaged in work of a complexity similar to that required under this Section for a period of at least 3 years.

B. Test Requirements

1. Prior to delivery to the construction site, submit a representative sample of screened topsoil for analysis to a certified independent laboratory to ensure conformance to requirements specified in 2.1. No substitutions for testing parameters shall be permitted.

2. Any analysis, whereby the date of testing by the certified independent laboratory is in excess of 1 month prior to the actual date of delivery to the construction site, shall not be accepted.

3. Prior to construction site delivery, advise the Engineer of the location of the source of the screened topsoil and submit a 2-pound sample to the Engineer.

4. Do not deliver screened topsoil to the construction site until the Engineer has approved the submittal in writing.

5. After delivery of screened topsoil to the construction site, submit a representative sample for analysis to a certified, independent laboratory to ensure conformance to requirements specified in 2.1. Submit test results to the Engineer for approval. In the event that the delivered sample is not consistent with the sample approved prior to delivery, remove the delivered screened topsoil from the construction site and replace it with material that does conform, all at the expense of the Contractor.

C. Certification

1. Prior to delivery of screened topsoil to the construction site, furnish the Engineer with a written statement from the topsoil supplier giving depth of stripped topsoil and certification that topsoil has never been treated with herbicides.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver the screened topsoil to the construction site until the Engineer has approved in writing the test results for the representative sample.

1.6 SUBMITTALS

A. Submit the following in accordance with the requirements of Section 01330, Submittal Procedures, and the Contract Documents:

1. Qualifications

a. Submit qualifications of the entity performing the laboratory testing of this Section to the Engineer in accordance with 1.4 A. Include the name, address and telephone number of the Testing laboratory performing the Work of this Section.

b. Submit qualifications of the entity and its workers performing the Work of this Section to the Engineer in accordance with 1.4 A. Include names of clients, telephone numbers, and contract amounts for work performed in the last three years and experience records of workers performing the Work of this Section.

2. Products

a. Submit in accordance with the requirements of Section 01330, Submittal Procedures, and the Contract Documents, a complete "Product List", listing the product to be used under this Section.

b. Submit the location of the source of the screened topsoil and a 2-pound representative sample of screened topsoil (as many as required) to the Engineer in accordance with 1.4 B.

3. Test Reports

a. Submit laboratory analyses of screened topsoil to the Engineer in accordance to 1.4 B and in the following format:

Material: Screened Topsoil
Specification: Section 02920 - Screened Topsoil
Source of Sample:
Contract or P.O.#:

Quality Characteristics:	**Spec.**
Visual Examination:	No hard clods, etc.
Organic Matter: (Loss of Ignition)	Min. 5% Max. 7%
Soluble Salts: - Micromhos/Cm - PPM	Max. 500 Max. 300
pH:	5.8 - 7.0
Mechanical Analysis: Passing - 1"	100%

Quality Characteristics:	Spec.
Passing - 1" Retain 2 mm (#10)	Max. 40% The portion retained shall be no larger than 3/8" in size and be composed of homogeneous clods and/or stones
Passing 2 mm (#10) Retain Pan	Min. 60%
Bouyoucous Hydrometer Test of Material:	
Passing 2 mm (#10) Percent - Sand	40%-60%
Percent – Silt	30%-40%
Percent – Clay	10% - 20%

4. Certification

   a. Submit to the Engineer certification required by 1.4 C.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Screened Topsoil: Fertile, friable, natural loam topsoil, free of subsoil, taken from a depth of no more than 1 foot, or less if subsoil is encountered, supplier-certified as having been obtained from an area which has never been treated with herbicide and conforming to the following:

1. Screened topsoil shall be of uniform quality, free from hard clods, stiff clay, hard pan, sods, partially disintegrated stone, lime, cement, ashes, slag, concrete, tar residues, tarred paper, boards, chips, sticks, glass or any other undesirable material.

2. Screened topsoil shall contain a minimum of 5 percent organic matter and a maximum of 7 percent organic matter as determined by loss on ignition of moisture-free samples.

3. pH range shall be 5.8 to 7.0, inclusive.

4. The range of soluble salts shall be equal to or less than 500 micromhos per centimeter.

5. Screened topsoil shall be graded as follows:

PASSING	RETAINED ON	PERCENTAGE
1" screen		100%
1" screen	2 mm (No. 10) Sieve	Not more than 40%*

*The portion retained shall be no larger than 3/8 inch in size and composed of homogeneous clods and/or stones.

6. The portion of screened topsoil passing the 2 mm sieve, based on the mechanical analysis of the soil as determined by the buoyoucous hydrometer method, shall consist of the following, based on dry weight of sample:

   a. Sand: 40%-60%, inclusive;

   b. Silt: 30%-40%, inclusive; and

   c. Clay: 10%-20%, inclusive.

PART 3 - EXECUTION

3.1 PREPARATION

A. Areas of Changed Grades: Verify that areas of changed grades shown on the Drawings have a smooth, uniform surface.

   1. Loosen subgrade to a minimum 4-inch depth.

   2. Remove stones over 2 inches in any dimension, roots, rubbish and other extraneous materials. Dispose of such material off the project site.

   3. Rake and drag to remove high areas and fill depressions.

   4. Limit preparation to areas which will be planted promptly after preparation.

B. Unaltered Areas: Prepare subgrade areas shown on the Drawings as unaltered or undisturbed by excavation, grading or stripping operations as follows:

1. Remove existing vegetation and turf. Dispose of such materials off the project site.

2. Till to a depth of not less than 6 inches to produce a homogenous mixture of fine texture, free of clods, stones, roots and other extraneous materials. Dispose of such materials away from subject property. Dispose in a legal manner.

3. Rake and drag to remove high areas and fill depressions.

4. Limit preparation to areas which will be planted promptly after preparation.

3.2 APPLICATION

A. Place and spread screened topsoil over prepared subgrade in a uniform layer of such thickness that after compaction it shall be of the thickness and shall meet grades and elevations, all as shown on the Drawings.

B. After spreading, rake and dispose of stiff clods, hard lumps, rocks, roots, litter and other extraneous materials off the project site.

C. Fine grade to smooth, even surface.

+ + END OF SECTION + +

DIVISION 3 – CONCRETE

SECTION 03010

MODIFICATIONS TO CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

This section modifies the Standard Specifications in Section X: Spec 00002, Concrete:

A. Delete the following from Section 2.1(g) – Frame and Grating (Reteculine) and instead, refer to Section XI – Supplementary Specifications, Section 05540 – Castings, Section 2.1(c):

"Frame and Grating – (Reteculine)

1) The frames, gratings and appurtenances shall be fabricated from steel conforming to ASTM A36.

2) All parts shall be galvanized according to the requirements of the NYSDOT 719-01 Type 1.

3) Grating shall be provided with lock-down bolt anchors."

++ END OF SECTION ++

SECTION 03100

CONCRETE FORMWORK

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included:

1. Under this section, the Contractor shall provide all labor, equipment and material necessary to furnish all formwork for cast-in-place concrete complete in place, and as shown on the Drawings, specified herein and approved by the Engineer.

2. In general, work to be included under this section shall include, but not be limited to, the following:

   a. Provide formwork in accordance with the provisions of this Section for all cast-in-place concrete shown on the Drawings or required by other Sections of these Specifications.

   b. Provide formed openings for other trades.

   c. Coordinate installation of items furnished by other trades.

B. Related Work Described Elsewhere:

1. Section 03200, Reinforcing Steel

2. Section 03300, Cast-In-Place Concrete

1.2 QUALITY ASSURANCE

A. Design of formwork is the Contractor's responsibility.

B. Standards:

1. ACI 301: Specifications for Structural Concrete for Buildings.

2. ACI 302: Recommended Practice for Concrete Floor and Slab Construction.

3. ACI 318: Building Code Requirements for Reinforced Concrete.

4. ACI 347: Recommended Practice for Concrete Formwork.

C. Allowable Tolerances: Conform to ACI 301, Section 4.3.

1.3 SUBMITTALS

A. General: Submit shop drawings in accordance with Section 01330, Submittal Procedures, and the Contract Documents.

B. Shop Drawings: Submit details of form types, methods of form construction and erection, design computations, and location of form joints, form ties and embedded items.

C. Certificates: Submit certificates from manufacturers stating that materials meet specified requirements.

D. Concrete Test Reports: Submit certified laboratory test reports if concrete tests are required for form removal.

E. Calculations: Submit early form removal calculations if required in advance of form removal.

PART 2 - PRODUCTS

2.1 FORM AERIALS

A. General: Conform to ACI 301 and ACI 302 unless otherwise shown or specified.

B. Forms:

1. Construct formwork for exposed (painted or unpainted) concrete surfaces with smooth faced undamaged plywood or other panel type materials acceptable to the Engineer to provide continuous, straight, smooth as-cast surfaces. Furnish in largest practical sizes to minimize number of joints.

2. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without excessive and objectionable bow or deflection.

3. Wood forms:

   a. Framing lumber: Stress-graded.

   b. Lumber in direct contact with concrete: Dressed on at least the contact side, with dressed or tongue-and-groove edges.

c. Other lumber: Dressed or rough.

4. Plywood forms:

a. Grade marked.

b. B-B Plyform, Exterior Class 1 and 2 and HDO High Density Concrete form Plywood, Class 1 and 2 conforming to Product Standard PS 1, minimum thickness 3/4-inch.

5. Hardwood forms: Tempered smooth-one-side (515), not less than 3/16-inch thick, conforming to product standard PS 58.

6. Fiber-glass-reinforced-plastic forms: Sizes and cross sections as required, with thicknesses, reinforcement, and surface finish to form concrete surfaces that are smooth and free of irregularity.

7. Steel forms: Sizes and cross sections as shown or required, with metal gauges, reinforcement, stiffeners, and surface finish to form concrete surfaces that are smooth, free of irregularity and concrete stains.

C. Form coatings: Inner faces of all forms shall be thoroughly cleaned prior to concreting. Forms for concrete surfaces that will not be subsequently waterproofed shall be coated with a chemical type release agent and shall be applied lightly by spray to avoid retardation. Contractor shall submit release agent manufacturer to Engineer for approval. Forms for concrete surfaces to be waterproofed shall be wetted prior to concreting.

2.2 DESIGN OF FORMWORK

A. General: Conform to ACI 301 and ACI 302 unless otherwise shown or specified.

1. Design, erect, support, brace, and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure.

2. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.

3. Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation, and position.

4. Design forms and falsework to include assumed values of live load, dead load, weight of moving equipment operated on formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of structure during construction.

5. Provide shores and struts with positive means of adjustment capable of taking up formwork settlement during concrete placing operations, using wedges or jacks or a combination thereof.

6. provide trussed supports when adequate foundations for shores and struts cannot be secured.

7. Support form facing materials by structural members spaced sufficiently close to prevent objectionable deflection.

8. Fit forms placed in successive units for continuous surfaces to accurate alignment, free from irregularities, and within allowable tolerances.

9. provide camber in formwork as required for anticipated deflections due to weight and pressures of fresh concrete and construction loads.

10. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints and provide backup material at joints as required to prevent leakage and fins.

11. Ties for forms shall be waterproof type.

PART 3 - EXECUTION

3.1 GENERAL

A. Unless otherwise shown or specified, install and remove formwork in accordance with ACI 301, Chapters 4, 10, 11, 13 and IS; and ACI 302, Chapter 3.

3.2 SURFACE CONDITIONS

A. Examine the substrate and conditions under which work of this Section is to be performed, and correct unsatisfactory conditions which would prevent proper and timely completion of the Work. Do not proceed until satisfactory conditions have been corrected.

3.3 FORM CONSTRUCTION

A. General:

1. Construct forms complying with ACI 347, to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in finish structures.

2. Provide for openings, offsets, sinkages, keyways, recesses, mouldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features required. Use selected materials to obtain required finishes.

3. Forms for openings, and construction which accommodates installation by other trades whose materials and products must be fabricated before the opportunity exists to verify the measurements of adjacent construction which affects such installations, shall be accurately sized and located as dimensioned on the Drawings. In the event that deviation from the Drawing dimensions results in problems in the field, the Contractor shall be responsible for resolution of the conditions as approved by the Engineer, without additional expense to the Department.

B. Fabrication:

1. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where the slope is too steep to place concrete with bottom forms only. Keep "groove, notch" wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.

2. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Brace temporary closures and set tightly to temporary openings on forms in as inconspicuous locations as possible, consistent with design requirements. Form intersecting planes to provide true, clean cut corners.

C. Falsework:

1. Erect falsework and support, brace and maintain it to safely support vertical, lateral, and asymmetrical loads applied until such loads

can be supported by in-place construction. construct falsework so that adjustments can be made for take-up and settlement.

2. Provide wedges, jacks, or camber strips to facilitate vertical adjustments. Carefully inspect falsework and formwork during and after concrete placement operations to determine abnormal deflection or signs of failure; make necessary adjustments to produce Work of required dimensions.

D. Forms for Exposed Concrete:

1. Drill forms to suit ties used to prevent leakage of concrete mortar around the tie holes. Do not splinter forms by driving ties through improperly prepared holes.

2. Provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back joints with extra studs or girts to maintain true, square intersections.

3. Use extra studs, walers, and bracing to prevent objectionable bowing forms between studs and to avoid bowed appearance in concrete. Do not use narrow strips of form material which will produce bow.

4. Assemble forms so that they may be readily removed without damage to exposed concrete surfaces.

E. Corner treatment: Unless shown otherwise, form chamfers with strips on external corners of columns, walls, girders, beams, foundation walls projecting beyond overlying masonry, and other external corners that will be exposed. Extend terminal edges to required limit and miter chamfer strips at changes in direction.

F. Provision for other trades: Provide openings in concrete formwork to accommodate work of other trades. Verify size and location of openings, recesses and chases with the trade requiring such items. Accurately place and securely support items to be built into forms.

G. Cleaning and tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before concrete is placed. Retighten forms immediately after concrete placement as required to eliminate mortar leaks.

3.4 FORM COATINGS

A. Coat form contact surfaces with form-coating compound before reinforcement is placed. Do not allow excess form-coating material to accumulate in the forms or to come into contact with surfaces which will be bonded to fresh concrete. Apply in compliance with manufacturer's instructions.

3.5 INSTALLATION OF EMBEDDED ITEMS

A. General: Set and build into the work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions and directions provided by suppliers of the items to be attached thereto.

B. Edge forms and screed strips for slabs: Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in the finished slab surface. Provide and secure units to support types of screeds required.

C. Those trades whose work is related to the concrete or must be supported by it shall be given ample notice and opportunity to install embedded items before the concrete is placed.

D. Pipes and sleeves, inserts and similar items shall be placed in the concrete in accordance with all of the requirements of the Building Code. Such items shall be protected to the extent that they are not displaced or damaged during the placing of concrete.

E. Openings in slabs shall be provided for pipes, conduits and the like required for the work of other trades. When such work is completed, the excess part of the respective openings shall be completely closed up to the pipe sleeve with waterstops or inserts, matching the adjoining work.

F. Sleeves for miscellaneous metal work, such as castings, pipes and anchors shall be set as indicated, true and to proper alignment.

3.6 ANCHORAGE ITEMS

A. Anchorage items shall be of sufficient number, size and location to ensure sufficient anchorage for the purpose intended.

B. Adequate slots or inserts shall be provided for anchoring members at openings. Slots and dowels shall be provided for anchoring ends and tops of masonry partitions abutting concrete.

3.7 SHORES AND SUPPORTS

A. Comply with ACI 347 for shoring and reshoring, and as herein specified. Submit a shore removal and reshoring schedule and drawings for the Engineer's review before proceeding with this work. Do not proceed until schedule and drawings have been reviewed.

3.8 REMOVAL OF FORMS

A. Forms shall not be disturbed until the concrete has adequately hardened. Shoring shall not be removed until the supported member has acquired sufficient strength to support its weight and the load upon it. Members subject to additional loads during construction shall be adequately shored to sustain all resulting stresses. Removal of forms shall be accomplished in such a manner and sequence as will prevent injury to the concrete.

Provisions of ACI 301, Sections 4.5, 4.6 and 4.7 apply. Subject to the County's requirements and upon approval, forms may be removed at the following minimum times unless high-early strength is specified. Shoring may be required at the option of the Engineer beyond these periods.

Removal of Forms and Supports:

		Temperature (Degrees F)				
		Over -95°F	70°F-95°F	60°F-70°F	50°F-60°F	Below 50°F
a.	Walls	5 days	1 day	2 days	3 days	Do not remove forms until site-cured test cylinder develops 50% of 28-day strength.
b.	Columns	7 days	2 days	3 days	4 days	
c.	Beam Soffits	10 days	4 days	5 days	6 days	
d.	Slabs 5 inches thick or less	10 days	5 days	6 days	7 days	
e.	Slabs over 5 inches thick		12 days	6 days	8 days	

When high-early strength concrete is specified, a schedule for removal of forms will be developed in the field from the age/strength relationships established for the materials and proportions used by tests in accordance with ACI-301, Section 3.8.

The removable portion of form ties shall be withdrawn from the concrete immediately after taking down the forms. The holes left by such ties shall be filled with a polymer modified grout, and the surface shall be finished with a steel spatula or rubbed with sack cloth.

Care shall be taken in removing forms, wales, shorings, supports, and form ties to avoid spalling or marring the concrete. The required rubbed finish and such patching as may be necessary shall be started immediately after removal of the forms.

3.9 REUSE OF FORMS

A. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable. Apply new form coating compound material to concrete contact surfaces as specified for new formwork. When forms are reused for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close all joints. Align and secure joints to avoid offsets.

+ + END OF SECTION + +

SECTION 03200

REINFORCING STEEL

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Contractor shall furnish and place all steel reinforcements for concrete, including all cutting, bending, fastening and any special work necessary to hold the reinforcement in place and protect it from injury and corrosion in accordance with the requirements of this section.

2. The work also includes furnishing and installing deformed reinforcing bars to be grouted into reinforced concrete masonry walls.

1.2 SUBMITTALS

A. In accordance with the procedures and requirements set forth in Section 01330, Submittal Procedures, and the Contract Documents , the Contractor shall submit the following:

1. Shop Drawings.

2. Mill test certificates.

B. Each submittal shall be identified by the Specification Section No.

C. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed materials compliance with the Contract Documents.

D. Partial, incomplete or illegible submissions will be returned to the Contractor without review for resubmission.

1. Shop Drawings shall include but not be limited to:

a. Detailed placing and shop fabricating drawings, prepared in accordance with ACI 315 - latest edition, shall be furnished for all concrete reinforcement. These drawings shall be made to such a scale as to clearly show construction joint locations,

openings, the arrangement, spacing and splicing of the bars. No materials shall be cut or fabricated until related drawings have been approved by the Engineer.

b. Details of supports for horizontal reinforcing steel in slabs, beams, etc.

PART 2 - PRODUCTS

2.1 GENERAL

A. Reinforcing bars shall be deformed new billet steel bars conforming to ASTM A615, Grade 60, A-775 and ASHTO M-284-811 A185.

B. Wire mesh reinforcement shall conform to ASTM A185 "Welded Steel Wire Fabric for Concrete Reinforcement". All wire mesh reinforcement steel used shall be in sheet form; rolled material will not be acceptable.

C. Mill test certificates shall be furnished to the Engineer for all shipments.

D. Bars which are shown to be epoxy-coated shall be coated with Scotchkote Brand Fusion Bonded Epoxy Coating 213 or 214 as manufactured by 3M, St. Paul, Minnesota, or equal. Coating shall be applied to cleaned steel reinforcing bars by the electrostatic spray method and fully cured in accordance with the recommendations of the manufacturer of the coating material. Before coating, the bars shall be cleaned by abrasive blast cleaning to meet the requirements of near white metal in accordance with SSPC-SP10. The coating shall be applied to the cleaned surface as soon as possible after cleaning, and before oxidation of the surface discernible to the unaided eye occurs. However, in no case shall application of the coating be delayed more than 8 hours after cleaning. The film thickness of the coating after curing shall be 5 to 20 mils, inclusive, as measured using ASTM G12 on the body of the reinforcing bar between the deformations and/or ribs on a straight length of bar. The coasting shall be free from holes, voids, cracks and damaged areas discernible to the unaided eye. Damaged or other unsatisfactory areas shall be patched with a coating material and by a method recommended by the coating manufacturer.

PART 3 - EXECUTION

3.1 FABRICATION AND STORAGE

A. All reinforcement shall be cut and bent cold accurately to the required dimensions. Bends shall be made in conformance with the Manual of Standard Practice of the Concrete Reinforcing Steel Institute. If shipped to

the job fabricated, it shall be properly bundled and tagged so that it can be handled without damage and readily identified with the approved placing diagrams. Direct heating of the bars shall not be permitted.

B. Reinforcing steel shall be stored above ground on platforms or other supports and shall be protected from the weather at all times by suitable covering. It shall be stored in an orderly manner and plainly marked to facilitate identification.

3.2 PLACING REINFORCING BARS

A. Chairs, tie wires, and other devices used to support, position, or fasten the reinforcement shall be made of or coated with, a dielectric material. The specific hardware that the Contractor proposes to use shall be approved by the Engineer.

1. Steel reinforcement shall be placed in the position indicated and within the allowable tolerances specified. Before concrete is placed, all reinforcement shall be securely fastened and supported with approved chairs or other approved devices. Brick or concrete block are not acceptable supporting devices.

2. Concrete shall not be placed until the reinforcing steel is inspected and permission for placing concrete is granted by the Engineer. All concrete placed in violation of this provision shall be rejected and removed.

3. Reinforcement for slabs, beams, etc., poured directly on soil, shall be supported on chairs designed specifically for this purpose. Brick supports or the like will not be acceptable.

B. Field Bending - The alternatives of shop bending or field bending of bar reinforcement will be at the option of the Contractor. Field bending shall be done by cold methods only. Direct heating of the bars shall not be permitted.

1. Field bending operations shall be allowed only when ambient and bar temperatures are 40°F or greater. When lower temperatures prevail, the Contractor may supply, for field bending operations, a fully enclosed space that is heated and constructed to the satisfaction of the Engineer. No additional payment will be made for such an enclosure.

2. Epoxy coated bar reinforcement damaged by handling or field bending work shall be evaluated and repaired, or replaced, in accordance with the following:

C. Field Repair:

1. The Contractor will be required to field repair damaged areas of the bar coating, and to replace bars exhibiting severely damaged coatings. The material used for field repair shall be that supplied by the coating applicator.

   a. Field repair will be required on all areas of damage. The total number of all damaged areas which have been repaired with patching material shall not exceed five in any 10-foot length of bar.

   b. Field repair will not be allowed on bars which have severely damaged coatings as determined by the Engineer.

   c. A reinforcing bar having coating damage determined by the Engineer to exceed the above criteria shall not be incorporated in the work, and it shall be removed from the work site. All such bars shall be replaced in kind with all cost borne by the Contractor.

D. Splices:

1. Splices shall be permitted only where shown on the Drawings. Should the Contractor desire to splice bars at locations other than those shown on the Drawings, written permission to do so shall first be obtained from the Engineer. Such permitted splices shall be well distributed, or located, at points of low tensile stress. Splices shall not be permitted unless a minimum of 2 inches can be provided between the spliced bar and the nearest adjacent bar.

   a. Splices for bars No. 11, or smaller, shall be made by placing the bars in contact and wiring them together for the full length of the splice.

   b. Arc welding of epoxy coated reinforcing bar splices shall require the end of the bar to be welded and to be entirely clean of epoxy coating for the full length of the splice plus six inches. After welding is complete, the cleaned portion of the bar shall be coated with epoxy. This may be accomplished by the use of the epoxy patching material. Coating of the clean portion shall overlap the original epoxy coating by at least six inches.

E. Wire mesh reinforcement shall be securely fastened at the ends and edges. Wire mesh shall be supported at elevations indicated prior to concrete placement. Edge laps shall not be less than one mesh in width and end laps not less than two meshes in length.

3.3 CONCRETE PROTECTION FOR REINFORCEMENT

A. The following minimum concrete cover (inches) shall be provided for reinforcement, except as otherwise noted on Drawings.

Concrete cast against and permanently exposed to earth	3"
Concrete exposed to earth, weather, liquid or salt	2"
Concrete not exposed to weather or in contact with ground:	
Slabs, Walls	1"
Beams, Columns	1-1/2"
Exterior Slabs	2"
Slabs over Liquid	1-1/2"

+ + END OF SECTION + +

SECTION 03251

CONSTRUCTION JOINTS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Furnish all materials, labor and equipment required for the construction of all construction joints specified herein and shown on the Drawings.

1.2 GENERAL INFORMATION

A. Construction joints shall be provided in accordance with Item 3.12 of Section 03300, Cast-in-Place Concrete.

B. Manufacturer's instructions shall be strictly followed in the use of all materials specified under this section. If required by the Engineer, the Contractor shall arrange for the presence of a factory approved representative to ensure that proper procedures are followed.

1.3 SUBMITTALS

A. In accordance with the procedures and requirements set forth in Section 01330, Submittal Procedures, and the Contract Documents, the Contractor shall submit the following:

1. Samples

2. Shop Drawings

B. Each submittal shall be identified by the Specifications Section No.

C. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed materials compliance with the Contract Documents.

D. Partial, incomplete or illegible submissions will be returned to the Contractor without review for resubmission.

PART 2 - PRODUCTS

2.1 EXPANSION JOINT FILLER

A. Expansion joint filler shall be provided where premolded filler is called for on Drawings and at other similar locations.

B. Expansion joint filler shall be sponge rubber as manufactured by W.R. Meadow, Inc. or equal. Materials shall meet specifications of ASTM D1752, Type I, Corps of Engineers Specification CRD-C509, Type I.

C. Sealant:

1. Sealant where shown on Drawings shall be "Dualthane," urethane joint sealant as recommended by W.R. Meadows, Inc., or equal.

2. Backer rod where shown on Drawings shall be closed cell polyethylene foam as manufactured by Industrial Thermo Polymers Ltd. or equal.

PART 3 - EXECUTION

3.1 EXPANSION JOINT FILLER

A. Expansion joint filler shall be carefully positioned so that top of filler shall one-half of 1-inch below concrete surfaces, and shall extend to bottom of concrete surfaces.

++ END OF SECTION ++

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Contractor shall furnish all labor, equipment, materials and services necessary for the manufacture, transportation and placement of all plain, reinforced, and fill concrete work, as shown on the Drawings or as ordered by the Engineer, except for the work specifically included under other items.

B. Related Work Specified Elsewhere:

1. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

2. Section 02200, Backfill and Compaction.

3. Section 03100, Concrete Formwork.

4. Section 03200, Reinforcing Steel.

1.2 CODES AND STANDARDS

A. Concrete work shall conform to the latest applicable requirements of the following codes and standards, including all reference therein.

1. New York State Department of Transportation Standard Specifications, Section 5, 501-503, latest edition.

2. New York State Uniform Fire Prevention and Building Code.

3. Building Code Requirements for Reinforced Concrete ACI 318.

4. Specifications for Structural Concrete for Buildings ACI 301.

5. Recommended Practice for Concrete Formwork, ACI 347.

6. Manual of practice for detailing reinforced concrete structures ACI 315.

B. Any procedure, materials or operation specified by reference to the American Society for Testing and Materials (ASTM), the American Concrete Institute (ACI), Local Building Code or other reference, shall comply with the requirements of the current and most recent specifications or standards. In conflicts between listed standards and this specification, the more stringent requirements shall govern.

C. Contractor is expected to obtain the most recent issue of all standards, recommendations, codes or specifications referred to within this specification.

1.3 SUBMITTALS

A. In accordance with the procedures and requirements set forth in Section 01330, Submittal Procedures, and the Contract Documents, the Contractor shall submit the following:

1. Shop Drawings.

2. Certifications of compliance with specifications for all sources of each material.

3. Name of the Cement Manufacturer.

4. Manufacturer's data on all admixtures.

5. Concrete mix design.

6. Transit Mix Supplier.

7. Delivery Tickets: Furnish to Engineer at the time of delivery copies of all delivery tickets and the tape showing the time the truck was loaded for each load of concrete delivered to the site. Provide items of information as specified in ASTM C94, Section 16.

B. Each submittal shall be identified by the Specification Section No.

C. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed materials compliance with the Contract Documents.

D. Partial, incomplete or illegible submissions will be returned to the Contractor without review for resubmission.

1. Shop Drawings shall include but not be limited to:

a. Complete reinforcing bar detailing drawings and schedules.

b. Location plans for all construction joints. Contractor may elect to show this information on the reinforcement detailing drawings.

PART 2 - PRODUCTS

2.1 CEMENT

A. All cement shall be made by a well-known and acceptable manufacturer. Unless otherwise permitted, the product of not more than one plant shall be used in the work. Cement shall be Type II Portland cement and shall conform to the requirements of ASTM Designation C 150. In special cases, when high early strength is desired, Type III Portland cement may be used with the approval of the Engineer. Lumpy, moist or partially set cement, or cement damaged by age or exposure shall not be used. Certified copies of mill reports shall be submitted.

B. Cement used in the work shall correspond to that upon which the selection of concrete proportions was based. Only one brand of Portland Cement shall be used in the work.

2.2 AGGREGATES

A. Contractor shall submit a new trial mix to the Engineer for approval whenever a different aggregate or gradation is proposed.

B. Contractor shall submit to the Engineer for approval, a minimum of two (2) suppliers of aggregates he proposes to use.

C. Contractor shall furnish confirmation to the Engineer that he can obtain 100% of the needed aggregates of the selected gradation from one supplier prior to approval to pour concrete.

D. Fine Aggregate: Fine aggregate shall conform to ASTM Designation C 33 and consist of natural sand, clean, sharp and free from loam, clay, lumps or other deleterious substances. Bank run (material as mined without further processing) will not be allowed.

E. Coarse Aggregate (Typical):

1. Coarse aggregate shall be crushed stone or gravel and a maximum of 1 1/2-inches in diameter. It shall conform to the requirements of ASTM Designated C 33 and the latest revision thereof. It shall be

clean, uncoated, processed aggregate free from loam, clay, lumps or other deleterious substances.

2.3 WATER

A. Water for use in concrete and mortar shall be from a potable domestic supply and free from injurious amounts of mineral and organic substance.

2.4 ADMIXTURES

A. Admixtures shall be used only when and as specified herein or approved by the Engineer, and shall conform to the Specifications of ASTM C 260 or C 494.

B. Admixtures shall be in accordance with the following:

1. Type-A, a water reducing admixture of the hydroxylated carboxylic acid or the hydroxylated polymer types, conforming to ASTM C494, WRDA with Hycol as manufactured by W.R. Grace or equal.

2. Type-D, a water reducing and retarding admixture conforming to ASTM C494.

3. Type-E, a water reducing and accelerating admixture conforming to ASTM C494.

4. Type-F, an air entraining admixture, "Darex AEA" as manufactured by W.R. Grace and Co., "Sika-AER" by Sika Chemical Corp., or equal conforming to ASTM C260.

C. Contractor shall submit manufacturer's descriptive details of admixtures for approval.

2.5 TESTS OF MATERIAL

A. Engineer shall have the right to order the test of any material entering into concrete or reinforced concrete to determine its suitability for the purpose. Costs for these tests shall be borne by the Contractor. Tests shall be made in accordance with the requirements of the ASTM. The complete record of such tests shall be available for inspection during the progress of the work.

2.6 PROPORTIONING

A. Concrete proportions, including water-cement ratio, shall be established on the basis of laboratory trial batches, with materials to be employed, in conformance with Chapter 4, ACI 318-83.

B. Contractor shall develop and submit a series of at least three trial design mixes for each aggregate gradation intended for use to the Engineer for approval. A copy of the approved design mix shall be forwarded to the Engineer at least 2 weeks before delivery of each class of concrete to the job site.

C. Contractor shall engage an independent testing laboratory in accordance with ACI 211 to attain properties of strength, water-cement ratio, slump, and entrained air content specified. This work shall be paid for by the Contractor.

D. Trial design mixes of each class of concrete required shall be made in accordance with ASTM C39 by the testing laboratory. Four standard 6-inch compression cylinders two tested at 7 days and two at 28 days, shall be made in accordance with ASTM C192 using the materials and proportions proposed for this project.

E. Certification of aggregates shall be made a part of these tests and referenced on the reports which shall be issued at seven and 28 days. These tests shall be repeated, if necessary, because of changes in materials or unsatisfactory results.

F. Quantity of ingredients to use per batch shall be governed by the size of the concrete mixer and the composition of the concrete, but shall not exceed the rated capacity specified for the mixer by the manufacturer of that equipment. Proportion of cement, aggregates, admixtures and water shall be such as to produce a mixture which will be watertight and work readily into the corners and angles of the forms and around reinforcement by methods of placing and consolidation employed on the work, but without permitting the materials to segregate or excessive free water to collect on the surface.

G. Proportion of cement, aggregates, admixtures and water used in the concrete shall be based on tests of grading and moisture content of materials, slump of concrete mixture, strength of concrete and the following factors:

1. Minimum Cement Content, lbs. per cubic yard: 600.

2. Maximum Water-Cement Ratio, by Weight: 0.45.

3. Percent Air Content: 6 ±1 percent.

4. Slump Range: 4 inches maximum.

5. Compressive Strength, lbs. per sq. inch at 28 days - F'c = 4000 psi (typical).

6. Compressive strength for concrete fill at 28 days shall be F'c = 4000 psi.

H. All concrete, unless otherwise noted on the Drawings, shall be air entrained concrete.

2.7 READY-MIXED CONCRETE

A. Ready-mixed concrete production methods and facilities shall comply with Standard Specifications for Ready-Mixed Concrete, ASTM C94. Batch deliveries shall not exceed the rated capacity specified for the mixer by the manufacturer of that equipment.

B. Contractor shall submit affidavits from the ready-mixed concrete supplier certifying that the proposed mix to be supplied satisfies all the requirements under this item and those outlined under "Proportioning." Such affidavits shall be subject to the approval of the Engineer.

2.8 EMBEDDED ITEMS

A. Items such as plates, angles, inserts, bolts and similar items not specified elsewhere shall be provided and installed under this Section unless specified otherwise. All carbon steel embedded items shall be hot dip galvanized after fabrication (unless otherwise noted). All galvanized elements that will be embedded in or will come in contact with concrete and mortar will require a chromate coating. This coating should be accomplished in the galvanizing plant by either dipping the galvanized elements in a solution of sodium or potassium dichromate acidified with sulfuric acid or spraying this solution on the galvanized surfaces.

B. All aluminum items in contact with concrete and mortar shall receive a bituminous coating such as Bitumastic Super Service Black, by Kop-Coat, Inc., Pittsburgh, PA.

2.9 CHEMICAL HARDENER

A. Chemical hardener shall be Lapidolith by Sonneborn, Hornolith by W.R. Grace or equal fluosilicate base material.

2.10 CONCRETE BONDING AGENT

A. The concrete bonding agent shall be an epoxy-resin bonding type, two component, polyamide type, Sikadur Hi-Mod by Sika Chemical Corporation or equal.

2.11 CURING

A. Beginning immediately after placement, concrete shall be protected from premature drying in accordance with ACI 301 and 302.1R. Curing by continuous sprinkling or wet mats will be the only acceptable method. Curing compounds will not be acceptable. Wet curing shall continue for a minimum of 7 days.

2.12 GROUT

A. Type A - Nonshrink Grout: The nonshrink, nonstaining grout, shall be "Euco N-S" by the Euclid Chemical Company, or "Masterflow 713" by Master Builders, or equal.

B. Type B - Nonshrink, Epoxy Grout: The nonshrink, epoxy grout shall be Euco High Strength Grout by the Euclid Chemical Company, Sikadur 32 Hi-Mod Grout by Sika Chemical Company, or Axpandcrete-S by Anti-Hydro Company, or equal.

2.13 FINISH AND REPAIR COMPOUNDS

A. Finish and repair compounds shall be Poly-Patch by Euclid Chemical Co., Sikatop by Sika Chemical Co. or equal.

PART 3 - EXECUTION

3.1 COMPRESSION TEST CYLINDERS

A. The Contractor shall perform, control and pay for all tests specified herein. All testing shall be performed in accordance with procedures specified herein. Contractor shall be required to prepare test cylinders for testing. Contractor shall give the Engineer a minimum of 24 hours notice prior to concrete placement after all other requirements of these specifications have been met.

B. Strength tests shall conform to ASTM C172 for sampling, ASTM C31 for making and curing test cylinders and ASTM C39 for testing. Four field cured test cylinders of concrete for each 50 cubic yards or fraction thereof or for each placement shall be made, whichever is less, as directed by the Engineer. One specimen shall be broken at 7 days and the remainder at 28 days.

C. Slump and air content tests shall conform to C143 for slump and ASTM C231 (pressure method for air content). Each test shall be made

whenever strength specimens are made and as often as necessary for control and acceptance purposes and as required by the Engineer.

D. Additional specimens shall be made when the Contractor desires approval of form removal earlier than set forth under "Removal of Forms" later in this section. Requests for testing of additional specimens shall require approval of the Engineer.

3.2 CONSISTENCY

A. Consistency of the concrete shall be checked by the Engineer by standard slump cone tests. Maximum slump shall be 4 inches. Contractor shall make any necessary adjustments in the mix as the Engineer may direct and shall upon written order suspend all pouring operations in the event the consistency does not meet the intent of the specifications. No payment shall be made for any delays, material or labor costs due to such eventualities.

B. The approved consistency of the concrete mix shall at all times be as stiff or dry as is practicable, considering the particular type of work being done and the necessity of obtaining a dense, impervious, watertight concrete. Thin or wet mixes as a substitute for proper placing facilities or adequate placing labor will not be permitted, nor will the appearance of free water in the forms.

3.3 MIXING CONDITIONS

A. Concrete shall be mixed only in such quantities as required for immediate use. No concrete shall be mixed while the air temperature is below 40°F, without permission of the Engineer. If permission is granted for mixing concrete under such conditions, the work shall be in accordance with ACI 306, "Recommended Practice for Winter Concreting" and the aggregates or water, or both if required, shall be heated and temperature of the concrete, when placed, shall not be less than 70°F, nor more than 100°F.

B. Hot Weather Placing:

1. When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.

2. Cool ingredients before mixing to maintain concrete temperature at time of placement below 80°F when the temperature is rising and below 85°F when the temperature is falling. Mixing water may be chilled, or chopped ice may be used to control the concrete

temperature provided the water equivalent of the ice is calculated in the total amount of mixing water.

3. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.

4. Wet forms thoroughly before placing concrete.

5. Do not place concrete at a temperature so as to cause difficulty from loss of slump, flash set, or cold joints.

6. Do not use set-control admixtures unless approved by the Engineer in mix designs.

7. Obtain Engineer's approval of other methods and materials proposed for use.

C. Retempering of concrete by adding water or other materials will not be permitted.

3.4 FORMWORK

A. Forms for concrete shall be constructed of wood, plywood, steel or other approved material. Type, size, quality, and strength of all materials from which forms are made shall be subject to the approval of the Engineer. No false work or forms shall be used which are not clean and suitable. Deformed, broken or defective false work and forms shall be removed from the work.

B. Forms for concrete shall be true to line and grade, and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. Forms shall be smooth and free from surface irregularities. Reuse of forms subject to approval by the Engineer at time of installation. Wire ties will not be permitted where the concrete surface will be exposed to either salt, water or weathering. All forms shall be constructed in such a manner that they can be removed without hammering or prying against the concrete. Suitable moldings shall be placed to bevel or round all exposed corners and edges of beams, columns, walls and slabs. Bevels shall be 3/4 inch unless otherwise noted.

C. Inner faces of all forms shall be thoroughly cleaned prior to concreting. Forms for concrete surfaces that will not be subsequently waterproofed shall be coated, prior to erection, with a chemical type release agent, and shall be applied lightly by spray to avoid retardation. Contractor shall

submit manufacturer to Engineer for his approval. Forms for concrete surfaces that are to be waterproofed shall be wetted prior to concreting.

3.5 FORM ACCESSORIES

A. Form accessories shall be of a commercially manufactured type. Form ties shall be so constructed that the ends, or end fasteners, can be removed without causing appreciable spalling at the faces of the concrete after ends, or end fasteners of form ties have been removed, the embedded portion of the ties shall terminate not less than 2 inches from the formed face of the concrete that is exposed to salt, wastewater or enclosed surfaces above the wastewater, and not less than 1 inch from the formed face of all other concrete. Form ties shall be furnished with plastic cones. Form ties in walls designed to retain liquids shall be provided with a water seal at mid-thickness of the wall. Form ties shall be commercially manufactured steel rods capable of withstanding applied pressures. Wire ties are not acceptable.

3.6 PLACING CONCRETE

A. Before any major concrete pour is started, Contractor shall prepare and submit to the Engineer for approval a schedule of his proposed operations. Approval of the schedule by the Engineer shall not relieve the Contractor of his responsibility for producing concrete work of the highest quality.

B. No foundation, slab or pavement concrete shall be placed until the depth and character of the foundation soils have been inspected and approved by the Engineer. Contractor shall coordinate work with the requirements of Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials, and Section 02200, Backfill and Compaction. No concrete shall be placed until all reinforcing steel, anchor bolts, pipes, conduits, sleeves and other work required to be built into concrete have been inspected and approved by the Engineer. All concrete shall be placed during the daylight hours except with the consent of the Engineer; the placing of concrete in any portion of the work shall not be started unless it can be completed in daylight. If special permission is obtained to carry on work during the night, an adequate floodlight system must be provided.

C. Concrete shall be placed in forms as soon as practicable after mixing, and in no case shall concrete be used which does not reach its final position in the forms within 1 1/2 hours after truck-mixed concrete leaves the plant as evidenced by the delivery ticket given to the concrete inspector.

D. The method and manner of placing concrete shall be such as to avoid the possibility of segregation of the concrete materials or the displacement of

the reinforcement. When troughs or chutes are used in placing concrete, their angle of inclination shall not exceed 1 vertical to 2 horizontal with respect to the horizontal. When pipes are used, they shall be kept full of concrete and have their lower ends buried in fresh concrete; such pipes shall be used in the same manner as a tremie. All chutes, troughs and pipes shall be kept clean and free from coatings of hardened concrete. Open troughs or chutes shall be metal or metal-lined, and shall extend as nearly as possible to the point of deposit. When the discharge must be intermittent, a hopper or other device for regulating the discharge shall be provided.

E. Dropping the concrete a distance of more than four (4) feet or depositing a large quantity at any point, running or working it along the forms will not be permitted.

F. Placing of concrete shall be so regulated that the pressure caused by the wet concrete shall not exceed that used in the design of the forms.

G. All concrete shall be deposited in approximately horizontal layers not deeper than 18 inches. Each part of the form shall be filled by placing the concrete as near to its final position as possible. The coarse aggregate shall be worked back from the face and the concrete forced under and around the inserts, piping and reinforcing bars without disturbing them.

H. All concrete shall be consolidated by continuous working with suitable tools and also by the use of approved mechanical vibrating devices (10,000 vibrations per minute minimum). All formed faces shall be well spaced and the mortar flushed to the surface.

I. Mechanical vibrators shall be an approved type transmitting vibrations directly to the concrete with sufficient intensity to cause flow and settlement. Their operation shall be carefully controlled to give sufficient duration to accomplish thorough compacting without overagitation which will cause segregation of the materials. Every effort shall be made to ensure that all concrete work is solid, compact, watertight, and smooth to prevent the formation of laitance.

J. The various pours shall be planned and executed to ensure that once started the placing of concrete in a pour shall be continuous and in a manner to prevent any initial set from starting in any concrete before fresh concrete is placed against it.

K. After the concrete has acquired its initial set, care shall be exercised to avoid jarring forms or placing any strain on the ends of projecting reinforcing bars.

L. Bonding for Next Concrete Pour: Roughen surfaces of set concrete at all joints, except where bonding is obtained by use of a concrete bonding

agent. Clean surfaces of laitance, coatings, loose particles, and foreign matter. Roughen surfaces in a manner to expose bonded aggregate uniformly and to not leave laitance, loose particles of aggregate, or damaged concrete at the surface.

M. Bonding of fresh concrete to fully-cured hardened concrete or existing concrete shall be accomplished by using an epoxy-resin bonding agent.

3.7 PROTECTION AND CURING

A. Careful attention shall be given to the proper curing and protection of all concrete in the structures. The Work shall be protected from the elements, flowing water and from defacement of any nature during construction operations.

B. After placing and finishing of concrete, concrete shall be cured and protected in accordance with Chapter 12 ACI 301, and as stated below.

1. Curing Methods:

   a. Perform curing of concrete by moist curing, or by moisture retaining cover curing.

   b. For curing, use water that is free of impurities which could etch or discolor exposed, natural concrete surfaces.

2. Provide moisture curing by any of the following methods:

   a. Keeping the surface of the concrete continuously wet by covering with water.

   b. Continuous water-fog spray.

   c. Covering the concrete surface with the specified absorptive cover, thoroughly saturating the cover with water, and keeping the absorptive cover continuously wet with sprinklets or porous hoses. Place absorptive cover so as to provide coverage of the concrete surfaces and edges, with a 4-inch lap over adjacent absorptive covers.

3. Provide moisture retaining cover curing as follows:

   a. Cover the concrete surfaces with the specified moisture retaining cover for curing concrete, placed in the widest practical width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately

repair any holes or tears during the curing period using cover material and waterproof tape.

C. Curing Formed Surfaces:

1. Cure formed concrete surfaces, including the undersides of girders, beams, supported slabs and other similar surfaces by moist curing with the forms in place for the full curing period or until forms are removed. If forms are removed, continue curing by method specified above.

D. Temperature of Concrete During Curing:

1. When the atmospheric temperature is 40°F and below, maintain the concrete temperature between 50°F and 70°F continuously throughout the curing period. When necessary, make arrangement before concrete placing for heating, covering, insulation or housing as required to maintain the specified temperature and moisture conditions continuously for the concrete curing period. Provide cold weather protection complying with the requirements of ACI 306.

2. When the atmospheric temperature is 80°F and above, or during other climatic conditions which will cause too rapid drying of the concrete, make arrangements before the start of concrete placing for the installation of wind breaks or shading, and for fog spraying, wet sprinkling, or moisture retaining covering. Protect the concrete continuously for the concrete curing period. Provide hot weather protection complying with the requirements of ACI 305, unless otherwise specified.

3. Maintain concrete temperature as uniformly as possible, and protect from rapid atmospheric temperature changes. Avoid temperature changes in concrete which exceed 5°F in any one hour and 50°F in any 24 hour period.

E. Protection from Mechanical Injury: During the curing period, protect concrete from damaging mechanical disturbances including load stresses, heavy shock, excessive vibration, and from damage caused by rain or flowing water. Protect all finished concrete surfaces from damage by subsequent construction operations.

F. All marred, damaged or graffiti-marked new concrete shall be made acceptable within 24 hours (if permissible in the opinion of the Department) or shall be removed and replaced at no additional cost to the Department.

G. When the concrete is placed in air temperatures of 40°F or lower the concrete shall be heated as described under Item 3.3 Mixing Conditions.

H. The concrete shall be protected during transit, and before and after placing, as directed by the Engineer, to retain all heat possible in the concrete mix.

I. After the concrete has been placed, it shall be enclosed and protected so as to maintain the temperature of the concrete at not less than 50°F until 70 percent of the designated strength has been attained, as indicated by cylinder tests.

J. Finished surfaces and wall edges located where travel and further construction work is necessary shall be suitably protected from damage by temporary guards or covers as directed by the Engineer.

3.8 REMOVAL OF FORMS AND SHORING

A. Forms shall not be disturbed until the concrete has adequately hardened. Shoring shall not be removed until the supported member has acquired sufficient strength to support its weight and the load upon it. Members subject to additional loads during construction shall be adequately shored to sustain all resulting stresses. Removal of forms shall be accomplished in such a manner and sequence as will prevent injury to the concrete.

B. Provisions of ACI 301, Sections 4.5, 4.6 and 4.7 apply. Subject to Nassau County's or Engineer's requirements and upon approval, forms may be removed at the following minimum times unless high-early strength is specified. Shoring may be required at the option of the Engineer beyond these periods.

Removal of Forms and Supports:

		Temperature (°F)				
		Over 95°F	70°F-95°F	60°F-70°F	50°F-60°F	Below 50°F
a.	Walls	5 days	I day	2 days	3 days	Do not remove forms until site-cured test cylinder develops 50% of 28-day strength.
b.	Columns	7 days	2 days	3 days	4 days	
c.	Beam Soffits	10 days	4 days	5 days	6 days	
d.	Slabs 5-inch thick or less	10 days	5 days	6 days	7 days	
e.	Slabs 5-inch thick or greater	12 days	6 days	8 days		

C. When high-early strength concrete is specified, a schedule for removal of forms will be developed in the field from the age/strength relationships established for the materials and proportions used by tests in accordance with ACI-301, Section 3.8.

D. When, in the opinion of the Engineer, conditions of the work or weather justify, forms may be required to remain in place for longer periods.

3.9 RECORD OF PLACINGS AND FORM REMOVAL

A. An accurate record shall be maintained of the dates of concrete placings and the exact location thereof and the dates of removal of forms. These records shall be available for inspection at all times on the job, and two copies shall be furnished to the Engineer upon completion of the concrete work.

3.10 QUALITY OF CONCRETE WORK

A. Make all concrete solid, compact and smooth, and free of laitance, cracks and cold joints.

B. All concrete for liquid retaining structures, and all concrete in contact with earth, salt, water, or exposed directly to the elements shall be watertight.

C. Cut out and properly replace to the extent ordered by the Engineer, or repair to the satisfaction of the Engineer, surfaces which contain cracks or voids, are unduly rough, or are in any way defective. Thin patches or plastering will not be acceptable.

D. All leaks through concrete, and cracks, holes or other defective concrete shall be repaired and made watertight by the Contractor.

E. Repair, removal, and replacement of defective concrete as ordered by the Engineer shall be at no additional cost to the Department.

F. Tolerances and criteria delineated in ACI 301 shall be strictly adhered to.

3.11 ADMIXTURES

A. When directed or approved by the Engineer, an admixture shall be added to the concrete to control the rate of hardening and workability. Admixture shall be of the retardant type under high temperatures and the accelerating type under low temperatures. The admixture shall be added to the mix at the batch plant and the proportions shall be in strict accordance with the manufacturer's recommendations.

B. Concrete retardant shall be used to expose aggregate and to provide the concrete with rough bonding surfaces at all horizontal construction joints. Apply retardant on forms or spray on unformed horizontal construction joints in strict accordance with manufacturer's directions. Remove all unset mortar by wire brushing or with a water jet within the time limit specified by the manufacturer. In lieu of the above method of exposing aggregate, a water blast or sand blast method may be used for vertical and horizontal surfaces. The Contractor must satisfactorily demonstrate, on sample panels, that the proposed method can achieve an etch of 1/8-inch, minimum.

C. Use air entraining admixture in all concrete, except interior slabs subject to abrasion, unless otherwise shown or specified. Add air entraining admixture at the manufacturer's prescribed rate to result in concrete at the point of placement having air content within the prescribed limits.

3.12 CONSTRUCTION AND EXPANSION JOINTS

A. Construction and expansion joints shall be located as shown on the Drawings where structural integrity is affected. Otherwise, Contractor shall submit description of the joint and its location to Engineer for approval.

1. Additional construction joints shall be located as follows: (except where otherwise noted on drawings):

   a. In walls locate joints at a spacing of approximately 40 feet.

   b. All corners shall be part of a continuous pour, and should a construction joint be required, the joint shall not be located closer than 12 feet from a corner.

   c. In foundation slabs and slabs on grade locate joints at a spacing of 40 feet maximum. Place concrete in a checkerboard pattern.

   d. In mats and structural slabs and beams, locate joints in compliance with ACI 301, Chapter 6 and recommendations of ACI 350, at a spacing of 40 feet maximum.

   e. Provide other additional construction joints as required to satisfactorily complete all Work.

B. In general, joints shall be located near the middle of the spans of slabs. Joints in walls shall be at the underside of floors, slabs, and the top of footings or floor slabs, unless otherwise indicated on the Drawings. Joints shall be perpendicular to the main reinforcement.

C. All reinforcing steel and welded wire fabric shall be continued across construction joints. Keys and inclined dowels shall be provided as shown on the Drawings or as directed by the Engineer. Longitudinal keys at least 1 1/2 inches deep shall be provided in all joints in walls and between walls and slabs or footings, except as specifically noted otherwise on the Drawings.

D. The surface of the concrete at all joints shall be thoroughly cleaned and all laitance removed by wire brushing, air or light sand blasting. On horizontal joints where concrete is to be placed on hardened concrete, a slush coat of mortar 1/2-inch to 1-inch thick with slump less than 6 inches, made of the same materials as the concrete, but without the coarse aggregate, shall be worked well into the irregularities of the hard surface just ahead of the concrete pour.

3.13 SLABS ON GROUND

A. The subgrade for slabs on ground shall be well drained and of adequate and uniform load bearing nature. The in-place density of the subgrade soils shall be at least the minimum required in the specifications. The bottom of an undrained granular base course shall not be lower than the adjacent finished grade.

B. The subgrade shall be free of frost before concrete placing begins. If the temperature inside a building where concrete is to be placed is below freezing it shall be raised and maintained above 50°F long enough to remove all frost from the subgrade.

C. The subgrade shall be moist at the time of concreting. If necessary, it shall be dampened with water in advance of concreting, but there shall be no free water standing on the subgrade nor any muddy or soft spots when the concrete is placed.

D. Provide control joints in slabs-on-grade at locations indicated on the Drawings. Control joints may be construction joints or sawed joints (cut 1/4 of the slab depth). Saw cuts for control joints shall be performed within 24 hours after the concrete is placed. For floors receiving floor coverings, joints may be made by insertion of fiberboard strips (1/4 of the slab depth) into the unset concrete. Wire mesh or reinforcement shall be interrupted 2 inches clear each side of sawed or impressed control joints.

E. Floor slabs shall be screeded level or pitched to drain as indicated on the Drawings. Slabs to be finished as specified in Item 3.14 hereinafter.

3.14 CONCRETE FINISH

A. Unless otherwise called for or shown on the Drawings all exposed edges shall have a 3/4 inch chamfer.

B. Concrete surfaces that are not exposed in the completed work will require no special finish other than such pointing up as is necessary to leave them smooth and impervious. All openings left by the removal of form ties shall be pointed up carefully with mortar. All concrete surfaces that are exposed in the completed work to the atmosphere, salt or to water shall be finished as specified herein. Immediately after removal of forms, finishes as hereinafter specified shall be applied.

1. Formed Vertical Faces:

a. All exposed vertical faces of formed concrete shall be prepared for the specified finish as follows. Remove all forms in such manner as to prevent damage to the concrete and at the proper time for the required finish.

b. Point up all areas, remove any projections and fins, repair all honeycomb as permitted and approved by the Engineer, and fill in all tie holes. Mortar used for filling and repairs shall be of the proper consistency and of the same color as the adjacent concrete. Any pointing up and repair not consistent with these specifications or approved by the Engineer shall be redone at no extra cost to the Department.

c. A grout finish shall be used on all exposed exterior and interior vertical and formed faces of concrete, unless otherwise noted or specified.

d. The grout finish on walls shall be carried at least 12 inches below finished grade or to the floor slab in case of interior wall faces.

e. After the pointing has been sufficiently set to permit it, the grout finish shall be applied in the following manner: The concrete surface shall be thoroughly moistened (but not soaked and no free water shall be standing) and the entire surface painted with a sand-cement wash. The wash shall be composed of one part of Portland cement, of which portion approximately 33 percent shall be White Portland cement, and one to one and one-half parts fine clean sand passing a No. 30 sieve. The grout shall be of such consistency that it will not run when applied to vertical surfaces, and so that it will fill all voids in the surface of the concrete. The sand-cement wash shall be applied with a brush and thoroughly worked into the concrete at a rate that

will completely fill all voids in the surface of the concrete and provide a firm even texture uniform in color. After the wash has started to harden slightly, but before it has taken its initial set, any excess material shall be removed with a straight edge, and in about an hour, the surface shall be rubbed with a rough cloth or pad to remove the excess wash entirely from the surface and leave the voids filled. The wash shall be applied without a break in application (time lapse sufficient to allow wash to set up) in any wall, beam or column face except at corners, edges or other offsets. Prior to final approval of the work, any surface which has been disfigured by drippings or other causes shall be thoroughly cleaned, using a weak solution of muriatic acid, if necessary, and grout finish application repeated as required. The entire grout finish operation shall be accomplished using a single brand of Portland cement and a single source of sand throughout the Project.

2. Unformed Horizontal Surfaces:

   a. All exterior horizontal concrete surfaces shall be screeded and then worked to a true, smooth surface with wood floats and proper edging or jointing tools.

   b. All interior concrete floors and slabs shall receive a swirl finish.

   c. Provide smooth form finish for all interior and exterior exposed beams and undersides of slabs.

   d. Floors shall have the aggregate well worked down from the surface and be given a hard, smooth steel trowel finish. After the hard, smooth finish is obtained, the finisher shall make an additional pass over the surface to obtain a nonskid finish, commonly known as a "swirl finish" which is smoother than "sidewalk finish" but is not of a glass like smoothness.

   e. Dusting with sand or cement will not be permitted.

   f. Paint, silicone damp-proofing or other coatings or substances shall not be applied to surfaces or adjoining joint surfaces until sealants have been installed and are nominally cured.

   g. Concrete and Masonry Joint Surfaces: Etch bonding surfaces with a 5 percent solution of muriatic acid, rinse thoroughly with water, and dry.

3.15 GROUT

A. Applications:

1. Type A - Nonshrink Grout Mix A - Nonshrink Grout shall be used for the setting of structural items such as base plates for columns and beams, equipment and other machinery. All grout shall be mixed and placed in strict accordance with the directions of the manufacturer.

2. Type B - Nonshrink, Epoxy Grout Mix B - Nonshrink, Epoxy Grout shall be used for sloping floors (prior to installing Heavy Duty Floor Toppings), the setting of handrail Posts, and around new openings, reinforcing bar dowels into existing concrete, piping, and plain opening in existing walls or where indicated on the Drawings. All grout shall be mixed and placed in strict accordance with the directions of the manufacturer.

B. Preparation:

1. The underside of the base plate for columns and beams, equipment and other machinery shall be cleaned of all dirt, grease and oil-like films.

2. The pertinent concrete surfaces shall likewise be cleaned of all similar contamination and debris, chipping or roughening the surface if any laitance or poor concrete is in evidence. Special care shall be taken with the grout in hot or cold weather to insure proper setting and gain of strength. Aggravating conditions of placement are to be alleviated to an extent that the temperature of the grout up until time of set will be about the range of 60° to 80°F. Ice or hot water may be used and shields from the sun and hot winds shall be provided when required. Following cleaning, the concrete shall be water saturated for a period of 6 hours, the excess water then removed from the surface and nonabsorbent edge forms erected.

C. Grouting:

1. Grout shall be placed quickly and continuously, shall completely fill the space to be grouted and be thoroughly compacted and free of air pockets. The grout may be poured in place, pressure grouted by gravity, or pumped. The use of pneumatic pressure or dry-packed grouting requires approval of the Engineer. Whenever practical, grout shall be poured from one side only and thence flow across to the open side to avoid air entrapment.

D. Finishing:

1. If an expanding grouting aid is used, the recommendations of the manufacturer on finishing of exposed edges shall be strictly followed. All visible wedges shall be removed 48 or more hours after the grout has been placed.

+ + END OF SECTION + +

DIVISION 4 – MASONRY

SECTION 04100

MORTAR

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Contractor shall furnish all labor, materials, equipment and incidentals required to provide mortar as shown and specified.

2. This Section specifies the mortar for masonry materials to be used to construct the chimney for pre-cast manholes.

B. Related Work Specified Elsewhere:

1. Section 03300, Cast-In-Place Concrete.

1.2 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies: Wherever a fire resistance classification is shown or scheduled for unit masonry construction (4-hour, 3-hour and similar designations), provide mortar in proportions complying with the requirements established by UL and the New York State Uniform Fire Prevention and Building Code.

B. Source Quality Control: Do not change source or brands of mortar materials during the course of the Work.

C. Presubmittal Meeting: Before submitting samples for approval, the Contractor and his supplier shall meet on-site with the Engineer to review existing masonry to be matched and preview proposed products.

D. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

1. ASTM C 91, Masonry Cement.

2. ASTM C 136, Sieve or Screen Analysis of Fine and Coarse Aggregates.

3. ASTM C 144, and ASTM C 404, Aggregate for Masonry Mortar.

4. ASTM C 150, Portland Cement.

5. ASTM C 207, Hydrated Lime for Masonry Purposes.

6. ASTM C 270, Mortar for Unit Masonry.

1.3 SUBMITTALS

A. Samples: Submit for approval samples of each type of colored mortar, showing the range of color which can be expected in the work. Label samples to indicate type and amount of colorant used. Engineer's review will be for color only. Compliance with all other requirements is the exclusive responsibility of the Contractor.

B. Manufacturer's Data: Submit for approval, copies of manufacturer's specifications and instructions for each manufactured product.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials: Manufactured materials, such as cement and lime, shall be delivered and stored in their original unopened containers, plainly marked with identification of materials and manufacturer.

B. Storage of Materials:

1. Store mortar materials off the ground in a dry location and under a properly constructed shelter using tarpaulin, felt paper, or polyethylene sheets to prevent damage by the elements. Containers showing evidence of damage will be rejected.

2. Protect liquid admixtures from freezing.

3. Store aggregates in separate bins.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portland Cement:

1. ASTM C 150, Type I, nonstaining, without air entraining and of natural color or white, to produce the required color of mortar or grout.

2. Use ASTM C 150, Type III, high early strength, for laying masonry when outside temperature is less than 50°F.

3. Provide nonstaining Portland cement, without air entraining and of natural color or of the color required to be compatible with the required colored mortar pigment selected by Engineer.

4. Product and Manufacturer: Provide one of the following:

   a. Speed Portland Cement and Hi-Speed Portland Cement by Louisville Cement Company.

   b. Atlas Type I Atlas Type III Portland Cement by Lehigh Portland Cement Company.

   c. Or equal.

5. Product and Manufacturer: Provide one of the following:

   a. White Portland Cement by Ideal Basic Industries.

   b. Atlas White Portland Cement Type I and Type III by Lehigh Portland Cement Company.

   c. Or equal.

B. Masonry Cement: Provide the following for masonry cement mortars:

1. ASTM C 91, Type S; proportioned as specified to comply with ASTM C 270.

2. Maximum Air Content, ASTM C 91: 18 percent.

3. Nonstaining and of the color required to be compatible with the required colored mortar pigment selected by Engineer.

4. Product and Manufacturer: Provide one of the following:

   a. Brixment-in Color Type S by Louisville Cement Company.

   b. Atlas Custom Color Masonry Cement Type S by Lehigh Portland Cement Company.

   c. Or equal.

C. Hydrated Lime: ASTM C 207, Type S, or lime putty ASTM C 5.

D. Sand Aggregates:

1. ASTM C 144, except for joints less than 1/4 inch use aggregate graded with 100 percent passing the No. 16 sieve.

2. White Mortar Aggregates: Provide natural white sand or ground white stone for Portland cement lime mortars.

E. Water: Free from injurious amounts of oils, acids, alkalis, or organic matter, and clean, fresh and potable.

F. Waterproofing Admixture:

1. Proportion: In strict accordance with manufacturer's instructions.

2. Product and Manufacturer: Provide one of the following:

a. Omicron by Master Builders Co.

b. Hydroxide Powder by Sonneborn Building Products.

c. Or equal.

2.2 MORTAR MIXES

A. General:

1. Antifreeze Admixture or Agents: Not permitted.

2. Calcium chloride: Not permitted.

B. Fire Resistant Mortar:

1. Standard: UL Design Numbers 0901, 0902, 0903, 0904, 0905, 0906, 0907 and 0908.

2. Proportion: Use 1 part Portland cement, 3 parts clean sand, and 15 percent hydrated lime (by cement volume).

C. Mortar for All Unit Masonry: Comply with ASTM C 270, Table 2, except limit materials to those specified herein, do not substitute ASTM C 91 masonry cement for ASTM C 150 Portland cement without an approved Shop Drawing review by Engineer, and limit cement to lime ratio by volume as follows:

1. Type M:

   a. Portland Cement Lime Mortar; provide the following proportions by volume:

      1) Portland Cement: 1 part.

      2) Hydrated Lime or Lime Putty: 1/4 part.

      3) Aggregate Ratio (measured in damp loose condition): not less than 2-1/4 and not more than 3 times the sum of the volumes of cement and lime.

      4) Maximum Air Content, ASTM C 270: 12 percent.

   b. Portland Cement Masonry Mortar; provide the following proportions by volume:

      1) Portland Cement: 1 part.

      2) Masonry Cement: 1 part.

      3) Aggregate Ratio (measured in damp loose condition): Not less than 2-1/4 and not more than 3 times to sum of the volumes of cement and lime.

      4) Maximum air content, ASTM C 270: 18 percent.

   c. Property Specification:

      1) Average Compressive Strength, ASTM C 270: 2,500 pounds per square inch.

      2) Minimum Water Retention, ASTM C 270: 75 percent.

2. Type S:

   a. Portland Cement Lime Mortar; provide the following proportions by volume:

      1) Portland Cement: 1 part.

      2) Hydrated Lime or Lime Putty: Over 1/4 to 1/2 maximum.

3) Aggregate Ratio (measured in damp loose condition): Not less than 2-1/4 and not more than 3 times the sum of the volumes of cement and lime.

4) Maximum air content, ASTM C 270: 12 percent.

b. Portland Cement Masonry Mortar; provide the following proportions by volume:

1) Portland Cement: 1/2 part.

2) Masonry Cement: 1 part.

3) Aggregate Ratio (measured in a damp loose condition): Not less than 2-1/4 and not more than 3 times the sum of the volumes of cement and lime.

4) Maximum air content, ASTM C 270: 18 percent.

c. Property Specification:

1) Average Compressive Strength, ASTM C 270: 1,800 pounds per square inch.

2) Minimum Water Retention, ASTM C 270: 75 percent.

PART 3 - EXECUTION

3.1 PREPARATION

A. Measurement of Materials:

1. Mortar Cement and Hydrated Lime: Batched by the bag.

2. Sand: Batched by volume in suitably calibrated containers, provided proper allowance is made for bulking and consolidation and for weight per cubic foot, of contained moisture.

3. Proportion of volumetric Mixtures: One 94-pound sack of Portland cement or one 50-pound sack of hydrated lime constitute nominal one cubic foot.

4. Shovel measurement: Not permitted.

B. Mortar Mixing:

1. Type of Mixer: Machine mix in approved mixer in which the quantity of water is accurately and uniformly controlled.

2. While mixer is in operation add approximately 3/4 the required water, 1/2 the sand, all the cement, then add remainder of sand.

3. Allow batch to mix briefly then add water in small quantities until satisfactory workability is obtained.

4. Mix for not less than 5 minutes after all materials have been added.

5. Hydrated Lime for Mortar Requiring Lime Content: Use dry-mix method. Turn over together the materials for each batch until the even color of the mixed, dry materials indicates that cementitious material has been thoroughly distributed throughout the mass, then add water to obtain required plasticity.

6. Lime putty if approved for use shall be prepared in accordance with ASTM C 5.

7. Waterproofing Admixture: Add to mortar mix for all exterior masonry in strict accordance with manufacturer's instructions.

8. The mixer drum shall be completely emptied before recharging the next batch.

9. Limit batch size to avoid retempering. Retempering of mortar shall not be permitted.

10. Mixers, wheelbarrows, mortar boards, etc., shall be kept clean.

3.2 INSTALLATION

A. Shall be installed as per NCDPW and NYSDOT standards.

3.3 FIELD QUALITY CONTROL

A. The Contractor shall have an independent laboratory take samples and conduct tests to evaluate air entrainment, water retention and the compliance of materials with the specifications and to determine the compressive strength of mortar and grout. Tests shall be conducted in accordance with ASTM C 91. Tests results shall be made available prior to the commencement of work.

B. After the initial test, the Engineer will require a maximum of five additional tests to be conducted at his discretion.

C. Installed mortar that does not meet the requirements of the specification shall be immediately removed and rebuilt.

+ + END OF SECTION + +

SECTION 04201

UNIT MASONRY CONSTRUCTION

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Contractor shall furnish all labor, materials, equipment and incidentals required to provide unit masonry construction as shown and specified. The Work also includes:

   a. Providing openings in masonry to accommodate the Work under this and other Sections and building into the masonry all items such as sleeves, anchor bolts, inserts and all other items to be embedded in masonry for which placement is not specifically provided under other Sections. Provide lintels in all openings or where directed by the Engineer.

   b. Providing openings in masonry to accommodate the work under other contracts and assisting other contractors in building into the masonry all items such as sleeves, anchor bolts, inserts and all other items required to be embedded in masonry under other contracts.

   c. Cutting and removing existing masonry for new openings and new abutting walls.

B. Coordination:

1. Review installation procedures under other Sections and coordinate the installation of items that must be installed with the masonry.

2. Notify other contractors in advance of the construction of the masonry to provide the other contractors with sufficient time for the installation of items included in their contracts that must be installed with the masonry.

C. Related Work Specified Elsewhere:

1. Section 03300, Cast-in-Place Concrete.

2. Section 04100, Mortar.

1.2 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies: Wherever a fire resistance classification is shown or scheduled for unit masonry construction (4-hour, 3-hour, and similar designations), comply with applicable requirements for materials and installation established by UL and other governing authorities.

B. Codes and Reference Standards: Comply with the applicable requirements of the New York State Uniform Fire Prevention and Building Code for the types of masonry construction shown and the following standards: ANSI A41.1 R70 Code Requirements for Masonry. ACI 531.1 Specifications for Concrete Masonry Construction Brick Institute of America, "Technical Notes on Brick and Tile Construction." Brick Institute of America, Technical Bulletin 1A, "Construction and Protection Recommendations for Cold Weather Masonry Construction." Brick Institute of America, Technical Notes on "Cleaning Clay Products Masonry." National Concrete Masonry Association, "Guide Specifications" and "Technical Bulletins." UL, Design Numbers U901 through U908.

C. Construction Tolerances: In accordance with ACI 531.1 and the following:

1. Variation from Plumb: For lines and surfaces of columns, walls and arises, do not exceed 1/4 inch in 10 feet, or 3/8 inch in a story height or 20 feet maximum, nor 1/2 inch in 40 feet or more. Except for external corners, expansion joints and other conspicuous lines, do not exceed 1/4 inch in any story or 20 feet maximum, nor 1/2 inch in 40 feet or more.

2. Variation from Level: For lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4 inch in any bay or 20 feet maximum, nor 3/4 inch in 40 feet or more.

3. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4 inch nor plus 1/4 inch.

D. Presubmittal Meeting: Before erecting the job mock-up, the Contractor and his installer shall meet on-site with the Engineer to discuss approved products and workmanship.

E. Job Mock-up:

1. Prior to installation of unit masonry work, but after Engineer's approval of samples, erect job mock-up using materials, pattern

bond and joint tooling shown or specified for final Work. Provide special features as directed including finished opening 1 foot-4 inches by 1 foot-4 inches, finished end, and expansion joint. Build mock-up at the site in location approved by the Engineer. The mockup shall be of full thickness and approximately 6 feet long by 4 feet high unless otherwise shown. Indicate the proposed range of color, texture and workmanship to be expected in the completed work. Obtain Engineer's acceptance of visual qualities of the mock-up before start of masonry Work. Retain and protect mock-up during construction as a standard for judging completed masonry work. Do not alter, move or destroy mock-up until given written permission by Engineer. Masonry construction that does not meet the standards approved on the sample panel shall be removed and rebuilt as required by Engineer.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials:

1. Deliver all materials to the site in the manufacturer's original unbroken, undamaged and unopened packaging with labels bearing the name of the manufacturer and the product. Masonry units and brick shall be factory packaged and strapped, delivered to the site and stored on skids.

B. Storage of Materials:

1. Protect masonry materials during storage and construction with a properly erected shelter from wetting by rain, snow or ground water and from soilage or intermixture with earth or other materials.

2. Store and handle all materials to prevent inclusion of water or foreign matter and to prevent damage of any nature. Packaged units kept in original unopened packages until time for use.

3. Distribute materials on floor slabs to prevent overloading. Designated live loads shown for floor shall not be exceeded.

C. Handling Materials:

1. Handle materials in a manner that minimizes chips, cracks, voids, discolorations or other defects which might be visible or cause staining in finished work.

1.4 JOB CONDITIONS

A. Environmental Requirements: Do not place any masonry when air temperature is 40°F and falling. Masonry may be placed when air temperature is 32°F and rising. In either case, it may not be placed if temperature is expected to drop below 32°F during next 72 hours unless adequate protection is provided as specified in 1.4.B.4.b. below.

B. Protection:

1. Protect partially completed masonry against weather, when Work is not in progress, by covering top of walls with strong, waterproof, nonstaining membrane. Extend membrane at least 2 feet down both sides of walls and hold securely in place.

2. Do not apply uniform floor or roof loading for at least 3 days after completing masonry columns or walls.

3. Do not apply concentrated loads for at least 7 days after completing masonry columns or walls.

4. Cold Weather Protection.

   a. When surrounding air temperature is 48°F to 40°F protect masonry construction from rain or snow for a minimum of 48 hours by covering with nonstaining weathertight membrane.

   b. When surrounding air temperature is 40°F and below maintain masonry construction temperature above 40°F for a minimum of 48 hours by enclosure and supplementary heat, electric heating blankets, infrared lamps, or other methods acceptable as directed by the Engineer.

5. Hot Weather Protection: Protect masonry construction, by methods acceptable to Engineer, from direct exposure to wind and sun when the surrounding air temperature is 99°F in the shade with relative humidity less than 50 percent.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Refer to the following Sections for required masonry materials:

1. Section 03300, Cast-In-Place Concrete.

2. Section 04100, Mortar.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine areas and conditions under which unit masonry Work is to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Engineer.

3.2 PREPARATION

A. Clean dirt, debris, oil, grease and other materials which would affect the bond of mortar from all surfaces to receive work under this Section.

B. Wetting of Masonry Units:

1. Brick: Wet brick having ASTM C 67 absorption rates greater than 0.25 ounce per square inch per minute.

a. Determine absorption by placing 20 drops of water inside a circle the size of a quarter on typical units. If water is absorbed within 1 1/2 minutes, wet brick before laying.

2. Use wetting methods which ensure that each masonry unit is nearly saturated but surface dry when laid.

3. Except for absorbent units specified to be wetted, lay masonry units dry. Do not wet concrete masonry units.

3.3 INSTALLATION, GENERAL

A. Thickness: Build walls, floors and other masonry construction to the full thickness shown. Build single-wythe walls to the actual thickness of the masonry units, using units of nominal thickness shown or specified.

B. Build chases and recesses as shown or required by others. Refer to paragraph 1.1.B. herein for the requirements of coordination with others. Provide not less than 8 inches of masonry between chase or recess and jamb of openings and between adjacent chases and recesses.

C. Leave openings for equipment, piping, ducts, and other items to be installed subsequent to starting of masonry Work. After installation of said items, complete masonry Work to match Work immediately adjacent to openings.

D. Cut masonry units using motor driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide pattern shown and to fit adjoining Work neatly. Use full size units without cutting wherever possible.

3.4 LAYING MASONRY WALLS

A. General:

1. Mortar Types: Unless otherwise indicated, use mortar as specified in Section 04100, Mortar, and as follows:

   a. For all Work, use Type S mortar.

   b. Do not use mortar which has begun to set or if more than 1/2 hour has elapsed since initial mixing. Retemper mortar during the 1/2-hour period only as required to restore workability.

   c. Do not use mortar which has begun to set or if more than 1/2 hour has elapsed since initial mixing. Retemper mortar during the 1/2-hour period only as required to restore workability.

2. Layout walls in advance for accurate spacing of surface pattern bond with uniform joint widths and to properly locate openings, expansion joints, returns and offsets. Avoid the use of less than half size units at corners, jambs and wherever possible at other locations.

3. Lay up walls plumb and true to comply with specified tolerances, with courses level, accurately spaced and coordinated with other Work.

4. Pattern Bond: Lay exposed masonry in running bond and as shown to match adjacent existing masonry. Lay concealed masonry with all units in a wythe bonded by lapping not less than 2 inches. Bond and interlock each course of each wythe at corners. Do not use units with less than 4-inch horizontal face dimensions at corners or jambs.

B. Mortar Bedding and Jointing:

1. Lay solid masonry units with completely filled bed and head joint; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush in cross joints and do not furrow bed joints.

Use trowel edge for flat bed joints. Fill all parapet blocks solid with grout.

2. Bed and lay brick and concrete masonry units at the proper angle with fully slushed joints.

3. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course of piers columns and pilasters and where adjacent to cells or cavities to be reinforced or filled with concrete or grout.

    a. Maintain 3/8-inch joints, except for minor variations required to maintain half bond.

4. Cut joints flush for masonry walls that are to be concealed or to be covered by other materials. unless otherwise shown.

5. Tool exposed joints slightly concave. Rake out mortar in preparation for application of caulking or sealants where required.

6. Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not hammer or otherwise force brick at corners, whether at jambs or changing the direction of a wall in order to force plumb the corner or jamb. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

C. Collar Joints:

1. Fill the vertical space between wythes solidly with mortar by parging the in-place wythe and shoving units into the parging, for the following masonry work:

    a. All walls, except cavity walls, and interior walls and partitions.

D. Stopping and Resuming Work: Rack back 1/2-brick length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly, if required, and remove loose masonry units and mortar prior to laying new masonry.

E. Built-in Work:

1. As the Work progresses, build in items shown, specified or required by others. Refer to paragraph 1.1.B. herein for the requirements of coordination with others. Fill cores in one block width solidly with masonry around built-in items.

a. Fill space between hollow metal frames and masonry solidly with mortar.

b. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of cavity fill mesh in the joint below and rod mortar or grout into core.

3.5 CUTTING AND REMOVING EXISTING MASONRY

A. Wherever existing masonry is shown to be cut and removed use methods that will produce sharp, true edges to accept new abutting work.

3.6 REPAIR, POINTING AND CLEANING

A. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point up all joints at corners, openings and adjacent work to provide a neat, uniform appearance, properly prepared for application of caulking or sealant compounds.

C. Cleaning Exposed, Unglazed Masonry Surfaces:

1. Wipe off excess mortar as the Work progresses. Dry brush at the end of each day's work.

2. Final Cleaning: After mortar is thoroughly set and cured, clean sample wall area of approximately 20 square feet as described below. Obtain Engineer's acceptance of sample cleaning before proceeding to clean remainder of masonry work.

a. Dry clean to remove large particles of mortar using wood paddles and scrappers. Use chisel or wire brush if required.

b. Presoak wall by saturating with water and flush off loose mortar and dirt.

c. Scrub down wall with stiff fiber brush and a solution of 1/2 cup of trisodium phosphate and 1/2 cup of household detergent dissolved in 1 gallon of water.

d. Rinse walls, using clean, pressurized water, to neutralize cleaning solution and remove loose material.

e. Acid cleaning of masonry will not be permitted.

E. Protection:

1. Protect the masonry Work from deterioration, discoloration or damage during subsequent construction operations.

2. When work on any brick or block masonry is finished for the day or discontinued on account of rain or snow, or where top of new work is likely to be damaged by storms, sloping planks covered with tarred felt shall be placed over the top of walls.

+ + END OF SECTION + +

DIVISION 5 – METALS

SECTION 05550

BOLLARDS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included: Under this section, the Contractor shall provide all labor, equipment and material to furnish and install painted steel bollards as shown on the drawings, specified herein and approved by the Engineer.

B. Related Work Described Elsewhere:

1. Spec. 00002, Concrete.

1.2 SUBMITTALS

A. General: Submit shop drawings in accordance with Section 01330, Submittal Procedures and the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Bollards shall be 8-inch diameter unless otherwise indicated on the Drawings, Schedule 80, steel pipe. Bollards shall be filled with concrete.

B. Bollards shall be painted after installation using paint materials manufactured by Con-Lux Coatings, Inc., Edison, NJ or approved equal. Primer shall be Con-Lux Rust Arrestor 43 White or equal. Finish coat shall be Con-Lux Steel-Guard 8500 series or equal. Finish paint color shall be chosen by the Owner.

C. Concrete shall be as specified in Spec. 00002 – Concrete.

PART 3 - EXECUTION

3.3 INSTALLATION

A. Bollards shall be installed where shown on the Drawings and as directed by the Engineer. Length shall be as shown on the Drawings.

B. Painting:

1. Paint shall not be applied when the surrounding temperature is less than 50°F, when the relative humidity exceeds 85 percent or when the surface to be painted is wet or damp, unless more stringent requirements are called for by the paint manufacturer.

2. Paint shall be applied per manufacturer's instructions. Paint shall be applied by brushing or spraying or a combination of these methods, unless otherwise specified.

3. All paint materials shall be delivered in original, unopened containers bearing the manufacturer's label and directions for use of the materials.

4. Paint on bollards shall be applied as follows:

   a. Prime Coat - One Coat

   b. Finish Coat - Two Coats

   Each coat of paint shall be applied as a continuous film of uniform thickness, free of pores, to the maximum extent practicable. Any thin spots or areas missed in the application shall be repainted and permitted to dry before the next coat is applied.

+ + END OF SECTION + +

SECTION 05503

ANCHOR BOLTS, EXPANSION ANCHORS AND CONCRETE INSERTS

PART 1 - GENERAL

1.1 SUMMARY

A. Scope: Contractor shall furnish all labor, materials, equipment and incidentals required to provide anchor bolts, expansion anchors and concrete inserts as shown and specified.

B. This section includes all bolts, anchors and inserts required for the Work but not specified under other Sections.

C The types of work using the bolts, anchors and inserts include, but are not limited to the following:

1. Hangers and brackets.

2. Structural steel.

3. Metal Fabrications.

1.2 QUALITY ASSURANCE

A. Reference Standards: Comply with the applicable provisions and recommendations of the following, except as otherwise shown and specified.

1. ASTM A 307, Carbon Steel Externally and Internally Threaded Standard Fasteners.

2. ASTM A 320, Alloy-Steel Bolting Materials for Low-Temperature Service.

B. Expansion anchors and inserts shall be UL or FM approved.

1.3 SUBMITTALS

A. Samples: Submit for approval representative samples of bolts, anchors and inserts as may be requested by the Engineer. His review will be for type and finish only. Compliance with all other requirements is exclusive responsibility of Contractor.

B. Shop Drawings: Submit for approval the following:

1. Setting drawings and templates for location and installation of anchorage devices.

2. Copies of manufacturer's specifications, load tables, dimension diagrams and installation instructions for the devices.

PART 2 - PRODUCTS

2.1 DESIGN CRITERIA

A. When the size, length or load carrying capacity of an anchor bolt, expansion anchor, or concrete insert is not shown on the Drawings, provide the size, length and capacity required to carry the design load times a minimum safety factor of four.

B. Determine design loads as follows:

1. For equipment anchors, use the design load recommended by the manufacturer and approved by the Engineer.

2. For pipe hangers and supports, use one half the total weight of pipe, fittings, valves, accessories and water contained in pipe, between the hanger or support in question and adjacent hangers and supports on both sides.

3. Allowances for vibration are included in the safety factor specified above.

4. Anchors shall develop ultimate shear and pull-out loads of not less than the following values in concrete:

Bolt Diameter (Inches)	Minimum Shear (Pounds)	Minimum Pull-Out Load (Pounds)
1/2	4,500	6,300
5/8	6,900	7,700
3/4	10,500	9,900

2.2 MATERIALS

A. Anchor Bolts:

1. Provide stainless steel anchor bolts complying with ASTM A320.

B. Expansion Anchors:

1. Provide stainless steel anchors. Anchors shall be of the size required for the concrete strength specified. Provide stud type (male thread) or flush type (female thread), as required.

2. Product and Manufacturer: Provide anchors by one of the following:

a. Hilti, Incorporated.

b. Molly Division of USM Corporation.

c.Or equal.

C. Adhesive Anchors:

1. Provide stainless steel HVA adhesive anchors as shown on Drawings.

2. Product and Manufacturer:

a. Hilti, Incorporated

b. Or equal.

D. Concrete Inserts:

1. Provide stainless steel inserts. Provide those recommended by the manufacturer for the required loading.

2. Manufacturer: Provide one of the following inserts:

a. ITT Grinnell.

b. Hohmann and Barnard, Inc.

c. Or equal.

E. Powder actuated fasteners and other types of bolts and fasteners not specified herein shall not be used unless approved by Engineer.

F. Connection Bolts, Nuts and Washers: Materials shall be as specified in other Sections of the Specifications, or shown on the Drawings. Where materials are not specified or shown on the Drawings, they shall be of Type 304 stainless steel.

G. Toggle Bolts:

1. Provide stainless steel spring wing toggle bolts of the size required for secure anchorage of individual items, but not less than 1/4" diameter, of length required.

2. Product and Manufacturer: Provide one of the following:

a. Spring Wing Toggle Bolts by Ramset Fastening Systems.

b. No. 3000 Series, Snapin Toggle Bolts by Star.

c. Or equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Drilling equipment used and installation of expansion anchors shall be in accordance with manufacturer's instructions.

B. Assure that embedded items are protected from damage and are not filled in with concrete.

C. Expansion anchors may be used for hanging or supporting pipe 2 inches diameter and smaller. Expansion anchors shall not be used for larger pipe unless otherwise shown or approved by the Engineer.

D. Use concrete inserts for pipe hangers and supports for the pipe size and loading recommended by the insert manufacturer.

E. Unless recommended in bolt manufacture's literature or approved by the Engineer, conform to following for expansion anchors:

1. Minimum embedment depth in concrete: 5 diameters.

2. Minimum anchor spacing on centers: 10 diameters.

3. Minimum distance to edge of concrete: 5 diameters.

4. Increase dimensions above if required to develop the required anchor load capacity.

F. Chromate Coating: All galvanized elements that will be embedded in or will come in contact with concrete mortar will require a chromate coating.

This coating should be accomplished by either dipping the galvanized elements in a solution of sodium or potassium dichromate acidified with sulfuric acid or spraying this solution on the galvanized surfaces.

G. Touch Up Painting: Touch-up galvanized surfaces with galvanizing repair paint applied in accordance with the manufacturer's instructions.

3.2 CLEANING

A. After embedding concrete is placed, remove protection and clean bolts and inserts.

+ + END OF SECTION + +

SECTION 05540

CASTINGS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. Contractor shall furnish all labor, materials, equipment and incidentals required to provide all castings as shown and specified.

2. Castings include metal items which are not a part of the miscellaneous metal fabrications or metal systems in other sections of these Specifications.

B. Castings shall include, but not be limited to the following:

1. Catch basin, frames, and grates.

C. Related Work Specified Elsewhere:

1. Section 02429, Drainage Structures.

2. Section 03200, Reinforcing Steel.

3. Section 03300, Cast-in-Place Concrete.

4. Spec. 00002, Concrete.

1.2 QUALITY ASSURANCE

A. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

1. ASTM A48, Gray Iron Castings.

2. ASTM A536, Ductile Iron Castings.

B. Shop Assembly: Preassemble items in the shop to the greatest extent possible, so as to minimize field splicing and assembly of units at the site. Disassemble units only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

1.3 SUBMITTALS

A. Shop Drawings: Submit for approval the following:

1. Shop Drawings for the fabrication and erection of all casting assemblies. Include plane, elevations, and details of sections and connections. Show anchorage and accessory items.

   a. Include setting drawings for location and installation of castings and anchorage devices.

2. Copies of manufacturer's specifications, load tables, dimension diagrams, anchor details and installation instructions.

3. Provide lettering to be cast into the top of the casting such as "Drain," "Sewer," etc.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the site to ensure uninterrupted progress of the Work.

1. Deliver anchor bolts and anchorage devices, which are to be embedded in cast-in-place concrete in ample time to not delay that Work.

B. Store materials to permit easy access for inspection and identification. Keep materials off the ground, using pallets, platforms or other supports.

PART 2 - PRODUCTS

2.1 DETAILS OF CONSTRUCTION

A. General:

1. Design all frames, covers and grates to prevent rocking and rattling under traffic.

2. All castings shall be free from pouring faults, cracks, blow holes, or other defects affecting their strength and value for the service intended.

3. Castings shall be manufactured using tough, close grained material without the admixture of cinder iron or metal of inferior quality. Angles shall be boldly filleted and corners kept sharp and perfect.

4. No plugging of defective castings will be permitted.

5. Castings shall be fabricated true to pattern so that component parts fit together. The dimensions of all castings shall have a tolerance of plus or minus 1/16 inch and an additional tolerance of plus or minus 1/16 inch per foot of dimension. The weight deviation tolerance is 5%. Notwithstanding the above tolerances, all manhole frames rings and covers of the same nominal size shall assemble interchangeably.

B. Dry Well, Frames and Grates:

1. Material: Cast iron conforming to ASTM A48 Class 30.

2. Size: As shown on the Drawings.

3. Construction: Heavy duty with machined bearing surfaces suitable for H-20 wheel loading.

4. Refer to Section 02429, Drainage Structures, for pre-cast concrete structures.

C. Trench Drain, Frame and Grate:

1. Material:

a. Frame – Modular channels shall be constructed of high density polyethylene (HDPE) having interlocking ends and radiused bottoms. Channel shall be provided with a 1% built-in slope. Channels shall be available with inverts ranging from 11.25 inches to 36.21 inches. Channels shall have clips attached to the frame to accommodate vertical re-bar for positioning and anchoring purposes. Trench drain shall be equipped with end outlet.

b. Grate – Grate shall be constructed of ductile iron suitable for H-20 wheel loading. Grate shall be provided with a heavy-duty steel frame to complement the channels and grate. Grate shall be equipped with mechanical lockdown devices.

2. Size: As shown on the Drawings.

3. Manufacturer: Trench drain shall be Model No. Z-874-21, as manufactured by Zurn Industries, Inc. (2640 South Work Street, Falconer, NY 14733; Phone No.: 716-665-1132) or approved equal.

4. Refer to Spec. 0002, Concrete, for concrete work associated with the trench drain, frame and grate.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Follow manufacturer's printed instructions and approved Shop Drawings.

B. Set castings accurately to required location, alignment and elevation, plumb, level, true and free of rock, measured from established lines and levels. Brace temporarily or anchor temporarily in formwork.

C. Protection from Dissimilar Materials: Painting, coat all surfaces of aluminum in contact with dissimilar materials such as concrete, masonry and steel or iron.

+ + END OF SECTION + +

DIVISION 9 – FINISHES

SECTION 09821

EPOXY RESIN COATING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope

1. Contractor shall furnish all labor, materials, equipment and incidentals required to provide two (2) coats of epoxy resin coatings to the concrete floor of the garage as shown on the Drawings. Each coat shall be a different color.

B. Related Work Specified Elsewhere:

1. Section 02140, Garage Decontamination.

1.2 QUALITY ASSURANCE

A. Manufacturer: Provide products manufactured by one of the following:

1. Sika Corporation, Lyndhurst, New Jersey

2. Or equal.

B. Manufacturers Qualifications: The manufacturer of the specified product shall have in existence, for a minimum of 5 years, a program of training, certifying, and technically supporting a nationally organized Approved Contractor Program with annual re-certification of its participants.

C. Applicator Qualifications:

1. Submit the name and experience record of the applicator. Include a list of utility or industrial installations coated, responsible officials, architects, or engineers concerned with the project and the approximate contract price.

2. Applicator shall be an Approved Contractor of the manufacturer of the specified product.

3. Applicators whose submissions indicate that they have not had the experience required to perform the Work will not be approved by the Department.

D. Source Quality Control: Obtain all materials from the same manufacturer unless otherwise approved. Obtain materials only from manufacturers who will:

1. Provide the services of a qualified manufacturer's representative at the project site at the commencement of Work to advise on materials, installation and finishing techniques.

2. Certify long term compatibility of all coatings with all substrates, both new and existing.

E. Manufacturer's Guarantee: The Approved Contractor of the manufacturer of the specified product and manufacturer shall provide the Department with a joint and separate guarantee on the application and product covered in this specification.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification and batch numbers.

B. Store and condition the specified product as recommended by the manufacturer.

1.4 JOB CONDITIONS

A. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to the mixing and handling of the moisture-insensitive, epoxy resin coating.

1.5 SUBMITTALS

A. Shop Drawings: Submit for approval manufacturer's specifications and installation instructions for each component of each coat of the epoxy resin material. The color of each coat shall be specified in the submitted shop drawings. Colors shall be neutral type floor color (e.g., white, gray).

B. Test Reports: Submit for approval certified laboratory test reports for required performance tests.

C. Certification: Certify that all coatings are compatible with substrate as specified.

PART 2 - PRODUCT

2.1 ACCEPTABLE MANUFACTURERS

A. Sika Corporation, Lyndhurst, New Jersey.

B. Approved equal.

2.2 PERFORMANCE CRITERIA

A. Properties of the cured epoxy resin coating:

1. Total Water Absorption (ASTM D-570) at 7 days: 1.0 percent max. (2–hour boil)

2. Elongation (ASTM D-522) at 14 days: 5% min.

3. Abrasion Resistance (ASTM D-968) at 14 days: 50 liters/mil.

4. Adhesion Classification (ASTM D-3359) at 14 days: 4A min.

5. Bond Strength (ASTM C-882) Hardened Concrete to Hardened Concrete

   a. 2 day (dry cure): 2,000 psi min.

   b. 14 day (moist cure): 1,500 psi min.

6. Tensile Properties (ASTM D-638) at 14 days: Tensile Strength 6,400 psi/Elongation at Break 2.7 percent.

7. Abrasion (Taber Abrader) at 7 days

   a. Weight loss: 0.65 gm max. (H-22 wheel; 1,000 gm weight; 1,000 cycles)

2.3 MATERIALS

A. Epoxy resin coating shall be Sikagard 62, as manufactured by Sika Corporation, or approved equal, and shall conform to the following requirements:

1. Component A shall be a modified epoxy resin of the epichlorohydrin bisphenol A type containing suitable viscosity control agents. It shall not contain butyl glycidyl ether.

2. Component B shall be primarily a reaction product of a selected amine blend with an epoxy resin of the epichlorohydrin bisphenol A type containing suitable viscosity control agents, pigments, and accelerators.

3. The material shall not contain asbestos.

4. Granules for slip-resistance shall be supplied by the manufacturer and shall be able to be mixed into the coating and shall not settle during application.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Substrate shall be concrete floor of garage, as shown on the Drawings. All substrates to be coated must be clean, sound, and surface dry. Substrates must be free of standing water, frost, dust, laitance, grease, oil curing compounds, waxes, impregnations, foreign particles, other coatings, and disintefrated materials. All projections, rough spots, etc., shall be dressed off.

3.2 APPLICATION

A. Mixing of the epoxy resin coating shall be as per manufacturer's specification.

B. Placement Procedure: The epoxy resin coating shall be applied only to approved, prepared surfaces with high-quality brushes, rollers or spray equipment. Coating shall be applied at ambient and substrate temperatures between 50 and 90°F. Application thickness shall be between 4-7 mils per coat (2 coats required). Subsequent coats shall be applied within 48 hours of the previous coat. Care is to be taken to avoid sags or runs. If they occur they are to be sanded out and the area re-coated. A slip-resistant aggregate shall be incorporated into the mixed epoxy resin coating at 0.5 pound per gallon or as otherwise directed by the Engineer.

C. When applying the coating, never stop the application until the entire surface has been coated, if possible. If impossible always discontinue at an edge, corner or joint. Never let a previously coated film dry, always coat into a wet film. Always apply the coating at a 45 degree angle to an edge, corner, or joint.

D. Adhere to all limitations and cautions for the epoxy resin coating in the manufacturer's printed literature.

3.3 CLEANING

A. The uncured epoxy resin coating can be cleaned from tools with an approved solvent. The cured epoxy resin coating can only be removed mechanically.

B. Leave finished work and work area in a neat, clean condition without evidence of spill overs onto adjacent areas.

+ + END OF SECTION + +

DIVISION 15 – MECHANICAL

SECTION 15051

BURIED PIPING MATERIALS AND INSTALLATION

PART 1 - GENERAL

1.1 SUMMARY

A. Scope:

1. Contractor shall furnish all labor, materials, equipment and incidentals as shown on the Drawings, specified and required to furnish, install and test all buried piping, fittings, specials and appurtenances. The Work includes, but is not limited to, the following:

   a. All types and sizes of buried piping, except as specified under other Sections. These include, but are not limited to: thermoplastic and ductile iron.

   b. Supports, restraints, and thrust blocks.

   c. Testing.

   d. Cleaning and disinfecting.

   e. Also included are installation of all jointing and gasketing materials, specials, couplings, flexible couplings, sleeves, tie rods, corrosion protection, and all other Work required to complete buried piping installation.

   f. All valves, specials, sleeves and wall pipes shown or specified shall be incorporated into the piping system as required and as specified herein.

   g. Unless otherwise shown or specified, buried piping installation includes all buried piping Work required, beginning at the outside face of structure or building foundation.

B. Coordination:

1. Review installation procedures under other Sections and coordinate with the Work that is related to this Section, including backfill, compaction and concrete.

C. Related Work Specified Elsewhere:

1. Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials.

2. Section 02200, Backfill and Compaction.

3. Section 03300, Cast-In-Place Concrete.

1.2 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies: Comply with applicable requirements of UL and other authorities having jurisdiction.

B. Source Quality Control: Obtain pipe and fittings for each type of pipe from one manufacturer.

C. Reference Standards: Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified:

1. ASTM D 2774, Underground Installation of Thermoplastic Pressure Piping.

2. AWWA C111 (ANSI A21.11), Rubber Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.

3. AWWA C600, Installation of Ductile-Iron Water Mains and Appurtenances.

4. AWWA M23, PVC Piping.

5. ANSI B31.2, Fuel Gas Piping.

6. NFPA 54, National Fuel Gas Code.

7. AWWA C104 (ANSI A21.4), Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

8. AWWA C110 (ANSI A21.10), Gray-Iron and, Ductile-iron Fittings, 3 in. through 48 in., for Water and Other Liquids.

9. AWWA C115 (ANSI A21.15), Flanged Ductile-Iron and Gray-Iron Pipe with Threaded Flanges.

10. AWWA C150 (ANSI A21.50), Thickness Design of Ductile-Iron Pipe.

11. AWWA C151 (ANSI A21.51), Ductile Iron Pipe, Centrifugally Cast, in Metal Molds or Sand-Lined Molds for Water or Other Liquids.

12. ANSI B18.2.1, Square and Hex Bolts and Screws.

13. ANSI B18.2.2, Square and Hex Nuts.

14. ASTM A 307, Carbon Steel Externally Threaded Standard Fasteners.

15. ASTM A 354, Quenched and Tempered Alloy Steel Bolts, Studs and Other Externally Threaded Fasteners.

1.3 SUBMITTALS

A. Shop Drawings: Submit for approval Shop Drawings showing the following:

1. Laying schedules and detailed drawings in plan and profile for all piping.

2. Full details of piping, valves, specials, joints, harnessing and connections to pipes and structures.

B. Tests: Submit description of proposed testing methods, procedures and apparatus. Submit copies of all test results.

C. Certificate: Submit certificate of compliance with referenced standards.

D. Record Drawings: Submit in accordance with the requirements of Section 01720, Project Record Documents.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Handle all pipe, fittings and accessories carefully with approved handling devices. Do not drop or roll pipe off delivery vehicle. Do not otherwise drop, roll or skid pipe. Materials cracked, gouged, chipped, dented or otherwise damaged will not be approved.

B. Store pipe and fittings on heavy wood blocking or platforms so they are not in contact with the ground.

C. Pipe, fittings and specials shall be unloaded and stored in areas designated on the drawings. Interiors shall be kept completely free from dirt and foreign matter.

D. No material furnished under this specification shall be shipped to the job site until all submittals have been approved.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Pipe bedding and backfill in accordance with Section 02200, Backfill and Compaction.

B. Pipe materials required are listed shown on the Drawings. Refer to applicable Sections for detailed materials Specifications.

C. Ductile Iron Pipe

1. General: All exterior buried ductile iron pipe shall be mechanical joint (M.J.) unless otherwise shown on the drawings, specified herein, or directed by the Engineer.

2. Ductile Iron M.J. Pipe:

a. Fabricate in accordance with requirements of AWWA C151:

1) Thickness: M.J. ductile iron pipe and fittings shall be minimum Class 54, unless otherwise specified.

3. Joints:

a. Mechanical Joints: Conform to AWWA C111:

1) Gaskets: Plain tip.

2) Bolts and Nuts: High strength, low alloy steel.

3) Glands: Restrained Ductile Iron Retainer Gland.

b. Push-On Joints: Conform to AWWA C111:

1) Gaskets: Molded rubber.

2) Stripes: Each plain end shall be painted with a circular stripe such that it provides a guide for visual check to determine when the joint is properly assembled.

c. Restrained Joints:

1) Restrained joints for mechanical joint piping shall be:

a) Locked mechanical joint style F-127-D by Clow Cast Iron Pipe and Foundry Division of the Clow Corporation.

b) Lok-Fast Joint by American Cast Iron Pipe Company.

c) Mechanical joint with retainer glands with alloy steel set screws.

d) Or equal.

2) Restrained joints for push-on joint piping shall be:

a) Clow Super-Lock Joint Pipe Style P-128 by Clow Cast Iron Pipe and Foundry Division of the Clow Corporation.

b) Lok-Ring Joint by American Cast Iron Pipe Company.

c) Or equal.

4. Fittings: Conform to AWWA C110:

a. Pressure Rating: 350 psi mechanical, 250 psi flanged.

b. Material: Ductile iron.

c. Gaskets: As specified above for joints.

d. Bolts and Nuts: As specified above for joints.

5. Coatings and Linings:

a. All ductile iron pipe and fittings, with the exception of sleeves shall be lined with a bituminous seal coated cement-mortar lining in accordance with AWWA C104. This lining shall be twice the standard thickness specified in AWWA C104.

b. Buried pipe and fittings shall be coated on the outside with a bituminous coating, approximately 1-mil thick. Exposed pipe shall be prime coated.

6. Couplings:

a. Sleeve Type, Flexible Couplings shall only be used with the approval of the Engineer:

1) Pressure and Service: Same as connected piping.

2) Materials: Steel.

3) Gaskets: Suitable for service intended.

4) Bolts and Nuts: Alloy steel, corrosion- resistant, prime coated. Buried couplings shall have Type 304 stainless steel bolts and nuts.

b. Product and Manufacturer: Provide couplings as manufactured by one of the following:

1) Dresser Industries.

2) Rockwell International Corp.

3) Or equal.

7. Flanged Adapters:

a. All flanged adapters, except as shown on the Drawings or directed by the Engineer, shall be as follows:

b. Pressure and Service: Same as connected piping.

c. Materials:

1) Cast iron or ductile iron for pipes up to 12-inch diameter.

2) Steel for pipes larger than 12-inch diameter.

d. Bolts and Nuts: Alloy steel, corrosion- resistant, prime coated.

e. Product and Manufacturer: Provide flanged adapters as manufactured by one of the following:

1) Dresser Industries.

2) Rockwell International Corporation.

3) Or equal.

D. Polyethylene Pipe and Fittings

1. Polyethylene pipe and fittings shall be circular ADS N-12 as manufactured by Advanced Drainage Systems, Inc. or approved equals. Pipe shall have a corrugated exterior and smooth interior. Joints shall be N-12 coupler. Bends shall be N-12 fabricated elbows.

2. Pipe shall conform to requirements of ASTM F405, AASHTO M252. Installation shall conform to ASTM D2321. Pipe and pipe fittings shall be made from virgin polyethylene compounds which conform to the requirements of cell class 324420 C as described in ASTM D3350.

E. General:

1. Pipe Marking:

a. Each piece of pipe or fitting shall be clearly marked with a designation which shall conform with designations shown on the Shop Drawings.

b. Class designation shall be cast or painted on each piece of pipe or fitting 4 inches in diameter and larger.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. All piping shall be sloped to avoid high spots and low spots and to facilitate drainage.

2. Proper and suitable tools and appliances for the safe, convenient handling and laying of pipe shall be used.

3. Install piping as shown on the Drawings, specified and as recommended by the manufacturer.

4. Request instructions from Engineer before proceeding if there is a conflict between the manufacturer's recommendations and the Drawings or Specifications.

5. Pipe, fittings and accessories that are cracked, damaged or in poor condition or with damaged linings will be rejected. At the time of laying, the pipe shall be examined carefully for defects, and should any pipe be discovered to be defective after being laid, it shall be removed and replaced with sound pipe by the contractor at his expense.

6. Minimum cover over buried piping shall be 4 feet unless otherwise shown or approved by Engineer.

7. Backfill and Compaction required is specified in Section 02200, Backfill and Compaction.

B. Bedding Pipe:

1. Bed pipe with materials as specified below and as shown on the Drawings.

   a. Trenches shall not be excavated below the pipe bottom. All loose and unsuitable material shall be removed from the trench bottom and backfilled with compacted select fill.

   b. Pipe embedment material shall be sand placed in accordance with the requirements of Section 02200, Backfill and Compaction, within the following limits:

      1) From the bottom of the pipe to 12 inches above the crown of the pipe for all pipe sizes.

   c. Pipe embedment shall be placed in maximum 6-inch layers and compacted for the full width of the trench. Recesses in the embedment shall be provided around each joint to allow space for making joints and inspection.

2. Carefully and thoroughly compact all pipe bedding and fill.

3. No piping shall be laid until Engineer approves the bedding condition.

4. No pipe shall be brought into position until the preceding length has been bedded and secured in its final position.

C. Laying Pipe:

1. Conform to manufacturer's instructions and to AWWA C600, and AWWA M23 where applicable.

2. Install unless otherwise approved by Engineer. Remove all pipe accurately to line and grade shown and relay pipes that are not laid correctly.

3. Slope piping uniformly between elevations given.

4. Ensure that water level in trench is at least 6 inches below bottom of pipe. Do not lay pipe in water. Maintain dry trench until jointing and backfilling are complete.

5. Start laying pipe at lowest point and proceed towards the higher elevations, unless otherwise approved by Engineer.

6. Excavate around joints in bedding and lay pipe so that only the barrel receives bearing pressure from the trench bottom.

7. Permissible deflections at joints shall not exceed 75 percent of the amount allowed by manufacturer and in no case exceed AWWA standards.

8. Prior to laying pipe, every precaution shall be taken to ensure that no foreign material enters the piping.

9. All pipe and fittings shall be carefully examined for cracks, damage or other defects while suspended above the trench, before installation. Defective materials shall be immediately removed from site.

10. Interior of all pipe and fittings shall be inspected and all dirt, gravel, sand, debris or other foreign material shall be completely removed from pipe interior before it is moved into the trench. Bell and spigot mating surfaces shall be thoroughly wire brushed and wiped clean and dry immediately before pipe is laid.

11. Every time that pipe laying is not actively in progress the open ends of pipe shall be closed by a watertight plug.

12. Field cutting pipe, where required, shall be made with a machine specially designed for cutting piping. Cuts shall be carefully done, without damage to pipe or lining, so as to leave a smooth end at right angles to the axis of pipe. Cut ends shall be tapered and sharp edges filed off smooth. Flame cutting will not be allowed.

13. Blocking under piping shall not be permitted unless specifically excepted by Engineer for special conditions. If permitted, conform to requirements of AWWA C600.

14. Repair protective coatings and linings in a satisfactory manner prior to backfilling. Refer to specific pipe specifications for coating systems required.

D. Jointing Pipe:

1. Clean completely all jointing surfaces and adjacent areas immediately before making joint.

2. Lubricate and adjust gaskets and "O"-rings as recommended by manufacturer.

3. After "O"-rings are compressed and before pipe is brought fully home, each gasket shall be carefully checked for proper position around full circumference of the joint.

4. Conform to AWWA C111 and to all applicable manufacturers recommendations pertaining to jointing pipe.

5. For mechanical joints the plain end shall be centered and pushed into the bell and the gasket shall be firmly pressed evenly into the bell. The gland shall be slid to the bell for bolting. All bolts with oiled threads shall be alternately torque tightened 180 degrees opposite to each other to seat the gasket evenly. The maximum torque shall be as follows:

Bolt Size (inches)	Applied Torque (ft-lbs)
5/8	50
3/4	80
1	90
1 1/4	150

All bolts and nuts shall be heavily coated with an approved bituminous or epoxy coating.

6. Solder Joints:

   a. Ream or file pipe to remove burrs.

   b. Clean and polish contact surfaces of joints.

   c. Apply flux to both male and female ends.

   d. Insert end of tube into fittings full depth of socket.

   e. Heat joint evenly.

   f. Apply continuous solder bead around entire circumference of joint.

7. Use hexagon head nuts and bolts on all flanged joints. Bolts shall neither project more than 1/4-inch from, nor fall short of the end of the nut.

8. Use ring gaskets unless otherwise specified or approved by Engineer. Maximum gasket thickness shall not exceed 1/8 inch. Gaskets shall be suitable for service intended in accordance with manufacturers ratings and instructions.

9. Clean and lubricate bolt threads and gasket faces for flanged joints.

10. All bolts and nuts for underground service on valves, mechanical joint fittings, pipe joint and other ferrous metal appurtenances shall be packed in an asphaltic material. After the joint has been made and the bolts drawn to the proper tension, the joint, including glands, flanges, bolt heads and nuts shall be packed to a minimum thickness of one inch over all surfaces with Talcote, or other equal asphaltic material. Alternatively coat all joint areas and fasteners with two heavy coats of coal tar epoxy.

E. Concrete Trust Blocks:

1. Provide concrete trust blocks as shown, required, or otherwise approved by Engineer.

F. Transitions from One Type of Pipe to Another:

1. Provide all necessary adapters, specials and connection pieces required when connecting different types and sizes of pipe or connecting pipe made by different manufacturers.

G. Closures:

1. Provide all closure pieces shown or required to complete the Work.

2. Locate closures in straight runs of pipe.

H. Backfilling:

1. Conform to applicable requirements of Section 02200, Backfill and Compaction.

2. Backfill by hand until pipe is covered by at least 1 foot of fill.

3.2 WORK AFFECTING EXISTING PIPING

A. Location of Existing Piping:

1. Locations of existing piping shown shall be considered approximate.

2. Contractor is responsible for determining exact location of existing piping to which he must make connections, or which he may disturb during earth moving operations, or which may be affected by his work in any way.

B. Work on Existing Pipelines:

1. Do not take pipelines out of service except where specified or approved by Engineer.

2. Cut or tap pipes as shown or required with machines specifically designed for this work.

3. Install temporary plugs to keep out all mud, dirt, water and debris.

4. Provide all necessary adapters, fittings, pipe and appurtenances required.

5. Refer to Section 02200, Backfill and Compaction for additional requirements.

6. The Contractor shall provide a temporary thrust restraint system for existing pipes wherever the installation of new pipes disturbs the existing pipe's thrust restraint. Upon completion of new pipe installation, the Contractor shall restore the existing pipe thrust restraint system to its condition at the onset of the job.

3.3 TESTING OF PIPING

A. General:

1. Test all piping as specified below except as otherwise authorized by Engineer.

2. Notify Engineer 48 hours in advance of testing

3. Provide all testing apparatus, including pumps, hoses, gages, and fittings.

4. Unless otherwise noted, pipelines shall hold the specified test pressure for a period of 2 hours.

5. Pipelines which fail to hold specified test pressure or which exceed the allowable leakage rate shall be repaired and retested.

6. Test pressures required are at the lowest elevation of the pipeline section being tested unless otherwise specified.

7. All gas piping shall be tested in accordance with NFPA 54.

8. Unless otherwise approved, conduct all tests in the presence of the Engineer.

9. All pipe shall be tested between valves.

B. Schedule of Pipeline Tests:

1. Piping shall be tested at 1.5 times the maximum working pressure or 10 psi, whichever is greater.

C. Pressure Test Procedure

1. Backfill and compaction shall be completed at least to the pipe centerline before testing, unless otherwise required or approved by Engineer. Backfill and compact around all blocking before testing and as required to assure restraint by harnessed joints.

2. Allow concrete for blocking to reach design strength before testing.

3. Fill section to be tested slowly with water and expel all air. Install corporation cocks, if necessary, to remove all air.

4. Test only one section of pipe at a time.

5. Maintain the test pressure for at least 2 hours.

6. Allowable Leakage Rates (in gallons per hour per 1,000 feet per inch diameter)except as otherwise noted:

a. Buried Ductile Iron and PVC - as specified herein and as specified in AWWA C.600 - Section 4 - Hydrostatic Testing.

Nominal Pipe Diameter (inch)	Allowable Leakage Rate Per 1000 ft of Pipeline (gph)
4	0.34
6	0.50
8	0.67
10	0.84
12	0.01

b. Exposed Ductile iron and PVC and pipe in tunnels: No leakage.

c. Copper, steel and Thermoplastic: No leakage.

d. Sodium hypochlorite and caustic Solution: No leakage.

7. All visible leaks shall be made tight regardless of the amount of leakage or results of the leakage tests. If the pipes tested do not meet

the leakage requirements of the leakage tests, they shall be repaired and retested as necessary until the leakage requirement is met.

8. All Work found defective shall be repaired or replaced at the expense of the Contractor.

D. Test Procedure for Gravity Sewer Piping:

1. Backfill and compaction shall be completed at least to the pipe centerline before testing, unless otherwise required or approved by the Engineer.

2. After pipe trenches have been satisfactorily backfilled to the required depth, piping shall be checked by the Engineer to determine if any displacement of pipe has occurred. A bright light shall be flashed between manholes. If the illuminated interior of the pipe shows displaced pipe, improper alignment or any other defects, the defect shall be corrected as determined by the Engineer. Upon satisfactory completion of the displacement test, the pipe shall be tested for leakage.

3. The Contractor shall test each section of gravity sewer pipe between manholes for watertightness individually. No continuous sections shall be tested simultaneously.

4. The Contractor shall plug the downstream end of the pipeline under test and all outlets discharging into the upstream manhole.

5. The upstream manhole and the section of pipeline under test shall be filled by the Contractor with water. The elevations to which the manholes shall be filled is a minimum of 2 feet above the crown of the pipe, or at least 2 feet above existing groundwater, whichever is higher.

6. The pipe shall remain filled for an initial 1 hour period to allow for stabilization. Following the stabilization period, water shall be added to the required elevation.

7. Leakage loss shall be measured over a period of 4 hours. After the stabilization period, the Engineer will take 3 readings of the water level in the manhole, and 4 hours later, take 3 more readings. An average of the readings will be used by the Engineer to calculate leakage.

8. If the measured rate of leakage is less than or equal to the allowable leakage rate, the section of pipeline tested is acceptable. If the test

fails, the section of pipe must be repaired or replaced at the expense of the Contractor, and retested by the same procedures. Regardless of the results of the leakage test, all visible leaks shall be repaired.

9. The maximum allowable leakage rate for any section of pipeline under testing shall not exceed 200 gallons per inch of internal diameter per mile of pipe per day.

10. At the conclusion of the test, clean all pipelines by flushing with water or other means, and remove any debris which may have entered the pipeline during construction.

3.4 CLEANING AND DISINFECTION

A. All piping shall be thoroughly cleaned and flushed prior to placing in service in a manner approved by Engineer.

B. Disinfection:

1. Disinfect all potable water piping wherever installed or relocated.

2. Completely clean interior of all piping and flush piping smaller than 12 inches prior to disinfection with water at a minimum velocity of 2 1/2 feet per second.

3. Conform to procedures described in AWWA C651 except that the tablet method will not be permitted unless otherwise approved by the Engineer.

4. Water for flushing, testing and chlorination shall be furnished by the Contractor.

5. Chlorine shall be supplied by Contractor.

6. Bacteriologic tests shall be performed by Contractor. A certified test laboratory report shall be submitted for approval by the Engineer.

7. Chlorine concentration in the water entering the piping shall be between 50 and 100 parts per million, such that a minimum residual concentration of 25 parts per million will be left after a 24-hour retention period. The operation shall be repeated as necessary to provide complete disinfection.

++ END OF SECTION ++

SECTION 15451

GROUNDWATER MONITORING WELLS

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall furnish all labor, materials, equipment, services, incidentals, etc., to install new monitoring wells as shown on the Drawings, as specified and as directed by the Department.

B. Contractor shall take all precautions necessary to protect existing groundwater monitoring wells (total of 7) during completion of the work specified herein, shown on the Drawings or as directed by the Department. At the discretion of the Department, the Contractor shall abandon and replace any groundwater monitoring well damaged during the project. Abandonment and replacement of groundwater monitoring wells shall be conducted in accordance with this specification and the Drawings, and as otherwise directed by the Department.

C. The Contractor shall retain the services of a well driller to abandon and install groundwater monitoring wells.

D. The Contractor shall be responsible for the correctness of the procedures used to conduct the Work. The Contractor shall provide the Engineer advance written notification of any changes in field procedures, describing and justifying such changes. No changes shall be made to the procedures, unless requested or authorized in writing by the Department.

E. The requirements for locating and protecting existing structures and utilities outlined in Section 02111, Excavation, Removal and Handling of Hazardous and Non-Hazardous Materials, shall also apply to this section.

F. MW-10R and MW-11R must be installed by the Contractor prior to initiating any remedial activities such that the Contractor can complete baseline groundwater sampling. Refer to Section 01652, Sampling Plan.

PART 2 - PRODUCTS

2.1 PVC PIPE

A. Well casing shall be 2-inch diameter Schedule 40 PVC conforming to ASTM D-1784 and ASTM D-1785 as manufactured by Atlantic Screen and

Manufacturing, Inc. or approved equal. The pipe shall be joined using internally threaded flush joints. Solvent weld pipe shall not be permitted.

B. Well screen shall be 2-inch diameter threaded flush joint wire wrapped PVC with 0.01-inch openings as manufactured by Atlantic Screen and Manufacturing, Inc. or approved equal. The pipe shall be joined using internally threaded flush joints. The bottom of the screen shall be fitted with an internally threaded, flush joint PVC plug fabricated from solid stock. Solvent weld pipe shall not be acceptable.

2.2 SAND PACK

A. Screen sand pack shall be a No. 1 well gravel pack, 100 percent passing the No. 12 Sieve and less than 2 percent passing the No. 25 sieve, as supplied by the Morie Company, Inc. or approved equal. The No. 1 well gravel pack shall be clean, washed and graded silica sand supplied in sealed bags.

B. The finer sand placed between the screen sand pack and the bentonite shall be a No. 00 sand pack material, 100 percent passing the No. 30 Sieve and less than 2 percent passing the No. 200 sieve, as supplied by the Morie Company, Inc. or approved equal. The No. 00 sand pack shall be clean, washed and graded silica sand supplied in sealed bags.

2.3 BENTONITE PELLETS

A. The bentonite shall be ½-inch diameter with a dry bulk density of 82 pounds per cubic foot, and containing a minimum of 90 percent sodium montmorillonite. The pellets shall be capable of swelling to 10 to 15 times their dry volume when hydrated with potable water. The bentonite pellets shall be Volclay tablets as manufactured by the American Colloid Company or approved equal.

2.4 CEMENT BENTONITE GROUT MIX

A. The bentonite shall be of the PureGold type as manufactured by the American Colloid Company or approved equal.

B. The cement shall be Type 1 Portland Cement as manufactured by the Lehigh Portland Cement Company or approved equal.

2.5 PROTECTIVE CASING

A. The protective casing shall be a surface flush concrete pad, 2-feet by 2-feet and 1-foot thick, with a 12-inch diameter lockable steel manhole cover and frame cast in the concrete pad as shown on the Drawings, as specified and as directed by the Department.

PART 3 – EXECUTION

3.1 ABANDONMENT OF EXISTING GROUNDWATER MONITORING WELLS

A. Groundwater monitoring wells damaged during completion of the Work shall be abandoned in accordance with the New York State Department of Environmental Conservation document entitled, "Groundwater Monitoring Well Decommissioning Procedures," dated April 2003.

B. Specifically, well abandonment procedures shall be as follows:

1. Contractor shall measure the total depth of the well to ensure the well depth is consistent with the recorded construction depth.

2. Contractor shall remove the steel manhole or steel "stickup" protective casing with an effort being made to ensure that the riser does not splinter and/or become structurally unstable for pulling.

3. The bottom of the casing shall be punctured and the casing freed from the hole using suitable equipment (i.e., drill rig cable system).

4. The well shall be tremie-grouted with a cement-bentonite grout while removing the casing. The grout shall be completed to a depth of approximately 5 feet below grade.

5. A bentonite seal shall be placed on top of the grout.

6. The remaining riser shall be sealed with a Portland cement plug to the ground surface.

C. In the event that the casing or well screen is severed during casing pulling, or if borehole collapse occurs, the remaining materials will be removed by overdrilling using the conventional auguring method described below.

1. Contractor shall measure the total depth of the well to ensure the well depth is consistent with the recorded construction depth.

2. Contractor shall remove the steel manhole or steel "stickup" protective casing with an effort being made to ensure that the riser does not splinter and/or become structurally unstable for pulling.

3. A J-plug or other suitable cap shall be placed on top of the well casing.

4. Overdrilling shall be conducted by either using a hollow-stem auger with outward facing carbide cutting teeth with a diameter 2 inches larger than the casing and/or using a hollow-stem auger fitting with a plug used to grind the well materials which will be brought to the surface by the auger.

5. Overdrilling shall be advanced 0.5 feet beyond the original bore depth.

6. Once the desired drilling depth has been completed (using the open ended hollow-stem auger method) the casing and screen shall be retrieved from the center of the augers.

7. As the augers are being retracted, cement-bentonite grout shall be pumped down the center of the augers.

8. Grout shall be completed to a depth of approximately 5 feet below grade.

9. A bentonite seal shall be placed on top of the grout.

10. The remaining riser shall be sealed with a Portland cement plug to ground surface.

D. Upon completion of well abandonment procedures, the Contractor shall prepare a letter report documenting the abandonment of wells. The letter report shall include, but not be limited to, the date work was completed, all procedures utilized to complete the work, a description of any changes to planned procedures and a statement that the abandonment has been completed in accordance with the requirements of the NYSDEC and this specification. The letter report shall be submitted to the Engineer for approval.

3.2 INSTALLATION OF NEW GROUNDWATER MONITORING WELLS

A. The new groundwater monitoring wells shall be installed at the locations shown on the Drawings or alternate locations identified by the Department.

B. The borehole for the installation of monitoring wells shall be drilled by 4 1/4-inch hollow stem auger method or alternate method approved by the Engineer. DRILLING MUD WILL NOT BE PERMITTED. Drill pipe and drill rod thread lubrication shall be vegetable oil.

C. At the completion of each borehole, monitoring wells shall be constructed of threaded flush joint 2-inch I.D. Schedule 40 PVC riser pipe and 2-inch I.D. Schedule 40 PVC well screen with slot size of 0.010 inches as specified herein.

D. No. 1 Grade Clean Silica Sand shall be placed around the well screen to a minimum height of 2-feet above the screened interval. Finer grained No. 00 sand 6 inches thick shall be placed above the well sand pack. All sand shall be well rounded, washed and sized with a diameter and gradation determined to be compatible with the native aquifer formation. A 3-foot thick bentonite seal shall be placed above the sand pack. Six-inches of No. 00 sand shall be placed above the bentonite pellet seal. The remainder of the borehole shall be completed with a cement/bentonite grout seal. All materials placed in the borehole annulus shall be installed using a tremie pipe. The cement/bentonite grout shall be pressure pumped into the borehole using a tremie pipe to ensure that no bridging of bentonite within the hole occurs and shall extend from the top of the seal to the ground surface. The cement/bentonite grout mix shall be prepared in the following proportions:

- 12 gallons of potable water
- 4 pounds of Pure Gold bentonite or approved equal
- One 94-pound bag of Type 1 cement

E. The Contractor shall furnish and install a surface casing around each well as shown on the Drawings. A locking removable air-tight well cap shall be placed in the well riser pipe. Locks for each Master Lock or approved equal padlocks shall be provided for each well cap and keyed uniformly. Two keys shall be provided to the Engineer and two keys shall be provided to the Department. Each concrete well pad shall be etched with the well identification number. Each letter and number on the alpha-numeric label shall be a minimum of 2 inches in height.

F. The Contractor shall be responsible for identifying and complying with all federal, state and local laws and regulations associated with constructing monitoring wells. The Contractor will be responsible for obtaining all required permits, utility markouts and protection of utilities, traffic controls, safety, security. Drill cuttings may be left on-site, as directed by the Department. Groundwater monitoring well installation will take place after site remediation. The potential exists for pesticide contaminated drill cuttings to be encountered. Excavated soil must be collected in 55-gallon drums, properly characterized and disposed of in accordance with all federal, state and local regulations, including the NYSDEC Hazardous Waste Regulations found at 6 NYCRR Parts 370-376.

G. The Contractor shall develop each monitoring well installed. The Contractor shall develop the groundwater monitoring wells by airlift, over pumping with a submersible pump, or pump and surge as approved by the Engineer. Development shall continue until the well water contains 50 NTUs or less as measured with a turbidity meter or until the Engineer

approves cessation of development. The sediment-free condition is to be measured within the first 15 minutes of pumping following start-up. Well development shall be supplemented by measurements of field parameters, including temperature, pH and conductivity. Development shall continue until the field parameters stabilize for a minimum of three consecutive readings of 10 percent or less variability for each of the parameters or until the Engineer approves cessation of development. Development water must be collected in 55-gallon drums, properly characterized and disposed of in accordance with all federal, state and local regulations, including the NYSDEC Hazardous Waste Regulations found at 6 NYCRR Parts 370-376.

H. Well casings and screens shall be installed straight, plumb and concentric in the borehole.

I. Oversight of all drilling activities shall be provided by a geologist with experience in hydrogeology projects and with at least 5 years experience with the proposed drilling method. Monitoring well construction logs shall be prepared by the geologist for each well and submitted to the Engineer within 14 calendar days of the date of completion of well construction. The well construction logs shall be typed. All logs shall include name of project, contract number, well identification number, location sketch, date of drilling/construction, and name of the geologist. The logs shall include depth of boring below grade from direct measurements accurate to within 0.10 foot and shall show screen slot size, length, depth and materials of construction, the dimensions of the borehole, and depth and thickness of sand and grouting. By signing each well construction log, the geologist shall certify that each log provides an accurate representation of the construction. The location and elevation of the top of casing of each well shall be surveyed by a Land Surveyor licensed to practice in New York State and shall be shown on a signed and sealed drawing submitted to the Engineer in triplicate and in electronic format in AutoCAD 2002. Survey tolerance shall be ± 0.01-foot vertical and ± 0.1-foot horizontal. The survey shall be tied to the New York State Coordinate System.

J. If the Contractor installs wells which are not functional or do not perform in accordance with the requirements of these Specifications as determined by the Engineer, the Contractor shall repair the wells, or replace the wells and abandon the disapproved wells in accordance with the Specifications as directed by the Department at no additional cost to the Department.

K. All down-hole equipment shall be cleaned of all foreign matter and steam-cleaned at a temperature of 212°F and void of any external oils and greases prior to use in each borehole and well.

L. All contact equipment, including pumps and hoses, shall be cleaned and flushed between uses. This cleaning process shall consist of steam

cleaning of pump and hose interior. The pumps and hoses shall then be flushed with 20 gallons of potable water.

M. A new length of dedicated polyethylene tubing shall be used for each well and disposed after use. The pump and hose shall always be placed on clean polyethylene sheeting to avoid contact with the ground surface.

N. All parts of drilling and heavy equipment which contact contaminated material, including drill rods and portions of vehicles which contact contaminated material shall be cleaned after mobilization to and demobilization from the project site, and between individual locations. All drilling and heavy equipment shall be cleaned of all foreign matter and steam cleaned at a temperature of 212°F, and void of any external oils and grease.

O. All equipment shall be stored above ground in a clean manner. All downhole equipment shall be stored in such a manner as to prevent contact with the ground surface.

P. The Contractor shall provide or construct a decontamination pad on which to clean all equipment, materials and supplies. Decontamination shall be completed to the satisfaction of the Engineer.

Q. In the event that the Contractor shall fail to install any monitoring well to the depth specified, or to such lesser depth as directed by the Engineer, or should the Contractor abandon the monitoring well because of loss of tools, or for any other cause, including separation of the well during construction, through the fault of the Contractor, the Contractor shall abandon the well as specified above. There will be no payment for incorrectly installed or incomplete monitoring wells and the abandonment of such wells, will be performed at no additional cost to the Department.

3.3 RESTORATION

A. Immediately upon completion of a monitoring well, the Contractor shall remove all equipment, materials, and supplies from the site of the work, remove all surplus materials and debris, fill in all holes or excavations, vehicle tracks, ruts, and grade and seed the site and its access to specified elevations and conditions. The site shall be thoroughly cleaned by the Contractor as directed by the Department.

++ END OF SECTION ++

SECTION XII

Measurement for Payment

SECTION XII

MEASUREMENT AND PAYMENT

A. SUMMARY

1. This section covers the methods and procedures that will be used to measure Contractor's work to provide payment to Contractor for work performance. All work elements necessary to complete the work may not be described in this section. It is the responsibility of the bidder to make a thorough investigation of the Contract Documents and the site to determine the scope of work needed or required in each bid item. Payments shall be made to Contractor based on the quantities or work successfully completed and accepted as measured in accordance with the specified methods of measurement and the prices stipulated as shown on the Bid Form (page V-2). This method of payment shall constitute complete compensation for all work shown on the drawings and provided in the specifications, for all costs of accepting the general risks, and liabilities, and shall include compensation for overhead, profit, materials and services, and performing all work required to accomplish and complete the work specified under each item and all other work required.

B. SUBMITALS

1. Preliminary items to be submitted in response to Notice of Intent:

   a. Bid breakdowns

2. Pay Requests:

   a. Submit in accordance with Section VIII, Article 13, "Payments to Contractor and Completion."

C. PAYMENT PROCEDURES

1. Under this Contract, 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 Engineer, in accordance with the expressed intent of the contract to secure a complete construction of a functionally complete project. The following 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:

a. All labor, material, equipment, bonds and insurance, tests, adjustments, warranties, overhead, and other expenses required to perform the work.

b. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.

c. All accessories, manuals, and services pertinent to the materials and equipment.

2. Lump Sum Items

a. The quantities of work performed under lump sum items shall not be measured except for the purpose of determining reasonable interim payments. Interim payments shall be made in accordance with the estimated value of work performed and found acceptable as determined by Engineer, or as specified in this section.

b. Where indicated for a lump sum item, Contractor shall provide a schedule of values. The schedule of values shall include a breakdown of major cost items included within the lump sum. The schedule of values shall be provided to Engineer prior to initiation of work.

3. Unit Price Items

a. Payments shall be made for unit items in accordance with the measurement methods set forth in this section or, where specified payment limits are unclear, as determined reasonable by Engineer, at the unit prices entered in the Bid Form. Interim measurements and/or payments may be adjusted to account for partially completed work.

4. Measurement for payment shall be made only for work that has been acceptably performed within the limits shown on the Plans, as specified, or directed by Engineer.

5. The work of the contract shall be paid in separate items as described below.

D. PAYMENT ITEMS FOR CONTRACT NUMBER D007692

1. Submittals, Mobilization, Site Preparation, Temporary Facilities and Utilities, Restoration and Demobilization (Payment Item No. 1)

a. Measurement and payment for Payment Item No. 1 shall be the lump sum bid for furnishing the required plans, schedules, submittals, permits, attending meetings, incidentals, etc., as required by the Contract Documents prior to the issuance of the Notice to Proceed, and for the Contractor to mobilize, maintain and demobilize, and provide equipment and storage areas, trailers, sanitary facilities, temporary utilities and facilities, decontamination station, submittals during construction, attendance at meetings during construction, site security, surveys, signs, health and safety, erosion, surface water and sedimentation controls, maintenance and protection of traffic, incidental provisions and any other items required to complete the Work and not specifically identified and paid for under other payment items. This payment item includes demolition and removal of all temporary facilities and temporary utilities, demolition, removal of decontamination station, including requirements for collection and analysis of composite soil samples prior to and after decontamination pad construction, and removal and proper off-site transportation and disposal of waste generated during construction and not included in other payment items.

b. Payment shall be made based on the percentage of the overall project completed, up to 60 percent of the lump sum bid for Payment Item No. 1. The final 40 percent of Payment Item No. 1 shall be withheld until the final payment for construction.

2. Demolition and Removals (Payment Item No. 2A)

a. Measurement and payment for Payment Item No. 2A shall be the lump sum bid for this payment item and shall be full payment for the provision of all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., required for complete demolition, removal, characterization and disposal of existing site features including, but no limited to, masonry walls, concrete slabs, asphalt pavement, sidewalks, piping, and other elements as shown on the Drawings, as specified and as directed by the Department. This payment item also includes all work associated with the protection of property not designated for removal and prevention of injury.

3. Asbestos Abatement (Payment Item No. 2B)

a. Measurement and payment for Payment Item No. 2B shall be the lump sum bid for this payment item and shall be full payment for the provision of all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., required for management, removal and proper disposal of asbestos-containing materials. This payment item includes payment for costs necessary for permit fees, handling, removal, testing, transportation and off-site disposal of

asbestos-containing materials, decontamination procedures and engineering controls, air sampling, monitoring and analysis costs for all phases of the asbestos project.

4. Underground Storage Tank Removal (Payment Item No. 2C)

   a. Measurement and payment for Payment Item No. 2D shall be the lump sum bid for this payment item and shall be full payment for the provision of all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., required for management, removal and proper disposal of the underground storage tank (UST) and associated piping. This payment item includes payment for all work associated with the implementation of protective measures for existing structures in close proximity to the UST that are not designated for removal (e.g., sheeting, shoring, etc.), collection and analysis of endpoint samples from the tank grave, furnishing, placing, grading and compacting general fill in the area of the excavation, and removal and proper off-site transportation and disposal of any liquids present within the tank as shown on the Drawings, as specified and as directed by the Department.

5. Dry Well Closure (Payment Item No. 2D)

   a. Measurement and payment for Payment Item No. 2C shall be the lump sum bid for this payment item and shall be full payment for the provision of all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., required for the closure of the on-site dry well, including power washing and sealing existing floor drain(s), removal, characterization and disposal of standing liquids from within the dry well, removal, characterization and disposal of sludge and soils from the bottom of the dry well, collection and analysis of an endpoint sample from the bottom of the dry well, and backfilling the dry well as shown on the Drawings, as specified and as directed by the Department.

6. Excavation of Hazardous Materials – Soil (Payment Item No. 3)

   a. Measurement for Payment Item No. 3 shall be for the actual number of cubic yards of in-place volume excavated to the dimensions and details as shown on the Drawings, as specified and as directed by the Department. For bidding purposes, this payment item includes excavation areas within the Fumex Sanitation site parking lot and the neighboring residential property. The in-place volume shall be measured and calculated based on submitted surveys of the excavations performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show, in cubic yards, the volume of the

excavation. Any excavation beyond the lines so approved will not be measured for payment and will be at the Contractor's expense.

b. Payment for Payment Item No. 3 shall be the unit price bid per cubic yard times the measured and calculated in-place volume excavated and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to excavate soil, hazardous waste and other materials, regardless of type, character, composition, weight, size or condition. The unit price bid shall apply for initial excavation to the limits shown on the Drawings and to any additional excavation required and as directed by the Department. This payment item includes load out of excavated material, and any sheeting, shoring and bracing required to complete the work. There shall be no additional payment for standby time during post-excavation sampling and the period required for analysis of post-excavation samples.

7. Transportation and Disposal of Hazardous Waste (Payment Item No. 4A)

a. Measurement for Payment Item No. 4A shall be for the actual number of in-place cubic yards of hazardous waste properly characterized, labeled, containerized, transported and disposed of off-site, as shown on the Drawings, as specified and as directed by the Department. For bidding purposes, the Contractor shall assume that excavated hazardous waste shall be disposed of as hazardous waste exceeding the applicable Land Disposal Restriction Universal Treatment Standards. The in-place volume shall be measured and calculated based on submitted surveys of the excavations performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show, in cubic yards, the volume of the excavation. Disposal of excess materials resulting from excavations beyond the lines so approved will not be measured for payment and will be at the Contractor's expense.

b. Payment for Payment Item No. 4A shall be the unit price bid per cubic yard of in-place hazardous waste properly transported off-site and disposed of, times the measured and calculated volume properly transported off-site and disposed of and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to store, characterize, package, label, manifest, transport and dispose of excavated soil, not included as part of other payment items. Certified weigh tickets acceptable to the Department showing the weight of the vehicle at the time of arrival and departure from the disposal facility shall be provided as a prerequisite to payment for all material transported off-site.

8. Transportation and Disposal of Non-Hazardous Waste (Payment Item No 4B)

a. Measurement for Payment Item No. 4B shall be for the actual number of in-place cubic yards of excavated nonhazardous waste properly characterized, labeled, containerized, transported off-site and disposed of off-site, as shown on the Drawings, as specified and as directed by the Department. For bidding purposes, the Contractor shall assume that the excavated nonhazardous waste shall be disposed of as a nonhazardous pesticide contaminated waste. The in-place volume shall be measured and calculated based on submitted surveys of the excavations, performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show, in cubic yards, the volume of the excavation. Disposal of excess materials resulting from excavations beyond the lines so approved will not be measured for payment and will be at the Contractor's expense.

b. Payment for Payment Item No. 4B shall be the unit price bid per cubic yard of in-place nonhazardous waste, times the measured and calculated volume properly transported off-site and disposed of and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to store, characterize, package, label, manifest, transport and dispose of excavated soil, not included as part of other payment items. Certified weigh tickets acceptable to the Department showing the weight of the vehicle at the time of arrival and departure from the disposal facility shall be provided as a prerequisite to payment for all material transported off-site.

9. Post Excavation Sample Collection and Analysis (Payment Item No. 5)

a. Measurement for Payment Item No. 5 shall be for the actual number of post-excavation soil samples properly collected, labeled, preserved, stored, shipped and analyzed as specified and as directed by the Department. The Contractor shall be required to provide complete deliverable packages and data usability summary reports, acceptable to the Engineer, for payment.

b. Payment for Payment Item No. 7 shall be the unit price bid per sample collected and analyzed times the number of samples properly collected, labeled, preserved, shipped off-site and analyzed by the laboratory and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to sample, ship, analyze and report as shown on the Drawings, as specified and as directed by the Department. This payment item shall also include payment for data

reduction, validation and reporting. There shall be no additional payment for QA/QC samples such as field blanks, matrix spikes, matrix spike duplicates, etc.

10. General Fill (Payment Item No. 6)

    a. Measurement for Payment Item No. 6 shall be for the actual number of cubic yards of in-place volume of general fill, compacted and graded, measured to the nearest cubic yard, as shown on the Drawings, as specified and as directed by the Department. The in-place volume shall be measured and calculated based on submitted surveys of the backfilled area prior to filling and upon completion of filling, performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show in cubic yards the volume of backfill. For bidding purposes, the Contractor shall assume that this payment item only includes backfill required to fill the excavation completed within the parking lot on the Fumex Sanitation site and the excavation completed within the residential property west of the Fumex Sanitation site. Any placement of material in excess of the limits shown in Drawings will not be measured for payment and will be at the Contractor's expense.

    b. Payment for Payment Item No. 6 shall be the unit price bid per cubic yard times the measured volume of compacted and graded backfill and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to test, furnish, place, grade and compact general fill in the areas of excavation and voids, to the elevations shown on the Drawings, as specified and as directed by the Department.

11. Topsoil (Payment Item No. 7)

    a. Measurement for Payment Item No. 7 shall be for the actual cubic yards of topsoil, furnished and placed, measured in-place to the nearest cubic yard, as shown on the Drawings, as specified and as directed by the Department. Any placement of material in excess of the limits shown in Drawings will not be measured for payment and will be at the Contractor's expense.

    b. Payment for Payment Item No. 7 shall be the unit price bid per cubic yard times the measured volume and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to supply, test and place topsoil in the areas shown on the Drawings, as specified and as directed by the Department.

12. Sod (Payment Item No. 8)

a. Measurement for Payment Item No. 8 shall be for the actual area provided with sod, measured in-place in the presence of the Engineer to the nearest square yard, as shown on the Drawings, and as specified and as directed by the Department.

b. Payment for Payment Item No. 8 shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to supply and place sod in the areas shown on the Drawings, as specified and as directed by the Department. The unit price bid shall include all costs associated with irrigation, replacement of sod which does not meet the criteria of the specifications and maintenance of sod for the period specified.

13. Trees (Payment Item No. 9)

a. Measurement for Payment Item No. 9 shall be for the actual number of trees planted, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 9 shall be the unit price bid per tree times the number of trees planted and shall be full payment for the provision of all labor, materials, equipment, supplies, power, incidentals, etc., required for planting and maintaining trees as shown on the Drawings, as specified and as directed by the Department. The unit price bid shall include all costs associated with irrigation, replacement of trees which do not meet the criteria of the specifications and maintenance of the trees for the period specified.

14. Bollards (Payment Item No. 10)

a. Measurement for Payment Item No. 10 shall be for the actual number of bollards installed, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 10 shall be the unit price bid per bollard times the number of bollards installed and shall be full payment for the provision of all labor, materials, equipment, supplies, power, incidentals, etc., required for furnishing and installing bollards as shown on the Drawings, as specified and as directed by the Department.

15. Trench Drain (Payment Item No. 11)

a. Measurement for Payment Item No. 11 shall be for the actual number of trench drains furnished and installed as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 11 shall be the unit price bid per trench drain times the number of trench drains installed and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to install the trench drains as specified and as directed by the Department. The unit price bid shall include provision for all work necessary for installation of the trench drain including, but not necessarily limited to, excavation and concrete work required to set the trench drain, furnishing the trench drain, setting and installation of the trench drain, and furnishing and installing all gratings and other appurtenances.

16. HDPE Drainage Piping (Payment Item No. 12)

a. Measurement for Payment Item No. 12 shall be for the actual length of HDPE drainage piping furnished and installed, measured in-place in the presence of the Engineer to the nearest linear foot, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 12 shall be the unit price bid per linear foot of HDPE drainage piping installed times the measured length of piping installed, and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install HDPE drainage piping. The unit price bid shall include provision for all work necessary to install HDPE drainage piping including, but not necessarily limited to, excavation of the pipe trench, installation and joining of piping, making piping connections and penetrations, backfill and compaction of pipe trench and proper off-site transportation and disposal of any excess excavated material.

17. Ductile Iron Drainage Piping (Payment Item No. 13)

a. Measurement for Payment Item No. 13 shall be for the actual length of ductile iron drainage piping furnished and installed, measured in-place in the presence of the Engineer, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 13 shall be the unit price bid per linear foot of ductile iron drainage piping installed times the measured length of piping installed, and shall be full payment for

furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install ductile iron drainage piping. The unit price bid shall include provision for all work necessary to install ductile iron drainage piping including, but not necessarily limited to, excavation of the pipe trench, installation and joining of piping, making piping connections and penetrations, backfill and compaction of pipe trench and proper off-site transportation and disposal of any excess excavated material.

18. Drainage Manhole (Payment Item No. 14)

a. Measurement for Payment Item No. 14 shall be for the actual number of precast manholes furnished, installed and placed into service as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 14 shall be the unit price bid per manhole times the number of manholes furnished and installed, and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install precast concrete manholes. The unit price bid shall include provision for all work necessary to install precast manholes including, but not necessarily limited to, excavation work to set the manholes, furnishing and installing the manholes, furnishing and installing manhole frames and covers, and proper off-site transportation and disposal of any excess excavated material.

19. Asphalt Cover (Payment Item No. 15)

a. Measurement for Payment Item No. 15 shall be for the actual area of impermeable cap installed, measured in-place to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department. For bidding purposes, the Contractor shall assume that this payment item only includes the area designated on the Drawings to be provided with an impermeable cap. The area installed shall be measured and calculated based on submitted surveys of the completed work performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show in square yards the area of impermeable cap installed.

b. Payment for Payment Item No. 15 shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install the impermeable cap, including all subbase, binder course and top course materials,

as shown on the Drawings, as specified and as directed by the Department.

20. On-Site Asphalt Restoration (Payment Item No. 16)

a. Measurement for Payment Item No. 16 shall be for the actual on-site area provided with asphalt, measured in-place to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department. For bidding purposes, the Contractor shall assume that this payment item only includes the area designated on the Drawings to be provided with on-site asphalt. The area installed shall be measured and calculated based on submitted surveys of the completed work performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show in square yards the area of on-site asphalt installed.

b. Payment for Payment Item No. 16 shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install on-site asphalt, including all subbase, binder course and top course materials, as shown on the Drawings, as specified and as directed by the Department.

21. Sidewalk Restoration (Payment Item No. 17A)

a. Measurement for Payment Item No. 17A shall be for the actual area of sidewalk restored, measured in-place to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department. The area installed shall be measured and calculated based on submitted surveys of the completed work performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show in square yards the area of sidewalk restored.

b. Payment for Payment Item No. 17A shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install concrete sidewalk, including all specified joints and appurtenances, as shown on the Drawings, as specified and as directed by the Department.

22. Concrete Handicap Ramp (Payment Item No. 17B)

a. Measurement for Payment Item No. 17B shall be for the actual number of handicap ramps furnished and installed as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 17B shall be the unit price bid per handicap ramp times the actual number of handicap ramps installed and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install handicap ramps, including all specified joints and appurtenances, as shown on the Drawings, as specified and as directed by the Department.

23. Concrete Curb Restoration (Payment Item No. 17C)

a. Measurement for Payment Item No. 17C shall be for the actual length of concrete curb restored, measured in-place to the nearest linear foot, as shown on the Drawings, as specified and as directed by the Department. The length installed shall be measured and calculated based on submitted surveys of the completed work performed, signed and sealed by a Land Surveyor licensed to practice in New York State. The signed and sealed survey shall show in linear feet the length of concrete curb restored.

b. Payment for Payment Item No. 17C shall be the unit price bid per linear foot times the measured length and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install concrete curbs, including all specified joints and appurtenances, as shown on the Drawings, as specified and as directed by the Department.

24. Public Roadway Restoration – Herricks Road (Payment Item No. 18)

a. Measurement for Payment Item No. 18 shall be for the actual area of public roadway restored, measured in-place in the presence of the Engineer, to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 18 shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to restore the public roadway, including all subbase, concrete foundation, binder course and surface course materials, as shown on the Drawings, as specified and as directed by the Department.

25. Garage Decontamination (Payment Item No. 19A)

a. Measurement for Payment Item No. 19A shall be for the actual area of garage floor decontaminated, measured to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 19A shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to decontaminate the garage floor as shown on the Drawings, as specified and as directed by the Department. The unit price bid shall include provision for all work required to decontaminate the garage floor including, but not necessarily limited to, power washing the garage floor, containment and collection of wash waters, collection and analysis of waste characterization samples, and the proper off-site transportation and disposal of wash waters.

26. Epoxy Coating (Payment Item No. 19B)

a. Measurement for Payment Item No. 19B shall be for the actual area of garage floor provided with an epoxy coating system, measured to the nearest square yard, as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 19B shall be the unit price bid per square yard times the measured area and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to furnish and install an epoxy floor coating on the garage floor as shown on the Drawings, as specified and as directed by the Department, including any required surface preparation, but not including the removal of floor tiles and decontamination of the floor, which is covered under separate payment items.

27. Groundwater Monitoring Well Installation (Payment Item No. 20A)

a. Measurement for Payment Item No. 20A shall be the actual linear feet of complete groundwater monitoring wells constructed to the dimensions and details as shown on the Drawings, as specified and as directed by the Department. The length shall be measured for payment from ground surface to the bottom of the well in the presence of the Engineer.

b. Payment for Payment Item No. 20A shall be the unit price bid per linear foot times the measured length of complete groundwater monitoring well and shall be full payment to furnish all labor, materials, equipment supplies, power, services, incidentals, facilities, etc., for the construction of each groundwater monitoring well as shown on the Drawings, as specified and as directed by the Department. This payment item includes accessing well locations, drilling, collection of soil samples, installation of casing, screen, well packing, grout, concrete base, protective steel casing, end plug,

locks, accessories and appurtenances, disposal of cuttings, decontamination water, and any other wastes, well development and implementation of the approved plans. No additional payment shall be made if the Contractor is unable to advance the borehole to the required depth, and is required to properly abandon the borehole and redrill at a new location, or if the wells are improperly constructed.

28. On-Site Monitoring Well Restoration (Payment Item No. 20B)

a. Measurement for Payment Item No. 20B shall be for the actual number of on-site monitoring wells restored as shown on the Drawings, as specified and as directed by the Department.

b. Payment for Payment Item No. 20B shall be the unit price bid per well to be restored times the actual number of wells restored and shall be full payment for furnishing all labor, materials, equipment, supplies, power, services, incidentals, facilities, etc., to restore on-site monitoring wells as shown on the Drawings, as specified and as directed by the Department. The unit price bid shall include provision for all work required to restore on-site monitoring wells including, but not necessarily limited to, excavation work to access the wells, installation of pipe fittings, riser pipe, well cap, concrete base and protective steel casing, backfill and restoration.

+ + END OF SECTION +

SECTION XIII

Wage Rates and Associated Contract Requirements

David A. Paterson, Governor

M. Patricia Smith, Commissioner

Dept. of Environ. Conservation

Matt DeVinney, Project Engineer
Dvirka & Bartilucci,Cons.Engrs
330 Crossways Park Drive
Woodbury NY 11797

Schedule Year 2009 through 2010
Date Requested 10/15/2009
PRC# 2007003138

Location Fumex Sanitation Site
Project ID#
Project Type Excavation and disposal of pesticide contaminated soil, backfill and compaction, closure of dry well, installation of asphalt cap, installation of storm water drainage facilities and connection to

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 2009 through June 2010. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.state.ny.us. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission: a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

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.

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.state.ny.us.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.state.ny.us.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.state.ny.us.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three (3) years from the project's date of completion. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Social Security number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provide, and Daily and weekly number of hours worked in each classification.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall receive 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).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b 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.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 and Article 9 of the Labor Law) constitute a misdemeanor punishable by fine or imprisonment, 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.

David A. Paterson, Governor

M. Patricia Smith, Commissioner

Dept. of Environ. Conservation

Matt DeVinney, Project Engineer
Dvirka & Bartilucci,Cons.Engrs
330 Crossways Park Drive
Woodbury NY 11797

Schedule Year 2009 through 2010
Date Requested 10/15/2009
PRC# 2007003138

Location Fumex Sanitation Site
Project ID#
Project Type Excavation and disposal of pesticide contaminated soil, backfill and compaction, closure of dry well, installation of asphalt cap, installation of storm water drainage facilities and connection to

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: $_____

Approximate Starting Date: ____/____/____

Approximate Completion Date: ____/____/____

Contract Type:
- [ ] (01) General Construction
- [ ] (02) Heating/Ventilation
- [ ] (03) Electrical
- [ ] (04) Plumbing
- [ ] (05) Other : _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

IMPORTANT NOTICE

FOR

CONTRACTORS & CONTRACTING AGENCIES

Social Security Numbers on Certified Payrolls

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concerns with regard to inclusion of this information on payrolls if another identifier will suffice.

For these reasons, ***the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor.***

NOTE: This change does not affect the Department's ability to request and receive the entire social security number from employers during the course of its public work / prevailing wage investigations.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

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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, 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 as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, 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.

NEW LEGISLATION

Effective February 24, 2008

WORKER NOTIFICATION – A9052 – S6240

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her particular job classification. The required notification will be provided with each wage schedule, may be downloaded from our website *www.labor.state.ny.us* or made available upon request by contacting the Bureau of Public Work at 518-457-5589.

* In the event that the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

NEW YORK STATE DEPARTMENT OF LABOR
BUREAU OF PUBLIC WORK
State Office Building Campus • Building 12 • Room 130
Albany, New York 12240

THIS IS A PUBLIC WORK PROJECT

Any worker, laborer, or mechanic employed on this project is entitled to receive the ***prevailing wage and supplements*** rate for the classification at which he/she is 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.state.ny.us

If you feel that you have not received proper wages or benefits, please call our nearest office. *

Albany	(518) 457-2744	**Newburgh**	(845) 568-5398
Binghamton	(607) 721-8005	**Patchogue**	(631) 687-4886
Buffalo	(716) 847-7159	**Rochester**	(585) 258-4505
Garden City	(516) 228-3915	**Syracuse**	(315) 428-4056
New York City	(212) 775-3568	**Utica**	(315) 793-2314
		White Plains	(914) 997-9507

** For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443,* ***www.comptroller.nyc.gov*** *- click on Bureau of Labor Law.*

Contractor Name: _____

Project Location: _____

STATE OF NEW YORK
David A. Paterson, Governor

DEPARTMENT OF LABOR
M. Patricia Smith, Commissioner

NEW LEGISLATION

Effective July 18, 2008

OSHA 10-hour Construction Safety and Health Course – S1537-A

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 does not apply to projects advertised for bid prior to July 18, 2008 AND only applies to workers on a public work project that are required under Article 8 to receive the prevailing wage.*

Rules and regulations will be promulgated and posted on the NYSDOL website www.labor.state.ny.us when finalized.

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~

   Keene State College
   Manchester, NH
   Leslie Singleton
   e-mail: lsingletin@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 will take 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 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;
- 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 course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-485-5696.

WICKS Reform 2008

(For all contracts advertised or solicited for bid on or after 7/1/08)

- Raises the threshold for public work projects subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work. The total project's threshold would increase from $50,000 to: $3 million in Bronx, Kings, New York, Queens and Richmond counties; $1.5 million in Nassau, Suffolk and Westchester counties; and $500,000 in all other counties.

- For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical work and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or use of a Project Labor Agreement (PLA), and must be open to public inspection.

- Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

- The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.

- Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

- Reduces from 15 to 7 days the period in which contractors must pay subcontractors.

IMPORTANT INFORMATION

Regarding Use of Form PW30R

"Employer Registration for Use of 4 Day / 10 Hour Work Schedule"

To use the '4 Day / 10 Hour Work Schedule':

There MUST be a *Dispensation of Hours (PW30)* in place on the project

AND

You MUST register your intent to work 4 / 10 hour days, by completing the PW30R Form.

REMEMBER...

The '4 Day / 10 Hour Work Schedule' applies ONLY to Job Classifications and Counties listed on the PW30R Form.

(**Please note** : For each Job Classification check the individual wage schedule for specific details regarding their 4/10 hour day posting.)

Instructions for Completing Form PW30R

"Employer Registration for Use of 4 Day / 10 Hour Work Schedule"

Before completing Form PW30R check to be sure ...

- There is a *Dispensation of Hours* in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Instructions (Type or Print legibly):

Contractor Information:

- Enter the Legal Name of the business, FEIN, Street Address, City, State, Zip Code; the Company's Phone and Fax numbers; and the Company's email address (if applicable)
- Enter the Name of a Contact Person for the Company along with their Phone and Fax numbers, and the personal email address (if applicable)

Project Information:

- Enter the Prevailing Rate Case number (PRC#) assigned to this project
- Enter the Project Name / Type (i.e. Smithtown CSD – Replacement of HS Roof)
- Enter the Exact Location of Project (i.e. Smithtown HS, 143 County Route #2, Smithtown,NY; Bldgs. 1 & 2)
- If you are a Subcontractor, enter the name of the Prime Contractor for which you work
- On the Checklist of Job Classifications -
  - Go to pages 2 and 3 of the form
  - Place a checkmark in the box to the right of the Job Classification you are choosing
  - Mark all Job Classifications that apply

Requestor Information:

- Enter the name of the person submitting the registration, their title with the company , and the date the registration is filled out

Return Completed Form:

- **Mail** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work, SOBC – Bldg.12 – Rm.130, Albany, NY 12240 ***-OR -***
- **Fax** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work at (518)485-1870

New York State Department of Labor
Bureau of Public Work
W. Averell Harriman State Office Campus
Building 12 - Room 130
Albany, New York 12240
Phone - (518) 457-5589 Fax - (518) 485-1870

Employer Registration for Use of 4 Day / 10 Hour Work Schedule

Before completing Form PW30R check to be sure …
There is a *Dispensation of Hours* in place on the project.
The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Please Type or Print the Requested Information

When completed …
Mail to NYSDOL Bureau of Public Work, SOBC, Bldg. 12, Rm.130, Albany, NY 12240
-or-
Fax to NYSDOL Bureau of Public Work at (518) 485-1870

Contractor Information

Company Name: _____ FEIN: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number _____ Fax Number: _____ Email Address: _____

Contact Person: _____

Phone No: _____ Fax No: _____ Email: _____

Project Information

Project PRC#: _____ Project Name/Type: _____

Exact Location
of Project: _____ County: _____

(If you are Subcontractor)
Prime Contractor Name: _____

Job Classification(s) to Work 4/10 Schedule: *(Choose all that apply on Job Classification Checklist - Pages 2 & 3)*

Requestor Information

Name: _____

Title: _____ Date : _____

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

Job Classification	Tag #	Applicable Counties	Check Box
Electrician	25m	Nassau, Suffolk	☐
Electrician	43	Cayuga, Chenango, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego, Otsego, Tompkins, Wayne	☐
Electrician	840Teledata	Cayuga, Onondaga, Ontario, Seneca, Wayne, Yates	☐
Electrician	86	Genesee, Livingston, Monroe, Ontario, Orleans, Wayne, Wyoming	☐
Electrician Lineman	1049Line/Gas	Nassau, Suffolk	☐
Electrician Lineman	1249a	Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates	☐
Elevator Constructor	138	Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester	☐
Elevator Constructor	14	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	☐
Elevator Constructor	27	Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates	☐
Elevator Constructor	35	Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamiliton, Herkimer, Montgomery, Oneida, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	☐
Elevator Constructor	62.1	Broome, Cayuga, Chenango, Cortland, Delaware, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tioga, Tompkins	☐
Glazier	677.1	Jefferson, Lewis, Livingston, Monroe, Ontario, Seneca, St. Lawrence, Wayne, Yates	☐
Insulator - Heat & Frost	30-Syracuse	Broome, Cayuga, Chemung, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Tioga, Tompkins	☐

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

Job Classification	Tag #	Applicable Counties	Check Box
Operating Engineer - Heavy& Highway	832H	Allegany, Chemung, Genesee, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates	☐
Painter	178 B	Broome, Chenango, Tioga	☐
Painter	178 E	Chemung, Schuyler, Steuben	☐
Painter	178 O	Delaware, Otsego	☐
Painter	31	Cayuga, Herkimer, Lewis, Madison, Oneida, Onondaga, Ontario, Oswego, Seneca	☐
Painter	38.O	Oswego	☐
Painter	4-Buf,Nia, Olean	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Niagara, Orleans, Steuben, Wyoming	☐
Painter	4-Jamestown	Cattaraugus, Chautauqua	☐
Sheetmetal Worker	46	Livingston, Monroe, Ontario, Seneca, Wayne, Yates	☐
Teamster - Heavy&Highway	294h/h	Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	☐
Teamster - Heavy&Highway	317a.hh	Allegany, Cayuga, Cortland, Seneca, Steuben, Tompkins, Wayne, Yates	☐
Teamster - Heavy&Highway	693.H/H	Broome, Chenango, Delaware, Otsego, Tioga	☐

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is for each hour worked, some classifications require the payment or provision of supplements for each hour paid (including paid holidays on which no work is performed) and/or may require supplements to be paid or provided at a premium rate for premium hours worked.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2

Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-775-3568	212-775-3579
Bureau of Public Work - Patchogue	631-687-4883	631-687-4904
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Nassau County General Construction

Asbestos Worker — 10/01/2009

JOB DESCRIPTION Asbestos Worker **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:	07/01/2009-11/30/2009	12/01/2009-11/30/2010
Abestos Worker Removal & Abatement Only*	$32.95	+Additional $3.00**

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

**Increase to be allocated at a later date.

SUPPLEMENTAL BENEFITS
Abestos Worker
Removal & Abatement Only $9.15

OVERTIME PAY
See (B, B2, K) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
NOTE: Easter Paid at Time and One-half IF worked

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 Benefits :
(per Hour worked)
Apprentice
Removal & Abatement Only $9.15

9-12a - Removal Only

Boilermaker — 10/01/2009

JOB DESCRIPTION Boilermaker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:	07/01/2009
Boilermaker	$ 45.89
Repairs & Renovation	45.89

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
BoilerMaker	48% of Hourly Wage Paid + $ 8.07
Repairs & Renovation*	

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.
*Same as Boilermaker (Includes replacement of parts and repairs & renovation of an existing unit).

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (8, 16, 23, 24) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25) on HOLIDAY PAGE
NOTE: *Employee must work in pay week to receive Holiday Pay.

**Boilermarker gets 4 times the hourly wage rate for working on Labor Day.

***Repairs & Renovation see (B,E,Q) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1/2) Year Terms at the following pecentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	07/01/2009
Boilermaker	48% of Hourly
Apprentice(s)	Wage Paid + $ 8.07
Repairs & Renovation*	
Apprentice(s)	$48% of Hourly Wage Paid + $ 8.07

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.
*Includes replacement of parts and repairs & renovation of an existing unit.

4-5

Carpenter 10/01/2009

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES
Orange: South of but including the following, Waterloo Mills, SlateHill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.
Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.
Suffolk: West of Port Jefferson and Patchoque Road to Route 112 tothe Atlantic Ocean.

WAGES
Per hour:

	07/01/2009	10/17/2009 Additional
Core Drilling:		
Driller	$ 33.25	$ 2.21*
Assistant Driller	27.22	1.94*

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.

* May be allocated between wages and benefits.

SUPPLEMENTAL BENEFITS
Per hour paid:

Driller	$ 15.31
Assistant	15.31

OVERTIME PAY
OVERTIME: See (B,E,K*,P,R**) on OVERTIME PAGE.

HOLIDAY
HOLIDAY:
Paid: See (5,6) on HOLIDAY PAGE.
Overtime: * See (5,6) on HOLIDAY PAGE.
** See (8,10,11,13) on HOLIDAY PAGE.

Assistant: One (1) year increments at the following percentage of Assistant wages. This is not an apprenticeship for Driller.

1st Year	2nd Year	3rd Year	4th Year
70%	80%	90%	100%

9-1536-CoreDriller

Carpenter **10/01/2009**

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2009	07/01/2010 Additional
Timberman	$ 40.50	$ 3.53*

SUPPLEMENTAL BENEFITS
Per hour paid:

Timberman	$ 40.62

*May be allocated between wages and benefits.

OVERTIME PAY
See (B, E, E2, 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
Wages per hour is Pecentage of Journeymans Wage.

(1) year terms:

1st	2nd	3rd	4th
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices	$ 25.14

9-1536

Carpenter **10/01/2009**

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2009	07/01/2010 Additonal
Building		

Millwright	$ 44.24	$ 3.62*

*May be allocated between wages and benefits

SUPPLEMENTAL BENEFITS
Per hour paid:

Millwright	$ 44.75

OVERTIME PAY
See (B, E, E2, 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
Wages per hour is Pecentage of Journeymans wage

(1) year terms:

1st.	2nd.	3rd.	4th.
55%	65%	75%	95%

Supplemental benefits per hour:

(1) year terms:

1st.	2nd.	3rd.	4th.
$28.19	$31.29	$35.51	$40.62

9-740.1

Carpenter — 10/01/2009

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2009

Marine Construction:

Marine Diver	$ 56.32
M.D.Tender	40.17

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyman	$ 40.86

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18,19) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.
Apprentices See (5,6,10,11,13,16,18,19)

Overtime: See (5,6,10,11,13,16,18,19) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wager per hour is Percentage of Journeymans Wage

(1) year terms:

1st	2nd	3rd	4th
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices $ 26.97

9-1456MC

Carpenter — 10/01/2009

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2009

Carpet/Resilient
Floor Coverer $ 44.02

SUPPLEMENTAL BENEFITS
Per hour paid:

Floor Coverer $ 38.58

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19)on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wage per hour is Pecentage of Journeymans Wage

(1) year terms:

1st.	2nd.	3rd.	4th.
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices $ 25.83

9-2287

Carpenter — 10/01/2009

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2009	07/01/2010 Additional
Piledriver	$ 44.61	$ 3.72*
Dockbuilder	44.61	3.72*

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyman $ 40.86

* May be allocated between wages and benefits.

OVERTIME PAY
See (B, E2, O) 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
Wages per houris Pecentage of Journeymans Wage

(1)year terms:

1st.	2nd.	3rd.	4th.
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices $ 26.97

9-1456

Carpenter 10/01/2009

JOB DESCRIPTION Carpenter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES
Nassau: That portion of the county that lies west of Seaford Creekand south of the Southern State Parkway.

WAGES

Per hour:	07/01/2009	07/01/2010 Additional
Show Exibit/ Carpenter	$ 44.02	$ 2.13

SUPPLEMENTAL BENEFITS
Per hour paid:

Show Exibit/
Carpenter $ 38.58

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
Wages per hour is Pecentage of Journeymans Wage

(1) year terms:

1st.	2nd.	3rd.	4th.
40%	50%	65%	80%

Supplemental benefits per hour:

Apprentices $ 25.83

9-EXHIB

Carpenter - Building / Heavy&Highway — 10/01/2009

JOB DESCRIPTION Carpenter - Building / Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour:

	07/01/2009
Building Carpenter	$ 37.21
Heavy Highway Carpenter	$ 37.21

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2009
Both Carpenter Categories	$ 30.29

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 23, 24, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms at the following pecentage of Journeymans Wage

1st	2nd	3rd	4th
40%	55%	65%	75%

Supplemental Benefits

Per Hour:

	07/01/2009
All Apprentice Terms	$ 17.38

4-Reg.Council Nass/Suff

Electrician — 10/01/2009

JOB DESCRIPTION Electrician **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour:

	07/01/2009
Tree Trimmer/ Line Clearance Specialist	$ 26.46

NOTE: This Rate For Line Clearance Only.

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2009
Tree Trimmer/ Line Clearance Specialist	20.5% of Hourly Wage Paid + $ 5.48

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY
See (B, E, P) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 8, 16, 23, 24, 25, 26) on HOLIDAY PAGE
NOTE: Time and One Half the Hourly Rate plus Holiday Pay if Worked

4-1049/Tree

Electrician — 10/01/2009

JOB DESCRIPTION Electrician **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009-05/31/2010	06/01/2010
Telephone & Intergrated Tele-Data Sytems Electrician	$ 33.31	$ 34.22

"PLEASE NOTE"
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)228-3915 or Suffolk Offices at (631)687-4882.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-05/31/2010	06/01/2010
Electrician	15.5% of Hourly Wage Paid + $ 14.89	15.5% of Hourly Wage Paid + $ 15.44

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

4-25tela

Electrician — 10/01/2009

JOB DESCRIPTION Electrician **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009-05/31/2010	06/01/2010
Electrcian Electrical Maintenance	$ 36.70	$ 37.70

"PLEASE NOTE"
Applicable to "EXISTING ELECTRICAL SYSTEMS" including, but not limited to TRAFFIC SIGNALS & STREET LIGHTING. Not used for addons.

** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 **
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,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per Hour:

Electrcian	12% of Hourly Wage Paid + $ 14.40	12% of Hourly Wage Paid + $ 14.94

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY
See (B, E2, H) 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 Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
40%	50%	60%	70%	80%

Supplemental Benefits per hour

Apprentice(s)	12% of Hourly Wage Paid + $ 12.46	12% of Hourly Wage Paid + $ 12.65

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

4-25m

Electrician — 10/01/2009

JOB DESCRIPTION Electrician
DISTRICT 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2009

Electrician/Wireman	$ 45.75
HVAC Controls	45.75
Fire Alarms (low volt included)	45.75

PUMP & TANK WORK
Electrcian/Wireman $ 35.20

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Electrcian/Wireman (all catagories)	16.0% of Hourly Wage Paid + $ 22.69

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

OVERTIME PAY
See (B, E, 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 Percetage of Journeyman(s) Wage

1st	2nd	3rd	4th	5th	6th
35%	40%	45%	50%	60%	70%

Supplemental Benefits per hour

Apprentice(s)

1st Term	3% of Hourly Wage Paid + $ 4.54
2nd Term	3% of Hourly Wage Paid + $ 6.79
3rd Term	16.0% of Hourly Wage Paid + $ 10.21
4th Term	16.0% of Hourly Wage Paid + $ 11.35
5th Term	16.0% of Hourly Wage Paid + $ 13.61
6th Term	16.0% of Hourly Wage Paid + $ 15.88

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Electrician Lineman **10/01/2009**

JOB DESCRIPTION Electrician Lineman **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Queens, Suffolk

WAGES
For Utility Distribution & Transmission Line Construction

Per Hour:	07/01/2009-04/03/2010	04/04/2010
Lineman/Splicer	$ 43.35	$ 45.52
Marerial Man	37.71	39.60
Heavy Equip. Operator	34.68	36.42
Groundman	26.01	27.31
Flagman	19.51	20.48

Undergrond Natural Gasline Mechanic (2" or Less)

	07/01/2009-05/31/2010	06/01/2010
Journeyman U.G.Mech.	$ 35.77	$ 37.92

** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 **
Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per Hour:

Utility Distribution & Transmission Line Construction

	07/01/2009-04/03/2010	04/04/2010
All Classifications	24.5% of Hourly Wage Paid + $ 6.95	25% of Hourly Wage Paid + $ 7.19

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Underground Natural Gas Mechanic

	07/01/2009-05/31/2010	06/01/2010
Journeyman U.G.Mech.	$ 16.57	$ 17.97

OVERTIME PAY
See (B, Q) on OVERTIME PAGE
See (B,G,P) for Natural Gas Mechanic

HOLIDAY
Paid: See (5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE
Overtime: See (1) on HOLIDAY PAGE

REGISTERED APPRENTICES
1000 hour Periods at the following Percentage of Journeyman's Wage.

1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
60%	65%	70%	75%	80%	85%	90%

4-1049 Line/Gas

Elevator Constructor — 10/01/2009

JOB DESCRIPTION Elevator Constructor **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES
Rockland: Entire County except for the Township of Stony Point
Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:	07/01/2009-03/16/2010	03/17/2010
Elevator Constructor	$ 49.78	$ 51.47
Elevator Modernization & Service/Repair	$ 39.65	$ 40.93

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2009-03/16/2010	03/17/2010
Elevator Constructor	$ 25.12	$ 26.44
Modernization & Service/Repair	$ 24.56	$ 25.86

OVERTIME PAY
Constructor. See (C, O) on OVERTIME PAGE.

Modern./Service See (B, H) on OVERTIME PAGE.

HOLIDAY
Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: Per Hour	07/01/2009-03/16/2010	03/17/2010
One (1) year terms at the following Percentage of Elevator Constructor Hourly Rate		
1st Term	50%	50%
2nd Term	55%	55%
3rd Term	65%	65%
4th Term	75%	75%
Modernization & Service/Repair:		
1st Term	50%	50%
2nd Term	55%	55%
3rd Term	65%	65%
4th Term	75%	75%
Supplemental Benefits per hour paid:		
Elevator Constructor:		
1st Term	$ 20.04	$ 21.55
2nd Term	$ 20.96	$ 22.14
3rd Term	$ 21.88	$ 23.85
4th Term	$ 22.70	$ 24.05
Modernization & Service/Repair:		
1st Term	$ 20.32	$ 21.48
2nd Term	$ 20.66	$ 21.82
3rd Term	$ 21.53	$ 22.72
4th Term	$ 22.39	$ 23.61

Glazier — 10/01/2009

JOB DESCRIPTION Glazier **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:	07/01/2009-04/30/2010	05/01/2010
Glazier	$ 46.60	Additional $ 3.45/hour*
Scaffolding	$ 47.60	Additional $ 3.45/hour*
Repair & Maintenance:		
Glazier	$ 25.85	Additional $ 1.00/hour*

*Increase to be allocated at a later date

Repair & Maintenance- All repair & maintenance work on a particular building, whenever performed, where the total cumulative contract value is under $100,000.00.

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyman....	$ 24.69
Glazier Repair & Maintenance**:	$ 14.04

OVERTIME PAY
OVERTIME: See (C*,D*O) on OVERTIME PAGE.

* Denotes if an optional 8th hour is required same will be at the regular rate of pay. If 9th hour is worked then both hours or more (8th and 9th or more) will be at the double time rate of pay.

** For Repair & Maintenance see (B,F, P) on overtime page.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE
The Following are paid holidays for the Repair & Maintenance Class:
New Years day, Presidents day, Memorial day, Independents day, Labor day, Thanksgiving day, Day after Thanksgiving, and Christmas day.

REGISTERED APPRENTICES
Wage per hour:

(1) year terms at the following wage rates.

1st term...	$ 15.65	40% of Journeymans wage
2nd term...	$ 23.33	50% "" "" ""
3rd term...	$ 28.85	60% "" "" ""
4th term...	$ 37.29	80% "" "" ""

Supplemental Benefits:
(Per hour worked)

1st term....	$ 11.42
2nd term....	$ 16.63
3rd term....	$ 18.24
4th term....	$ 21.47

9-1281 (DC9 NYC)

Insulator - Heat & Frost — 10/01/2009

JOB DESCRIPTION Insulator - Heat & Frost **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:	07/01/2009-01/05/2010	01/06/2010
Heat, Frost & Asbestos		additional
Insulator(s)	$ 54.51	$ 2.00/hr

SHIFT WORK:

2nd Shift: Same wage and regular rate

3rd Shift: 14% premium on wage and benefits

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-01/05/2010	01/06/2010
Insulator(s)	$ 24.11	$ 24.11

OVERTIME PAY
See (C, O, V) on OVERTIME PAGE
Wage and benefits for 8th Hour to be paid at time and one half

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:

Apprentice Insulator(s)

1 year terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
40%	60%	70%	80%

Supplemental Benefits per hour:

Apprentice Insulator(s)

Use same % as for Wage of $ 24.11

9-12

Ironworker — 10/01/2009

JOB DESCRIPTION Ironworker **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Wages: (Per Hour)

	07/01/2009
Structural.....	$ 41.05
Riggers.....	$ 41.05
Machinery Movers.....	$ 41.05
Machinery Erectors.....	$ 41.05

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2009
Journeyman..	$ 52.50

OVERTIME PAY
See (B*,E**,Q,V) on OVERTIME PAGE.

* Time and one-half shall be paid for all work in excess of (8) eight hours at the end of a work day to a maximum of two hours on any regular work day (the ninth (9th) and tenth (10th) hours of work)and double time shall be paid for all work thereafter.

** Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:
(Per Hour)

Six (6) month terms at the following wage rate.

1st	2nd	3rd	4th	5th	6th
$21.82	22.42	23.02	23.02	23.02	23.02

Supplemental Benefits:
(Per Hour)

07/01/2009
$ 37.85

9-40/361-Str

Ironworker — 10/01/2009

JOB DESCRIPTION Ironworker **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Rockland: Southern Section

WAGES
Per hour:

	07/01/2009
Reinforcing & Metal Lathing...	$ 49.87

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyman	$ 33.01

OVERTIME PAY
See (*A, E, Q, **V) on OVERTIME PAGE
OVERTIME: See (A*,E,Q,V**) on OVERTIME PAGE.

*,** All overtime in excess of ten (10)hours shall be paid at double wage.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

(1) year terms at the following wage rates:

1st	2nd	3rd
$ 28.55	$ 33.15	$ 38.21

Supplemental Benefits per hour paid:

1st	2nd	3rd
$ 22.56	$ 24.21	$ 25.36

9-46Reinf

Ironworker — 10/01/2009

JOB DESCRIPTION Ironworker **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2009
Ornamental	$ 39.85
Chain Link Fence	$ 39.85
Guide Rail Installation	$ 39.85

Shift Work: Minimum duration of 5 days.

Monday thru Friday:
When two or three shifts are employed, each shift shall work 7 hour days and be paid for 10 1/2 hours. Shifts not completing the full 7 hours shall be paid 1 1/2 times the straight-time rate for the hours worked.

Monday thru Friday: (Guardrail & Sign work only)
When two or three shifts are employed, each shift shall work 7 hours and be paid for 9 hours. Shifts not completing the full 7 hours shall be paid at 1 1/2 times the straight rate for hours worked.

Saturday, Sunday, Holidays:
When two or three shifts are employed, each shift shall work 7 hour days and be paid for 15 3/4 hours. Shifts not completing the full 7 hours shall be paid 2 1/4 times the straight-time rate for the hours worked.

SUPPLEMENTAL BENEFITS

Per hour paid:

	07/01/2009
Journeyman:	$ 36.17

OVERTIME PAY

OVERTIME: See (A*,D1,E**,Q,V) on OVERTIME PAGE.

*Time and one-half shall be paid for all work in excess of seven (7) hours at the end of a work day to a maximum of two (2) hours on any regular work da (8th & 9th hours of work) and double time shall be paid for all work thereafter.
**Time and one-half shall be paid for all work on Saturday up to seven (7) hours and double time shall be paid for all work thereafter.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1st term represents first 1-4 months, thereafter (1/2) year terms at the following percentage of Journeyman's wage.

APPRENTICES:

1st	2nd	3rd	4th	5th	6th
50%	50%	55%	60%	70%	80%

Supplemental Benefits per hour paid:

	07/01/2009
APPRENTICES:	
1st Term	$ 28.69
2nd Term	28.69
3rd Term	29.41
4th Term	30.33
5th Term	31.55
6th Term	32.97

9-580-Or

Ironworker **10/01/2009**

JOB DESCRIPTION Ironworker **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2009	07/01/2010 Additional

Derrickman/Rigger	$ 52.50	$1.50*

*Increase to be allocated at a later date

SUPPLEMENTAL BENEFITS

Journeyman	07/01/2009	07/01/2010
	$ 27.03	$ 27.03

OVERTIME PAY
OVERTIME See (A*,D1,E**,Q,V) on OVERTIME PAGE.

*Time and one-half shall be paid for all work in excess of seven (7) hours at the end of a work day to a maximum of two hours on any regular work day (the eighth (8th) and ninth (9) hours of work) and double time shall be paid for all work thereafter.
**Time and one-half shall be paid for all work on Saturday up to seven (7) hours and double time shall be paid for all work thereafter.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 10) on HOLIDAY PAGE
HOLIDAY:
Paid:.....See (1) on HOLIDAY PAGE.
Overtime:....See (5*, 6*, 8**, 24***, 25**) on HOLIDAY PAGE.

*No work shall be performed on this day, except in cases of emergency. Such work shall be done at double time rate of pay.
**Double time rate of pay.
***Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES
Wage per hour:

(1/2) year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th
50%	50%	70%	80%	90%	90%

Supplemental benefits per hour paid:

Registered Apprentice	
1st year	50% of journeyman's rate
All others	75% of journeyman's rate

9-197D/R

Laborer - Building — 10/01/2009

JOB DESCRIPTION Laborer - Building **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009
Building Laborer	$ 31.85
Asbestos Abatement Worker (Re-Roofing see Roofer)	$ 31.50

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
Building Laborer	$ 22.51
Asbestos Worker	$ 11.60

OVERTIME PAY
See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Regular Hours Work Terms (Not Available for Abatment Work)

TERM #1	1 hr to 1000hrs
TERM #2	1001hrs to 2000hrs
TERM #3	2001hrs to 3000hrs
TERM #4	3001hrs to 4000hrs

Wages per hour:
APPRENTICES (Not Allowed on Abatment Work)

TERM #1	$ 16.00
TERM #2	19.00
TERM #3	21.75
TERM #4	24.50

Supplemental Benefits per hour:

APPRENTICES

TERM #1	$ 14.59
TERM #2	16.16
TERM #3	16.92
TERM #4	17.77

4-66

Laborer - Heavy&Highway **10/01/2009**

JOB DESCRIPTION Laborer - Heavy&Highway **DISTRICT** 4

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:	07/01/2009
GROUP # 1	$ 33.89
GROUP # 2	$ 32.94
GROUP # 3	$ 30.05

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

ALL GROUPS	$ 24.45
After Forty (40)paid Hours in a work Week	$ 15.92

OVERTIME PAY
See (B, E2, F) on OVERTIME PAGE
NOTE: Premium Pay of 25% of wage for all Straight time hours on all New York State D.O.T. and other Goverment Mandated Off-Shift Work

NOTE: Hazardous Material Work add an Additional 10% of Hourly Rate

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (1) on HOLIDAY PAGE

REGISTERED APPRENTICES
One (1) Year Terms at the following Pecentage of the Journeyman's Wage

1st	2nd
80%	90%

Supplemental Benefits per hour:

APPRENTICES $ 24.45

After Forty (40)paid
Hours in a work Week $ 15.92

4-1298

Mason — 10/01/2009

JOB DESCRIPTION Mason **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2009

Brick/Blocklayer $ 48.50

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Brick/Block Layer $ 22.04

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 Journeymans Wage:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices $ 13.11

9-1Brk

Mason - Building — 10/01/2009

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2009

Building:
Tile Finisher $ 37.68

SUPPLEMENTAL BENEFITS
Journeyman $ 21.40

OVERTIME PAY
See (A, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 10, 11, 15, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:
(per hour paid)

(750 hour) terms at the following percentages of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	65%	70%	75%	85%	90%	95%

Supplemental Benefits:
(per hour paid)

(750) hour terms at the following percentages of journeyman's wage:

Apprentices.

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	65%	70%	75%	85%	90%	95%

9-7/88-tf

Mason - Building — 10/01/2009

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2009
Building:Marble Restoration Marble, Stone, etc & Polisher	$ 36.26
Marble, Stone, etc Finishers	$ 18.94

SUPPLEMENTAL BENEFITS

Journeyman:	07/01/2009
Polisher	$ 19.80
Finisher	10.47

OVERTIME PAY
See (A, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (*5, 6, 11, 15) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15) on HOLIDAY PAGE
* Journeymen receive 1/2 days pay for Labor Day. Cleaner, Maintenance and 1ST three terms of Apprentices see (5, 6, 11, 15)on HOLIDAY PAGE. All others See (1) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages:
(per hour worked)

Polisher:
900 hour terms at the following percentage of Journeyman's wage.

Term:	1st	2nd	3rd	4th
Hours:	1-900	901-1800	1801-2700	2701-3600
	70%	80%	90%	100%

Finisher:
750 hour terms at the following percentage of Journeyman's wage.

Term:	1st	2nd	3rd	4th	5th	6th	7th
Hours:	1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250
	70%	74%	78%	82%	88%	96%	100%

Supplemental Benefits:
(per hour worked)
Polisher: 07/01/2009

Term wage % of $6.50
plus $13.30

Finisher: $ 10.47

9-7/24

Mason - Building 10/01/2009

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2009

Building:
Tile Setters $ 46.83

Shift Work:
12:01am Monday-
12:00midnight Friday $ 58.53

12:01am Saturday-
12:midnight Saturday $ 70.24

12:01am Sunday-
12:00midnight Sunday $ 93.66

SUPPLEMENTAL BENEFITS
Journeyman: $ 24.65

OVERTIME PAY
See (A, E, Q, *V) on OVERTIME PAGE
*Applicable to Shift Work ONLY

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 10, 11, 15, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:
(750 hr)terms at the following wage rates.

Term:	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Hours:	1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750
Wages:	$22.73	25.18	29.93	32.26	34.72	39.47	41.82	44.10	45.32

Supplemental Benefits per hour paid:

Term:	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Hours:	1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750
Supps.	$12.00	13.03	15.23	16.37	17.38	19.58	20.70	21.90	24.15

9-7/52

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building:	07/01/2009
Mosaic & Terrazzo Mechanic	$ 42.14
Mosaic & Terrazzo Finisher	$ 40.65

SUPPLEMENTAL BENEFITS

Journeyman:	$ 29.26

OVERTIME PAY
See (A, 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:
(750 Hour) terms at the following percentage of the Terrazzo Mechanic's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000
50%	55%	65%	70%	75%	85%	90%	95%

Supplemental benefits per hour paid:
(750 hour) terms at the following percentage of Terrazzo Mechanic's benefit.

1st	2nd	3rd	4th	5th	6th	7th	8th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000
50%	55%	65%	70%	75%	85%	90%	95%

9-7/3

Mason - Building / Heavy&Highway 10/01/2009

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 9

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:	07/01/2009
Stone Setter	$ 55.34
Stone Tender	$ 36.68

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
Stone Setter	$ 23.23
Stone Tender	$ 15.28

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 seven (7) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (8, 25) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour: 07/01/2009

Stone Setter(750 hour) terms at the following wage rate per hour:

1st term	2nd term	3rd term	4th term	5th term	6th term
$27.71	$32.15	$36.58	$41.02	$45.45	$49.89

Supplemental Benefits for all terms

07/01/2009

$ 14.69

9-1Stn

Mason - Building / Heavy&Highway — 10/01/2009

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per hour: 07/01/2009

Marble-Finisher $ 41.30

SUPPLEMENTAL BENEFITS
Journeyman $ 24.33

OVERTIME PAY
See (C, O, V) on OVERTIME PAGE

HOLIDAY
Paid: See (*2) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
* 1/2 Day for Labor Day.

REGISTERED APPRENTICES
Wages:

750 hour terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000
50%	55%	65%	70%	75%	85%	90%	95%

Supplemental Benefits: 07/01/2009

1st-6th terms $14.50 + term wage % of $9.83

7th and 8th terms $24.33

9-7/20-MR

Mason - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Mason - Heavy&Highway **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2009

(MASON)
Pointer, Cleaner &
Caulkers $ 41.19

SUPPLEMENTAL BENEFITS
Pointer, Cleaners & Caulkers $ 21.32

OVERTIME PAY
See (B, E2, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:
(Per hour)

One (1) year terms at the following wage rates.

	1st	2nd	3rd	4th
07/01/2009	$ 22.16	$ 25.41	$ 30.14	$ 36.57

Apprentices Supplemental Benefits:
(per hour paid)

	1st	2nd	3rd	4th
07/01/2009	$ 3.15	$ 7.21	$ 10.21	$ 10.21

9-1PCC

Mason - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Mason - Heavy&Highway **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2009

Cement Mason $ 47.50

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Cement Mason $ 26.61

OVERTIME PAY
See (D, O, V) on OVERTIME PAGE

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 Journeymans Wage.

1st Term	50%
2nd Term	60%
3rd Term	70%

Supplement Benefits per hour paid:
Apprentices:

1st term	$ 17.25
2nd term	19.13
3rd term	20.99

9-780

Operating Engineer - Building — 10/01/2009

JOB DESCRIPTION Operating Engineer - Building **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
BUILDING CATEGORIES:

CLASS " AA "CRANES:
Crane, Truck Crane, Derrick, Dragline, Dredge, Crawler Crane, Tower Crane & Pile Driver.

CLASS "A":
Asphalt Spreader, Backhoe Crawler, Boiler, Boring Machine, Cherry Picker (over 50 tons), Concrete Pump, Gradall, Grader, Hoist,Loading Machine (10 yds. or more), Milling Machine, Power Winch - Stone Setting/Structural Steel & Truck Mounted, Powerhouse, Road Paver, Scoop-Carryall-Scraper in Tandem, Shovel, Sideboom Tractor, Stone Spreader (self-propelled), Tank Work, Tower Crane Engineer.

CLASS "B":
Backhoe, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker (under 50 Tons), Conveyor-Multi, Dinkey Locomotive, Fork Lift, Hoist (2 Drum), Loading Machine & Front Loader, Mulch Machine (Machine Fed), Power Winches (Not Included in Class "A"), Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall, Scaper, Maintenance Man on Tower Crane, Trenching Machine, Vermeer Cutter, Work Boat.

CLASS "C":
Curb Machine, Maintenance Engineer (Small Equip. & Well Point), Field Mechanic, Milling Machine (Small), Pulvi Mixer, Pumps (all), Roller (dirt), Ridge Cutter, Vac-All, Shotblaster, Striping Machine, Interior Hoist, Concrete Finish Machine, ConcreteSpreader, Conveyer, Curing Machine, Hoist (one drum).

CLASS "D":
Concrete Breaker, Concrete Saw/Cutter, Fork Life or Walk Behind (power operated), Generator, Hydra Hammer, Compactors (mechanical or hand operated), Pin Puller, Portable Heaters, Power Booms, Power Buggies, Pump (double action diaphragm).

CLASS "E":
Batching Plant, Generator, Grinder, Mixer, Mulching Machine, Oiler, Pump (gypsum), Pump (single action diaphragm), Stump Chipper, Track Tamper, Tractor (caterpiller or wheel), Vibrator, Deckhand on Workboat.

	07/01/2009
Class "AA"	$ 55.50
Cranes: Boom length over 100 feet add $ 1.00 per hour	
" " " 150 " " $ 1.50 " "	
" " " 250 " " $ 2.00 " "	
" " " 350 " " $ 3.00 " "	
Class "A"	$ 46.04*
*Add $3.50 for Hazardous Waste Work	
Class "B"	$ 43.65*
*Add $2.50 for Hazardous Waste Work	
Class "C"	$ 42.06*
*Add $1.50 for Hazardous Waste Work	
Class "D"	$ 38.85
Class "E"	$ 37.24

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
ALL CLASSES	$ 28.19
NOTE: Overtime Rate	$ 22.85

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE
"NOTE": Employee must be employed day before and day after a holiday to receive holiday pay.

REGISTERED APPRENTICES

One(1) Year Terms at the following Rate:

	07/01/2009
1st Term	$ 20.84
2nd Term	21.67
3rd Term	22.33

Supplemental Benefits per hour:

APPRENTICES	$ 15.89
Note: OVERTIME AMOUNT	5.85

4-138

Operating Engineer - Building / Heavy&Highway — 10/01/2009

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour:

	07/01/2009
Well Driller	$ 30.51
Well Driller Helper	$ 26.83

Hazardous Waste Differential
Added to Hourly Wage:

Level A	$ 3.00
Level B	2.00
Level C	1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	$ 3.00
Level B	2.00

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2009
Well Driller	$ 10% of straight
Well Driller Helper	time rate plus $ 9.95
(NOTE)	Additional $3.00 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

4-138well

Operating Engineer - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Operating Engineer - Heavy&Highway **DISTRICT** 4

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:	07/01/2009
Heavy Highway/Building	
Party Chief	$ 52.90
Instrument Man	39.64
Rodman	34.84
Steel Erection	
Party Chief	$ 53.26
Instrument Man	41.77
Rodman	28.43

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
Heavy Highway/Building	$ 24.20
Steel Erection	$ 24.20

OVERTIME PAY
See (B, *E, Q) on OVERTIME PAGE
* Doubletime paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 8, 11, 12, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 12, 15, 25) on HOLIDAY PAGE

4-15D-N/S co.

Operating Engineer - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Operating Engineer - Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
HEAVY/HIGHWAY CATEGORIES:

CLASS "AA" CRANES:
Crane, Truck Crane, Derrick, Dragline, Dredge, Crawler Crane, Tower Crane, Pile Driver.

CLASS "A":
Asphalt Spreader, Backhoe Crawler, Boiler Cherrypicker (over 50 tons), Concrete Pump, Grader, Gradall, Hoist Loading Machine 10 yds. or more), Milling Machine, Power Winch-Stone Setting/Structural Steel or Truck Mounted, Powerhouse, Road Paver, Scoop-Carryall-Scaper in Tandem, Shovel, Sideboom Tractor, Stone Spreader (self propelled), Tank Work, Track Alignment Machine.

CLASS "B":
Backhoe, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker (under 50 tons), Conveyor-Multi, Dinky Locomotive, Fork Lift, Hoist (2 drum), Loading Machine & Front Loader, Mulch Machine (machine fed), Power Winches (all others not included in CLASS A), Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall, Scaper, Maintenance Man on Tower Crane, Trenching Machine, Vermeer Cutter, Work Boat.

CLASS "C":
Curb Machine, Maintenance Engineer (Small Equip. & Well Point), Field Mechanic, Milling Machine (Small), Pulvi-Mixer, Pumps, Roller (Dirt), Vac-All, Welding/Burning, Compressor (Structural Steel & 2 or more Batteries), Concrete Finish Machine, Concrete Spreader, Conveyor, Curing Machine, Fireman, Hoist (One Drum), Ridge Cutter, Striping Machine, Welding Machine (Structural Steel & Pile Work).

CLASS "D":
Compressor (Pile,Crane,Stone Setting), Concrete Saw Cutter/ Breaker, Work Lift (Walk Behind,Power Operated), Generator (Pile Work),Hydra Hammer, Hand Operated Compactor, Pin Puller, Portable Heater, Powered Broom/Buggy/Grinder, Pump (Single Action-1 to 3 Inches/Gypsum/Double Action Diaphragm), Hand Trenching Machine, Welding Machine.

CLASS "E":
Batching Plant, Generator, Grinder, Mixer, Mulching Machine, Oiler, Pump (Centrifugal up to 3 In.), Root Cutter, Stump Chipper, Oiler on Tower Crane, Track Tamper, Tractor, Vibrator, Deckhand on Work Boat.

07/01/2009

Class "AA"	$ 54.85

Cranes: Boom Length over 100 feet add $ 1.00 per hour
" " " 150 " " $ 1.50 " "
" " " 250 " " $ 2.00 " "
" " " 350 " " $ 3.00 " "

Class "A"	$ 48.47*

*Add $3.50 for Hazardous Waste Work.

Class "B"	$ 45.24*

*Add $2.50 for Hazardous Waste Work.

Class "C"	$ 43.61*

*Add $1.50 for Hazardous Waste Work

Class "D"	$ 40.33
Class "E"	$ 38.71

"NOTE": PREMIUM PAY of 25% on straight time hours for NEW YORK STATE-D.O.T. and other GOVERNMENTAL MANDATED off-shift work.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
ALL CLASSES	$ 28.44
Note: OVERTIME AMOUNT	$ 22.85

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 9, 15) on HOLIDAY PAGE

"NOTE": Employee must be employed day before and day after a holiday to receive holiday pay.

REGISTERED APPRENTICES
One(1) Year Terms at the following Rate:

1st Term	$ 20.84
2nd Term	21.67
3rd Term	22.33
APPRENTICES	$ 15.89
Note: OVERTIME AMOUNT	5.85

4-138

Operating Engineer - Marine Construction — 10/01/2009

JOB DESCRIPTION Operating Engineer - Marine Construction **DISTRICT** 4

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES
Per Hour:

DREDGING OPERATIONS	07/01/2009
CLASS A Operator, Leverman, Lead Dredgeman	$ 32.89
CLASS A1 Dozer, Front Loader	To Conform to Operating Engineer Prevailing Wage in Locality where Work

Operator	is being Performed including Benefits.
CLASS B	
Spider/Spill Barge Operator, Tug Operator(over1000hp), OperatorII, Fill Placer, Derrick Operator, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer	$ 28.49
Certified Welder, Boat Operator(licensed)	$ 26.84
CLASS C	
Drag Barge Operator, Steward, Mate, Assistant Fill Placer,	$ 26.14
Welder (please add)	$ 0.06
Boat Operator	$ 25.29
CLASS D	
Shoreman, Deckhand, Rodman, Scowman, Cook, Messman, Porter/Janitor	$ 21.09
Oiler(please add)	$ 0.09

SUPPLEMENTAL BENEFITS
Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

	07/01/2009
All Classes A & B	$ 8.05 plus 7% of straight time wage
(overtime hours add)	$ 0.63
All Class C	$ 7.75 plus 7% of straight time wage
(overtime hours add)	$ 0.48
All Class D	$ 7.45 plus 7% of straight time wage
(overtime hours add)	$ 0.23

OVERTIME PAY
See (B, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Trenchless Pipe Rehab — 10/01/2009

JOB DESCRIPTION Operating Engineer - Trenchless Pipe Rehab **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour:

	07/01/2009
DSET/DSSET Operator	$ 31.50
Robotic Unit Operator	31.50
DDCC Injection Operator	31.50
Technician/Equipment Operator	27.00
AM Liner/Hydra Seal Installer	27.00
Hobas Pipe, Polyethyene Pipe or Pull and Inflate Liner Inst.	27.00

SUPPLEMENTAL BENEFITS
Per Hour Worked

All Classifacations	$ 11.34

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
At One Year Terms
(Per Hour)

First Year	$ 16.00
Second Year	16.75
Third Year	17.25
Fourth Year	18.00

Supplemental Benifit
(Per Hour Worked)
All Terms $ 11.34

4-138TrchPReh

Painter — 10/01/2009

JOB DESCRIPTION Painter **DISTRICT** 9

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per hour:

	07/01/2009
Drywall Taper	$ 35.00

SUPPLEMENTAL BENEFITS
Per hour worked:

Journeyman	$ 23.14

OVERTIME PAY
See (A, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages(per Hour)

	07/01/2009
1st Year	$ 13.25

2nd Year	17.50
3rd Year	21.00
4th Year	28.00

Suppemental Benefits:
(per Hour)

1st year	$10.27
2nd Year	13.50
3rd year	16.26
4th year	21.34

9-NYDCT9-DWT

Painter — 10/01/2009

JOB DESCRIPTION Painter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES
(Per hour) 07/01/2009

Brush	$ 35.00
Spray & Scaffold	38.00
Fire Escape	38.00
Decorator	38.00
Paperhanger/Wall Coverer	36.83

SUPPLEMENTAL BENEFITS
(per hour worked) 07/01/2009

Paperhanger	$ 27.25
All others	23.14

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
Indentured after 5/31/93 (1) year terms at the following wage rate.
(per hour)

Appr 1st term...	$ 13.25
Appr 2nd term...	17.50
Appr 3rd term...	21.00
Appr 4th term...	28.00

Spplemental benefis:
(per Hour worked)

Appr 1st term...	$10.27
Appr 2nd term...	13.50
Appr 3rd term...	16.26
Appr 4th term...	21.34

9-NYDC9-B/S

Painter - Bridge & Structural Steel — 10/01/2009

JOB DESCRIPTION Painter - Bridge & Structural Steel **DISTRICT** 9

ENTIRE COUNTIES
Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

(Per Hour Worked)	07/01/2009	10/01/2009	10/01/2010
STEEL:			
Bridge Painting	$ 45.25	$ 45.50	$ 46.25

Power Tool/Spray	$ 51.25	$ 51.50	$ 52.25

Shift Work: Where project specifications and/or contract provide for night work outside the regular hours of work, and said night work is performed on a second shift, which is separate from the first crew, the night shift employees shall be paid an additional 10% of the regular wage up to seven (7) hours, after which they shall be paid at time and one half the regular wage. If only a night shift is employed, the employees shall be paid at time and one half.

Note: For Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS
Per Hour Worked:

	07/01/2009	10/01/2009	10/01/2010
Journeyman	$ 28.31* $ 28.31**	$ 29.90* $ 29.90**	$ 31.04* $ 31.04**
Hourly Rate after 40 hours from May 1st to Nov. 15th	$5.00 only	$6.00 only	$6.75 only
Hourly Rate after 50 hours from Nov. 16th to April 30th	$5.00 only	$6.00 only	$6.75 only

*For the period of May 1st to November 15th:
This rate shall be paid up to maximun of forty (40) hours worked per week. For all hours exceeding 40, the hourly rate shall drop to the hourly rate shown above by date.
EXCEPT for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

**For the period of November 16th to April 30th:
This rate shall be paid up to a maximun of fifty (50) hours worked per week. For all hours exceeding 50, the hourly rate shall drop to the hourly rate shown above by date.

OVERTIME PAY
See (A, F, R) on OVERTIME PAGE
*Note: When calculating overtime pay for the Power Tool/ Spray classification, add Six dollars to the hourly overtime rate calculated for the "Bridge Painting" classification.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
(wage per hour Worked):

(1) year terms at the following percentage of Journeyman's wage.

Apprentices:	1st	2nd	3rd
07/01/2009	40%	60%	80%

Supplemental Benefits:

1st Term: Same as Journeyman excluding the additional $5.00 per hour paid.

2nd and 3rd term: Same as Journeyman

9-DC-9/806/155-BrSS

Painter - Line Striping **10/01/2009**

JOB DESCRIPTION Painter - Line Striping **DISTRICT** 9

ENTIRE COUNTIES
Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES
Per hour:

Painter (Striping-Highway): 07/01/2009

Striping-Machine Operator*	$ 25.53
Linerman Thermoplastic	$ 30.79

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

SUPPLEMENTAL BENEFITS
Per hour paid: 07/01/2009
Journeyman: $ 9.97 + 7% of wage

OVERTIME PAY
See (B, E, P, S) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

9-8A/28A-LS

Painter - Metal Polisher — 10/01/2009

JOB DESCRIPTION Painter - Metal Polisher **DISTRICT** 9

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2009
Metal Polisher	$ 24.85*

*Note: All workers shall be paid an additional premium in an amount equal to twenty (20%) percent of their basic straight time rate of pay for all time worked on hanging scaffolds and on standing scaffolds while working more than 34 feet off the ground. Such premium are to be paid on top of their straight time or overtime, whichever is applicable. This also applies to employees erecting scaffolding.

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Journeyman: $ 11.02

OVERTIME PAY
See (B, E, Q, T) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
55% of Basic Polisher Rate

9-8A/28A-MP

Plasterer — 10/01/2009

JOB DESCRIPTION Plasterer **DISTRICT** 9

ENTIRE COUNTIES
Kings, Nassau, Queens, Suffolk

PARTIAL COUNTIES
New York: Includes work in all Islands in New York City, except Manhattan.

WAGES
Per hour:

	07/01/2009
Building:	
Plasterer/Traditional	$ 35.53

SUPPLEMENTAL BENEFITS
Per hour worked:
Journeyman $ 21.80

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:
(per hour)

(1) year terms at the following % journeyman's wage rate.

First year:	1st 6 months	2nd 6 months
	40%	45%
Second year:	1st 6 months	2nd 6 months
	55%	60%
Third year:	1st 6 months	2nd 6 months
	70%	75%

Supplemental Benefits:
(per hour paid):
(1) year term broken down into six month periods:
1st year:

1st six months	$ 8.37
2nd six months	9.35
3rd six months	11.35
4th six months	12.33
5th six months	14.33
6th six months	15.33

9-530-Z1

Plumber **10/01/2009**

JOB DESCRIPTION Plumber **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009-04/30/2010	05/01/2010
Plumber/ PUMP & TANK	$ 42.24	$ 42.49

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-04/30/2010	05/01/2010
Plumber	$ 19.57	$ 20.82

OVERTIME PAY
See (B, N, V) on OVERTIME PAGE
(V) Sunday & Holidays 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 Wage Per Hour:

	07/01/2009-04/30/2010	05/01/2010
1st Term	$ 9.77	$ 9.85

2nd Term	15.37	15.47
3rd Term	20.96	21.09
4th Term	26.80	26.95

Supplemental Benefits per hour:

1st Term	$ 8.39	$ 9.69
2nd Term	8.89	10.29
3rd Term	9.39	10.89
4th Term	9.64	11.24

4-200 Pump & Tank

Plumber **10/01/2009**

JOB DESCRIPTION Plumber **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009-04/31/2010	05/01/2010
Plumber MAINTENANCE ONLY	$ 28.07	$ 29.46

(NOTE)
Maintenance: Correction of problem(s)with the existing fixture or group of fixtures, preventive repairs or servicing of said fixtures.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-04/31/2010	05/01/2010
Plumber MAINTENANCE ONLY	$ 9.40	$ 9.65

OVERTIME PAY
See (B, J) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
One(1) Year Terms, WAGES Per Hour as Follows:

	07/01/2009-04/31/2010	05/01/2010
1st term	$ 14.29	$ 15.00
2nd term	$ 15.38	$ 16.15
3rd term	$ 16.53	$ 17.35
4th term	$ 17.72	$ 18.61
5th term	$ 18.96	$ 19.91

SUPPLEMENTS PER HOUR

1st term	$ 7.90	$ 8.19
2nd term	$ 7.90	$ 8.19
3rd term	$ 7.90	$ 8.19
4th term	$ 7.90	$ 8.19
5th term	$ 7.90	$ 8.19

4-200 Maintance

JOB DESCRIPTION Plumber **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Per Hour:	07/01/2009-04/30/2010	05/01/2010
Plumber	$ 47.73	$ 47.73

SUPPLEMENTAL BENEFITS
Per Hour:

Plumber	$ 26.68	$ 27.93

OVERTIME PAY
See (A, O, V) on OVERTIME PAGE
CODE "V" is only for SUNDAYS and HOLIDAYS 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:

	07/01/2009-04/30/2010	05/01/2010
1st Term	$ 13.37	$ 14.62
2nd Term	15.75	16.63
3rd Term	17.11	18.26
4th Term	18.63	19.78
5th Term	20.21	21.36

4-200

Roofer **10/01/2009**

JOB DESCRIPTION Roofer **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES

Rate Per Hour	07/01/2009
Roofer/Waterproofer	$ 37.50

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009
Roofer/Waterproofer	$ 25.37

OVERTIME PAY
Per Hour:
NEW ROOF SEE (B,E,Q)
RE-ROOF SEE (B,E,E2,Q)

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 pecentage of Roofers/Waterproofers Wage

1st	2nd	3rd	4th
40%	50%	70%	80%

Supplemental Benefits per hour:

1st Term	$ 2.00
2nd Term	6.33
3rd Term	14.67
4th Term	19.96

4-154

Sheetmetal Worker — 10/01/2009

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2009

Sheetmetal Worker	$ 45.40

For Temporary Operation or
Maintenance of Fans is 80% of Above Wage Rate

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Sheetmetal Worker	$ 35.18

OVERTIME PAY
See (A, O) on OVERTIME PAGE
For Fan Maintenance See Codes B & O

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:

(1/2) Year Terms at the following percentage of journeyman's hourly wage:

1st	2nd	3rd	4th
30%	35%	40%	45%
5th	6th	7th	8th
50%	55%	60%	70%

Supplemental Benefits per hour:

1st Term	$ 14.56
2nd Term	16.32
3rd Term	17.92
4th Term	19.50
5th Term	21.07
6th Term	22.53
7th Term	24.44
8th Term	28.13

4-28

Sheetmetal Worker — 10/01/2009

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per Hour: 07/01/2009

SIGN ERECTOR $39.70

*NOTE: Overhead Highway Signs and Structurally Supported Signs
(See IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS
PER HOUR 07/01/2009

$26.27

OVERTIME PAY
See (A, F, S) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 12, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour: 07/01/2009

Half (1/2) year terms at the following rate(s):

1st	2nd	3rd	4th	5th
35%	40%	45%	50%	55%
6th	7th	8th	9th	10th
60%	65%	70%	75%	80%

Supplemental Benefits per hour paid:
Half (1/2) year terms at the following dollar amount

07/01/2009

1st	$7.21
2nd	$8.17
3rd	$9.14
4th	$10.10
5th	$13.58
6th	$15.41
7th	$16.65
8th	$17.92
9th	$19.59
10th	$21.19

9-137-SE

Steamfitter — 10/01/2009

JOB DESCRIPTION Steamfitter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour	07/01/2009-12/29/2009	12/30/2009
Steam Fitter	$ 48.90	*Additional $ 2.50/Hr
Sprinkler Fitter	48.90	*Additional $ 2.50/Hr
For Work on Temporary Heat & Air Conditioning	$ 37.16	*Additional $ 2.50/Hr

*Increase to be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per Hour

Steamfitter	$ 41.56
Sprinkler Fitter	41.56
(For Work on Temporary Heat & Air conditioning).	$ 33.47

OVERTIME PAY
See (C, *D, O, V) on OVERTIME PAGE
(*D) ON ALL HVAC AND MECHANICAL CONTRACTS THAT DO NOT EXCEED $15,000,000.00
and ON ALL FIRE PROTECTION/SPRINKLER CONTRACTS THAT DO NOT EXCEED $ 1,500,00.00

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour worked:

(1) year terms at the following percentage of Journeyman's wage.

Apprentices:	1st	2nd	3rd	4th	5th
	40%	50%	65%	80%	85%

Suppelmental Benefits:
(1) year term at the following dollar amounts:

Apprentices:	1st	2nd	3rd	4th	5th
07/01/2009	$17.17	$21.24	$27.34	$33.43	$35.47

9-638A-StmSpFtr

Steamfitter **10/01/2009**

JOB DESCRIPTION Steamfitter **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2009-12/31/2009	01/01/2010
Steamfitter/Maintenance & AC Service Work	$ 34.55	*Additional $ 1.00/Hr.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.
Refrigeration Compressor installation up to 5hp (combined).
Air Condition / Heating Compressor installation up to 10hp (combined).

*Increase to be allocated at a later date

SUPPLEMENTAL BENEFITS
Per Hour

Steamfitter/Maintenance & AC Service Work	$ 10.52

OVERTIME PAY
OVERTIME:....See (B, E, Q*, S**) on OVERTIME PAGE.

HOLIDAY
HOLIDAY:
Paid:.....See (2, 6, 9, 10, 11, 15, 17, 26,Memorial Day) on HOLIDAY PAGE.
Overtime:.... * (2, 6, 9, 15, 17)
** (10, 11, 26, Memorial Day)

9-638B-StmFtrRef

Survey Crew Consulting — 10/01/2009

JOB DESCRIPTION Survey Crew Consulting **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Dutchess: Only the portion south of the north city line in Poughkeepsie.

WAGES
Feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer agreement.
Categories cover GPS & underground surveying.

WAGES: (per hour)

	07/01/2009
Survey Rates:	
Party Chief.....	$ 33.70
Instrument Man..	$ 28.38
Rodman.....	$ 25.02

SUPPLEMENTAL BENEFITS
Per Hour

All Crew Members:	$ 11.70

OVERTIME PAY
OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.
*Doubletime paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Teamster - Asphalt Delivery — 10/01/2009

JOB DESCRIPTION Teamster - Asphalt Delivery **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2009

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.

"TRUCK DRIVER"

Asphalt Delivery	$ 33.90

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.

"TRUCK DRIVER"

Asphalt Delivery	$ 20.00

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

"Heavy Construction Work"

"TRUCK DRIVER"

Asphalt Delivery	$ 30.87

"Light Construction Work"

"TRUCK DRIVER"

Asphalt Delivery	$ 13.75

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 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
NOTE:(*16) Paid at Double if Worked. (**25) Paid at Double if Worked.

4-282 AD

Teamster - Building — 10/01/2009

JOB DESCRIPTION Teamster - Building **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2009-06/30/2010	07/01/2010
Truck Driver (Building Demolition & Debris)		
Trailers	$ 28.85	$ 29.85
Straight Jobs	28.55	29.55

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-06/30/2010	07/01/2010
All Classifications	$ 23.15	$ 24.35

OVERTIME PAY
See (B, L, S, S1) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 8, 11, 12, 26) on HOLIDAY PAGE

4-282

Teamster - Delivery of Concrete — 10/01/2009

JOB DESCRIPTION Teamster - Delivery of Concrete **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2009

Heavy Construction Work:
Shall Include the supply of Ready-Mix Concrete for construction, improvment and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools & Power Generation Plants

"TRUCK DRIVER"

Concrete Delivery $ 35.51

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.

"TRUCK DRIVER"

Concrete Delivery $ 23.00

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

"Heavy Construction Work"

Concrete Delivery $ 28.45

"Light Construction Work"

Concrete Delivery $ 14.50

OVERTIME PAY
See (B, E, *I, P) on OVERTIME PAGE
NOTE: (B,E & P) Apply only to Heavy Construction Work.
(*I) Applies only to Light Construction Work.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, *16, **25) on HOLIDAY PAGE
NOTE:(*16) Paid at Double if Worked. (**25) Paid at Double if Worked.

4-282ns

Teamster - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Teamster - Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2009-06/30/2010	07/01/2010
Truck Driver/Chauffer (Debris Removal)		
Trailers	$ 28.85	$ 29.85
Straight Jobs	$ 28.55	$ 29.55

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2009-06/30/2010	07/01/2010

All Classifications $ 23.15 $ 24.35

OVERTIME PAY
See (B, L, S, S1) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 8, 11, 12, 26) on HOLIDAY PAGE

4-282

Teamster - Heavy&Highway — 10/01/2009

JOB DESCRIPTION Teamster - Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Suffolk

WAGES
Per Hour: 07/01/2009

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.

Site Excavating
(Chauffeurs) $ 33.90

Light Construction Work:
Shall include the construction, improvment and modification of Single & Multi Family Homes, Town Houses, Apartment Buildings, including driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings.

Site Excavating
(Chauffeurs) $ 20.00

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2009

Heavy Construction Work

Chauffeurs $ 30.87

Light Construction Work

Chauffers $ 13.75

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
NOTE:(*16) Paid at Double if Worked. (**25) Paid at Double if Worked.

4-282

Welder — 10/01/2009

JOB DESCRIPTION Welder **DISTRICT** 1

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES
Per hour 07/01/2009

Welder (To be paid the same rate of the mechanic performing the work)

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

(A)	Time and one half of the hourly rate after 7 hours per day
(AA)	Time and one half of the hourly rate after 7 and one half hours per day
(B)	Time and one half of the hourly rate after 8 hours per day
(B1)	Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday. Double the hourly rate for all additional hours
(B2)	Time and one half of the hourly rate after 40 hours per week
(C)	Double the hourly rate after 7 hours per day
(C1)	Double the hourly rate after 7 and one half hours per day
(D)	Double the hourly rate after 8 hours per day
(D1)	Double the hourly rate after 9 hours per day
(E)	Time and one half of the hourly rate on Saturday
(E1)	Time and one half 1st 4 hours on Saturday Double the hourly rate all additional Saturday hours
(E3)	Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
(E2)	Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(E4)	Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(F)	Time and one half of the hourly rate on Saturday and Sunday
(G)	Time and one half of the hourly rate on Saturday and Holidays
(H)	Time and one half of the hourly rate on Saturday, Sunday, and Holidays
(I)	Time and one half of the hourly rate on Sunday
(J)	Time and one half of the hourly rate on Sunday and Holidays
(K)	Time and one half of the hourly rate on Holidays
(L)	Double the hourly rate on Saturday
(M)	Double the hourly rate on Saturday and Sunday
(N)	Double the hourly rate on Saturday and Holidays
(O)	Double the hourly rate on Saturday, Sunday, and Holidays
(P)	Double the hourly rate on Sunday
(Q)	Double the hourly rate on Sunday and Holidays
(R)	Double the hourly rate on Holidays
(S)	Two and one half times the hourly rate for Holidays, if worked
(S1)	Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
(T)	Triple the hourly rate for Holidays, if worked

(U) Four times the hourly rate for Holidays, if worked

(V) Including benefits at SAME PREMIUM as shown for overtime

(W) Time and one half for benefits on all overtime hours.

NOTE:BENEFITS are PER HOUR WORKED,for each hour worked, unless otherwise noted

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

(1)	None
(2)	Labor Day
(3)	Memorial Day and Labor Day
(4)	Memorial Day and July 4th
(5)	Memorial Day, July 4th, and Labor Day
(6)	New Year's, Thanksgiving, and Christmas
(7)	Lincoln's Birthday, Washington's Birthday, and Veterans Day
(8)	Good Friday
(9)	Lincoln's Birthday
(10)	Washington's Birthday
(11)	Columbus Day
(12)	Election Day
(13)	Presidential Election Day
(14)	1/2 Day on Presidential Election Day
(15)	Veterans Day
(16)	Day after Thanksgiving
(17)	July 4th
(18)	1/2 Day before Christmas
(19)	1/2 Day before New Years
(20)	Thanksgiving
(21)	New Year's Day
(22)	Christmas
(23)	Day before Christmas
(24)	Day before New Year's
(25)	Presidents' Day
(26)	Martin Luther King, Jr. Day

BUREAU OF PUBLIC WORK
STATE OFFICE BUILDING CAMPUS
ALBANY, NY 12240

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION: REQUIRED BY ARTICLES 8 AND 9 OF THE LABOR LAW

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

THIS FORM MUST BE TYPED

SUBMITTED BY: (CHECK ONE) ☐ CONTRACTING AGENCY ☐ ARCHITECT OR ENGINEERING FIRM ☐ PUBLIC WORK DISTRICT OFFICE

DATE :

A. PUBLIC WORK CONTRACT TO BE LET BY: (Enter Data Pertaining to Contracting Agency)

1. Name and complete address (☐ check if new or change) :

Telephone: ( ) Fax: ( )
E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT
☐ 02 OGS
☐ 03 Dormitory Authority
☐ 04 State University Construction Fund
☐ 05 SUNY/Colleges
☐ 06 Mental Hygiene Facilities Corp.
☐ 07 OTHER N.Y. STATE UNIT
☐ 08 City
☐ 09 Local School District
☐ 10 Special Local District, i.e., Fire, Sewer, Water District
☐ 11 Village
☐ 12 Town
☐ 13 County
☐ 14 Other Non-N.Y. State (Describe)

3. SEND REPLY TO (☐ check if new or change)
Name and complete address:

Telephone: ( ) Fax:( )
E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title _____

Description of Work _____

Contract Identification Number _____

Note: For NYS units, the OSC Contract No.

6. Location of Project:
Location on Site _____

Route No/Street Address _____

Village or City _____

Town _____

County _____

7. Nature of Project - Check One:

☐ 1. New Building
☐ 2. Addition to Existing Structure
☐ 3. Heavy and Highway Construction (New and Repair)
☐ 4. New Sewer or Waterline
☐ 5. Other New Construction (Explain)
☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
☐ 7. Demolition
☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

☐ Construction (Building, Heavy Highway/Sewer/Water)
☐ Tunnel
☐ Residential
☐ Landscape Maintenance
☐ Elevator maintenance
☐ Exterminators, Fumigators
☐ Guards, Watchmen
☐ Janitors, Porters, Cleaners
☐ Moving furniture and equipment
☐ Trash and refuse removal
☐ Window cleaners
☐ Other (Describe)

9. Name and Title of Requester

Signature

OFFICE USE ONLY

Locality Designations :

SEE PAGE TWO FOR LAWS RELATING TO PUBLIC WORK CONTRACTS

NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE AWARDED ANY PUBLIC WORK CONTRACT

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements

NOTE: The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = NYS Dept. of Labor; NYC = New York City Comptroller's Office; AG = NYS Attorney General's Office; DA = County District Attorney's Office.

A list of those barred from bidding, or being awarded, any public work contract or subcontract with the State, under section 141-b of the Workers' Compensation Law, may be obtained at the following link, on the NYS DOL Website:

https://dbr.labor.state.ny.us/EDList/searchPage.do

NYSDOL Bureau of Public Work Debarment List 10/15/2009

AGENCY	Fiscal Officer	SSN/FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	AG	*****1355	4-A GENERAL CONSTRUCTION CORP.		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****3983	A & D CONTRACTING CORP.		15 PINE AIRE DRIVE BAY SHORE NY 11706	08/01/2005	08/01/2010
DOL	DOL	*****7478	A & T GENERAL CONSTRUCTION INC.		3 ALAN B SHEPARD PLACE YONKERS NY 10705	12/11/2006	12/11/2011
DOL	DOL	*****9254	A A GENERAL CONTRACTORS INC.		1765 MT. READ BOULEVARD ROCHESTER NY 14606	10/18/2004	10/18/2009
DOL	NYC	*****5804	AAR CO ELECTRIC INC		5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	DOL	*****0635	ABOVE ALL PUMP REPAIR CORP		360 KNICKERBOCKER AVENUE BATAVIA NY 11716	10/20/2008	10/20/2013
DOL	NYC	*****8758	ACC CONSTRUCTION CORP.		6 EAST 32ND ST - 7TH FL NEW YORK NY 10016	05/25/2006	05/25/2011
DOL	NYC	*****5022	ACE DRYWALL SYSTEMS INC.		194 ASHLAND PLACE BROOKLYN NY 11217	03/06/2008	03/06/2013
DOL	AG	*****8219	ACTIVE CABLING INC		C/O FRANK DECAPITE 7 SYCAMORE ROAD DRWOODBURY NY 11797	10/02/2008	10/01/2013
DOL	DOL	*****3012	ADAM DECKMAN	DECKMAN PAINTING	154 POND VIEW PARKWAY ROCHESTER NY 14612	04/16/2007	04/16/2012
DOL	DOL	*****5116	ALJAA CONSTRUCTION CORPORATION		3755 SENECA STREET WEST SENECA NY 14403	12/14/2005	12/14/2010
DOL	DOL		ALL TOWNS MECHANICAL	BARRY MORRIS	18 EAST SUNRISE HIGHWAY FREEPORT NY 11758	01/21/2008	01/21/2013
DOL	DOL	*****3101	ALLSTATE CONCRETE CUTTING, INC.		635 MIDLAND AVENUE GARFIELD NJ 07026	07/09/2007	07/09/2012
DOL	DOL	*****5918	AMERICAN WEATHERTITE, INC.		PO BOX 208 CLIFTON NJ 07110	03/28/2005	03/28/2010
DOL	DOL	*****8291	AMIR'S VISION INC		230 PRATT STREET BUFFALO NY 14204	09/17/2008	09/17/2013
DOL	AG		AMODIO RUSSO		14 BRAYRON ROAD CARMEL NY 10512	06/01/2005	06/01/2010
DOL	AG		ANASTASIA ANTHOULIS	AKA STACEY GOUZOS	131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****0860	ANDREA STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	AG		ANDRES ALVAREZ		372 NORTH MAIN STREET LODI NJ 07644	12/24/2004	12/24/2009
DOL	DOL		ANNE M DIPIZIO		217 STRASMER ROAD DEPEW NY 14043	12/14/2005	12/14/2010
DOL	DOL		ANTHONY T RINALDI		C/O CRAIN CONSTRUCTION CO KINDERHAMACK RDKACKENSACK NY 07061	10/02/2008	10/02/2013
DOL	DOL		ANTHONY TAORMINA		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	AG	*****7327	ANTHOS CONTRACTING CORP		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****2725	ARAGONA CONSTRUCTION CORP		5755 NEWHOUSE ROAD EAST AMHERST NY 14051	10/10/2007	10/10/2012
DOL	DOL	*****8688	ARC MECHANICAL CORP		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	DOL	*****8482	ARGO CONTRACTING CORP		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	NYC	*****5804	ARIE BAR	C/O AAR CO ELECTRIC INC	5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	DOL		ARTHUR C OSUORAH		PO BOX 1295 BUFFALO NY 14215	02/15/2008	02/15/2013
DOL	DOL	*****8027	ARTHUR DESIGN ENGINEERS & ASSOCIATES		PO BOX 1295 BUFFALO NY 14215	02/15/2008	02/15/2013
DOL	DOL	*****2993	AST DRYWALL & ACOUSTICS INC		46 JOHN STREET - STE 711 NEW YORK NY 10038	12/16/2008	12/16/2013
DOL	DA	*****5761	AZTEC PLUMBING & HEATING CORP		153 BAYWOODS LANE BAY SHORE NY 11706	03/19/2007	03/19/2012
DOL	DOL	*****3559	B & Z DEVELOPMENT INC	BEN-ZVY ENTERPRISE S INC	19 WEST STREET SPRING VALLEY NY 10977	02/22/2005	02/22/2010
DOL	DOL	*****7828	BALLAGH GENERAL CONTRACTING INC		250 KNEELAND AVENUE YONKERS NY 10705	07/09/2007	07/09/2012
DOL	DOL		BEATRICE ORTEGA		764 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL	*****3559	BEN-ZVY ENTERPRISES INC.		19 WEST STREET SPRING VALLEY NY 10977	02/22/2005	02/22/2010
DOL	DOL		BERNADETTE GORMALLY		250 KNEELAND AVENUE YONKERS NY 10705	07/09/2007	07/09/2012
DOL	NYC		BERNARD COHNEN		193 HARWOOD PLACE PARAMUS NJ 07652	05/14/2008	05/14/2013

DOL	DOL	*****5455	BEST OF FRIENDS OF SCHENECTADY CONSTR CO		425 HAMILTON STREET SCHENECTADY NY 12305	01/24/2006	01/24/2011
DOL	DOL	*****9890	BETTY JOE FRAZIER	NOBLE CONSTRUCTI ON GROUP	23960 WHITE ROAD WATERTOWN NY 13601	02/14/2008	02/14/2013
DOL	DOL	*****0818	BLASTEC INC	MILLER SANDBLASTI NG & PAINTING	121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL	*****8501	BLOCKHEAD CONCRETE & PAVING INC		P O BOX 71 CHEEKTOWAGA NY 14225	09/03/2008	09/03/2013
DOL	DOL	*****4311	C & F SHEET METAL CORP		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/24/2014
DOL	DOL	*****0289	C J H INC		22 BLACK HAWK ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010
DOL	DOL	*****9286	CALI BROTHERS INC		1223 PARK STREET PEEKSKILL NY 10566	09/12/2007	09/12/2012
DOL	NYC	*****4437	CAPPRY CONTRACTING MGMT. CORP		1081 CONEY ISLAND AVENUE BROOKLYN NY 11230	02/09/2006	02/09/2011
DOL	DOL	*****9721	CATENARY CONSTRUCTION CORP		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	02/14/2011
DOL	DOL		CHARLES MARANGOUDAKIS		25 WOODHILL LANE MANHASSEST NY 11030	08/16/2005	08/16/2010
DOL	DOL		CHARLES MURDOUGH		203 KELLY DRIVE EAST AURORA NY 14052	03/26/2008	03/26/2013
DOL	DOL		CHESTER A BEDELL		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DOL		CHRISTINA J HOEK		22 BLACK HAW ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010
DOL	DOL		CHRISTOPHER NICHOLSON		91 NEWMAN PLACE BUFFALO NY 14210	10/19/2006	10/19/2011
DOL	DOL	*****5329	CNY MECHANICAL ASSOCIATES INC		P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	AG	*****7344	COLUMBUS GENERAL CONSTRUCTION INC		914 NEWKIRK AVENUE BROOKLYN NY 11230	12/16/2004	12/16/2009
DOL	DOL	*****6866	COMMERCIAL SYSTEM CONSTRUCTION		91 NEWMAN PLACE BUFFALO NY 14210	10/19/2006	10/19/2011
DOL	AG	*****0033	CORINTHIAN CONSTRUCTION CO INC		372 NORTH MAIN STREET LODI NJ 07644	12/24/2004	12/24/2009
DOL	DOL	*****7794	CRAIN CONSTRUCTION COMPANY INC		ONE KINDERHAMACK ROAD HACKENSACK NJ 07061	10/02/2008	10/02/2013
DOL	DOL		CRAIN CONSTRUCTION OF NEW JERSEY		ONE KINDERHAMACK ROAD HACKENSACK NJ 07061	10/02/2008	10/02/2013
DOL	DOL		CRAIN CONSTRUCTION OF NEW YORK INC		C/O CRAIN CONSTRUCTION CO ONE KINDERHAMACK ROADHACKENSACK NJ 07061	10/02/2008	10/02/2013
DOL	DOL		CRAIN CONTRACTING COMPANY		ONE KINDERHAMACK ROAD HACKENSACK NJ 07061	10/02/2008	10/02/2013
DOL	NYC	*****8777	CROSSLAND ELECTRICAL SYSTEMS INC		846 EAST 52ND STREET BROOKLYN NY 11203	12/19/2008	12/29/2013
DOL	DOL	*****0115	CROW AND SUTTON ASSOCIATES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL	*****4266	CRYSTAL INTERIOR CONTRACTING INC		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL	*****6339	D J FLOORS INC		9276 VIA CIMATO DRIVE CLARENCE CENTER NY 14032	08/29/2007	08/29/2012
DOL	DOL		D JAMES SUTTON		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		DARREN MAYDWELL		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL		DEANNA J REED		5900 MUD MILL RD-BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****3012	DECKMAN PAINTING		154 POND VIEW PARKWAY ROCHESTER NY 14612	04/16/2007	04/16/2012
DOL	DOL	*****6971	DELPHI PAINTING AND DECORATING INC		1445 COMMERCE AVENUE BRONX NY 10461	10/09/2007	10/09/2012
DOL	DOL		DESMOND CHARLES		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL	*****7157	DG PIPELINE INC		312 HALSEYVILLE ROAD ITHACA NY 14850	09/06/2006	09/06/2011
DOL	DOL	*****3218	DIAMOND "D" CONSTRUCTION CORP		5270 TRANSIT ROAD DEPEW NY 14043	12/14/2005	12/14/2010
DOL	DOL		DIMITEIUS KASSIMIS		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL	*****3364	DJH MECHANICAL ASSOCIATES LTD		155 KINGSBRIDGE ROAD EAST MOUNT VERNON NY 10552	02/01/2006	02/01/2011
DOL	DOL		DOMINIC ANTONUCCI		1939 TOWN LINE ROAD HILTON NY 14468	10/18/2004	10/18/2009
DOL	DOL	*****5881	DON ADAMS ROOFING INC		472 COMMERCE STREET HAWTHORNE NY 10532	12/07/2005	12/07/2010

DOL	DOL		DONALD SCHWENDLER		9276 VIA CIMATO DRIVE CLARENCE CENTER NY 14032	08/29/2007	08/29/2012
DOL	DOL	*****6148	DOT CONSTRUCTION OF NY INC		765 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL		DOUGLAS MCEWEN		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL		DOUGLAS S GRIFFEN		312 HALSEYVILLE ROAD ITHACA NY 14850	09/06/2006	09/06/2011
DOL	DOL		EDWARD SUBEH		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	DOL	*****3554	ELITE BUILDING ENTERPRISES INC		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/21/2013
DOL	DOL		ELIYHU BENYAMIN		303 TEN EYCK STREET BROOKLYN NY 11206	03/05/2005	03/05/2010
DOL	AG	*****3233	EMEIS & EMEIS GENERAL CONTRACTING CORP		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL		EREZ BEN-ZVY		19 WEST STREET SPRING VALLEY NY 10977	02/22/2005	02/22/2010
DOL	DOL		ESCO INSTALLERS LLC		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	DOL	*****0329	FAULKS PLUMBING HEATING & AIR CONDITIONING INC		3 UPTON STREET HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		FERNANDO GOMEZ		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/25/2014
DOL	DOL	*****0768	FISHER CONCRETE INC		741 WELSH ROAD JAVA CENTER NY 14082	04/08/2009	04/08/2014
DOL	NYC	*****2505	FLORENCE XVI CENTURY MARBLE INC		120 GLEN HEAD ROAD GLEN HEAD NY 11545	08/03/2005	08/03/2010
DOL	DOL	*****7975	FORD CONSTRUCTION INC		18-18 26TH STREET ASTORIA NY 11102	07/18/2005	07/18/2010
DOL	DOL		FORD MASONRY		18-18 26TH STREET ASTORIA NY 11102	07/18/2005	07/18/2010
DOL	DOL	*****0115	FOXCROFT NURSERIES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		FRANCIS (FRANK) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK (FRANCIS) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK BAKER		24 EDNA DRIVE SYOSSET NY 11791	05/14/2008	05/14/2013
DOL	DOL		FRANK J MERCANDO	C/O MERCANDO CONTRACTIN G CO INC	134 MURRAY AVENUE YONKERS NY 10704	11/22/2008	11/22/2013
DOL	DOL	*****0128	FRANK J TUCEK & SON INC		92 NORTH ROUTE 9W CONGERS NY 10920	01/29/2007	01/29/2012
DOL	DOL		FRANK LOBENE JR		13 CHEVIOT LANE ROCHESTER NY 14624	10/18/2005	10/18/2010
DOL	DOL	*****9832	G A FALCONE CONSTRUCTION INC		253 COMMONWEALTH AVENUE BUFFALO NY 14216	08/07/2007	08/07/2012
DOL	DOL	*****7088	GBA CONTRACTING CORP		4015 21ST AVENUE ASTORIA NY 11105	01/11/2008	01/11/2013
DOL	AG		GEORGE BEGAKIS		57-16 157TH STREET FLUSHING NY 11355	10/04/2006	10/04/2011
DOL	NYC		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	AG		GERARD IPPOLITO		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	AG		GERASIMO ANDRIANIS		22-15 47TH STREET ASTORIA NY 11105	08/03/2006	08/03/2011
DOL	DOL		GREG SURACI		364 BLEAKER ROAD ROCHESTER NY 14609	10/25/2007	10/25/2012
DOL	DOL		GRIOGORIOS BELLOS		4015 21ST AVENUE ASTORIA NY 11105	01/11/2008	01/11/2013
DOL	DOL	*****8904	HALLOCKS CONSTRUCTION CORP	P O BOX 278	YORKTOWN HEIGHTS NY 10598	12/01/2008	12/01/2013
DOL	DOL		HARALAMBOS KARAS		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	10/22/2013
DOL	DOL	*****0080	HI-AMP ELECTRICAL CONTRACTING CORP		265-12 HILLSIDE AVENUE FLORAL PARK NY 11004	02/15/2008	02/15/2013
DOL	AG	*****1841	HOWARD K ENTERPRISE INC		219-02 NORTHERN BOULEVARD FLUSHING NY 11361	04/14/2005	04/14/2010
DOL	AG		HOWARD KIM		75 WEST EDSALL BOULEVARD PALISADES PARK NJ	04/14/2005	04/14/2010
DOL	DOL	*****6429	IDM ENTERPRISES INC		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014

DOL	DOL	*****6293	IMPRESSIVE CONCRETE CORP		264A SUBURBAN AVENUE DEER PARK NY 11729	12/18/2007	12/18/2012
DOL	DOL	*****8898	IN-TECH CONSTRUCTION INC		8346 BREWERTON ROAD CICERO NY 13039	07/06/2007	07/06/2012
DOL	NYC	*****7728	INTEGRITY CONSTRUCTION & CONSULTING SERVS		7615 MYRTLE AVENUE GLENDALE NY 11385	02/15/2007	02/15/2012
DOL	DOL	*****0488	INTERWORKS SYSTEMS, INC.		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DOL		IVAN D MARKOVSKI		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014
DOL	DOL		IVAN TORRES		11 PLYMOUTH ROAD DIX HILLS NY 11746	02/15/2008	02/15/2013
DOL	AG	*****0663	J B C CONTRACTING CO., INC.		346 PROSPECT AVE- 1ST FL BROOKLYN NY 11215	03/23/2005	03/23/2010
DOL	AG	*****0280	J B C CONTRACTING COMPANY		346 PROSPECT AVE. - 1ST F BROOKLYN NY 11215	03/23/2005	03/23/2010
DOL	DOL	*****4003	J BARR CONSTRUCTION CORP		119-51 METROPOLITAN AVE BROOKLYN NY 11415	12/14/2004	12/14/2009
DOL	DOL	*****7357	J C MCCASHION CONSTRUCTION INC		84 FREDERICK AVENUE ALBANY NY 12205	04/13/2006	04/13/2011
DOL	AG	*****1562	JANS GENERAL CONSTRUCTION CORP.		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL		JASON ASBURY		22562 SEA BASS DRIVE BOCA RATON FL 33428	10/10/2007	10/10/2012
DOL	DOL		JAY MEYER		239 MARSH DRIVE DEWITT NY 13214	02/20/2007	02/20/2012
DOL	DOL		JEANETTE CALICCHIA		1223 PARK STREET PEEKSKILL NY 10566	09/12/2007	09/12/2012
DOL	DOL		JOHN B DUGAN		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DA		JOHN BIAS		153 BAYWOODS LANE BAY SHORE NY 11706	03/19/2007	03/19/2012
DOL	AG		JOHN BRADFORD		6614 FURNACE ROAD ONTARIO NY 14519	12/22/2004	12/22/2009
DOL	NYC		JOHN C MCCASHION		84 FREDERICK AVENUE ALBANY NY 12205	04/13/2006	04/13/2011
DOL	NYC		JOHN MARI JR		278 ROBINSON AVENUE NEW YORK NY 10312	04/06/2008	04/06/2013
DOL	NYC		JOHN O'SHEA		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	DOL	*****5970	JOHN PREVETE FRAMING AND JOHN PREVETE FRAMING INC	JOHN PREVETE	320 RIDGE ROAD WEST MILFORD NJ 07480	03/26/2008	03/26/2013
DOL	DOL		JOHN SAN SEVERE		C/O CRAIN CONSTRUCTION CO ONE KINDERHAMACK ROADHACKENSACK NJ 07061	10/02/2008	10/02/2013
DOL	DOL		JOSE DOS SANTOS JR		85-08 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	DOL		JOSEPH CALICCHIA		1223 PARK STREET PEEKSKILL NY 10566	09/12/2007	09/12/2012
DOL	DOL		JOSEPH DIPIZIO		5270 TRANSIT ROAD DEPEW NY 14043	12/14/2005	12/14/2010
DOL	DOL	*****1763	JR RESTORATION & ROOFING INC		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL	*****9422	JUNKYARD CONSTRUCTION CORP.		2068 ANTHONY AVENUE BRONX NY 10457	12/26/2007	12/26/2012
DOL	DOL	*****3810	K M MARTELL CONSTRUCTION, INC.		57 CROSS ROAD MIDDLETOWN NY 10940	06/25/2007	06/25/2012
DOL	DOL	*****9993	K M R ENTERPRISES		10 STUFFLE STREET CROPSEYVILLE NY 12052	12/20/2006	12/20/2011
DOL	DOL	*****8648	K-STAR CONSTRUCTION CORP		42 48 161ST STREET FLUSHING NY 11358	12/11/2006	12/11/2011
DOL	NYC		KAZIMIERZ KONOPSKI		194 ASHLAND PLACE BROOKLYN NY 11217	03/06/2008	03/06/2013
DOL	AG		KEFCAL CONSTRUCTION, INC.		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	NYC	*****4923	KELLY'S SHEET METAL, INC.		1426 ATLANTIC AVENUE BROOKLYN NY 11216	12/28/2007	12/28/2012
DOL	DOL		KEMPTON MCINTOSH		8531 AVENUE B BROOKLYN NY 11236	12/16/2008	12/16/2013
DOL	DOL		KENNETH W. GRIFFIN		101 LILL STREET ROCHESTER NY 14621	05/01/2006	05/01/2011
DOL	DOL		KEVIN MARTELL		57 CROSS ROAD MIDDLETOWN NY 10940	06/25/2007	06/25/2012
DOL	DOL		KING MACHINE	DBA KING MACHINE	11365 CENTER ROAD SHERIDAN NY 14135	04/04/2005	04/04/2010
DOL	AG	*****3318	KOSMAR CONTRACTING CORP.		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012

DOL	DOL		KRIS CLARKSON		2484 CATON ROAD CORNING NY 14830	06/20/2007	06/20/2012
DOL	DOL	*****3496	L & T PLUMBING CORP.		367 VETERANS MEMORIAL HWY COMMACK NY 11725	01/11/2005	01/11/2010
DOL	DOL	*****5462	LABAR ENTERPRISES OF ROCHESTER, INC.	LABARBERA EXCAVATING INC	2121 EMPIRE BOULEVARD WEBSTER NY 14580	04/18/2005	04/18/2010
DOL	DOL	*****5462	LABARBERA EXCAVATING INC		2121 EMPIRE BOULEVARD WEBSTER NY 14580	04/18/2005	04/18/2010
DOL	NYC	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	*****9628	LANCET ARCH INC		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	02/14/2011
DOL	DOL		LARRY FRANGOS		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	DOL	*****0256	LIBERTY PAINTING COMPANY INC		183 LORFIELD DRIVE SNYDER NY 14226	12/08/2005	12/08/2010
DOL	AG	*****5102	LIBERTY TREE SERVICE, INC.		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	DOL	*****6651	LIGHTNING FAST LABOR FORCE SERVICES, INC.		150 NORTH CHESTNUT STREET ROCHESTER NY 14604	05/01/2006	05/01/2011
DOL	DOL	*****4981	LOBENE PAINTING, INC.		13 CHEVIOT LANE ROCHESTER NY 14624	10/18/2005	10/18/2010
DOL	AG	*****4654	LOOK UNDER THE CARPET SERVICES INC		P O BOX 686 BUFFALO NY 14290	12/15/2005	12/15/2010
DOL	DOL	*****5953	LPD CONTRACTING INC		1205 MCBRIDE AVENUE WEST PATTERSON NJ 07424	08/27/2007	08/27/2012
DOL	DOL	*****9875	M & S STRIPING INC		73 INDUSTRIAL PARK BLVD ELMIRA NY 14901	01/10/2007	01/10/2012
DOL	DOL	*****9688	M K PAINTING INC		4157 SEVENTH STREET WYANDOTT MI 48192	05/14/2007	05/14/2012
DOL	AG		MANNS CONTRACTING CORP		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	NYC		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	NYC		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	*****4543	MARANGOS CONSTRUCTION CORP		59-45 56TH AVENUE MASPETH NY 11378	08/16/2005	08/16/2010
DOL	DOL	*****7694	MAS-ANN MECHANICAL INC		35 REGENCY OAKS BLVD ROCHESTER NY 14624	07/24/2002	01/04/2010
DOL	DOL		MATTHEW LOBENE		13 CHEVIOT LANE ROCHESTER NY 14624	10/18/2005	10/18/2010
DOL	NYC	*****4132	MCCASHION BROTHERS HOLDING COMPANY LLC		84 FREDERICK AVENUE ALBANY NY 12205	04/13/2006	04/13/2011
DOL	DOL		MCS PAINTING CONTRACTORS, INC.		LIME KILN COURT STONY POINT NY 10980	01/25/2006	01/25/2011
DOL	DOL	*****0241	MERIT FENCE CO INC		130 OLD ROUTE 6 CARMEL NY 10512	08/06/2003	02/02/2012
DOL	AG	*****1515	MGC RESTORATION SERVICES, INC.		64-58 218TH STREET BAYSIDE NY 11364	01/01/2005	01/01/2010
DOL	AG		MICHAEL CAPOUS		64-58 218 STREET BAYSIDE NY 11364	01/01/2005	01/01/2010
DOL	DOL		MICHAEL L. KRIVITZA	NORTHEAST TECHNOLOGIES	105 PINE STREET - APT 2 EAST ROCHESTER NY 14445	05/14/2007	05/14/2012
DOL	DOL		MICHAEL STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	DOL	*****0860	MICHAEL STEVENS	STEVENS TRUCKING	2458 EAST RIVER ROAD CORTLAND NY 13045	01/23/2008	01/23/2013
DOL	DOL		MICHAEL TAYLOR		66 RYBKA ROAD STUYVESANT FALLS NY 12174	03/02/2007	03/02/2012
DOL	DOL	*****0818	MILLER SANDBLASTING AND PAINTING		121 LINCOLN AVENUE ROCHESTER NY 14611	02/21/2008	02/21/2013
DOL	DOL	*****4435	MODERN TECH DESIGN & SERVICES INC		9151 SOUTHWESTERN BLVD ANGOLA NY 14006	01/19/2006	01/19/2011
DOL	AG		MOHAMMED A. RASHID		914 NEWKIRK AVENUE BROOKLYN NY 11230	12/16/2004	12/16/2009
DOL	DOL		MOHAMMED ALI ALVI		22-41 26TH STREET APT. 2ASTORIA NY 11102	07/18/2005	07/18/2010
DOL	AG		MOHAMMED H. KABIR		200 EAST 77TH STREET BROOKLYN NY 11218	03/23/2005	03/23/2010
DOL	DOL	*****6616	MUIR CONTRACTORS ASSOCIATES INC		75 ARGYLE AVE - SUITE 2B UNIONDALE NY 11553	08/18/2005	08/18/2010
DOL	DOL	*****2251	MURDOUGH DEVELOPMENT CO., INC.		203 KELLY DRIVE EAST AURORA NY 14052	03/26/2008	03/26/2013
DOL	DOL		N F K ENTERPRISES		22 BLACK HAWK ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010

DOL	DOL	*****3310	N F K EXCAVATING AND CONSTRUCTION INC		22 BLACK HAWK ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010
DOL	DOL	*****7371	N F K LANDSCAPING SUPPLY CORP		22 BLACK HAWK ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010
DOL	DOL	*****2213	NEUSS CONSTRUCTION, INC.		1191 ROUTE 9W - SUITE #C6 MARLBORO NY 12542	09/06/2006	09/06/2011
DOL	DOL		NICK NITIS		3 ALAN B SHEPARD PLACE YONKERS NY 10705	12/11/2006	12/11/2011
DOL	DOL	*****9890	NOBLE CONSTRUCTION		23960 WHITE ROAD WATERTOWN NY 13601	02/14/2008	02/14/2013
DOL	DOL	*****7771	NORTHEAST TECHNOLOGIES		105 PINE STREET APT. 2 EAST ROCHESTER NY 14445	05/14/2007	05/14/2012
DOL	DOL	*****1833	NORTHEASTERN SUPREME FLOOR CO.,INC		66 BENEDICT STREET CASTLETON NY 12033	03/02/2007	03/02/2012
DOL	DOL	*****7041	NYCOM SERVICES CORP		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	11/22/2013
DOL	DOL	*****0797	O GLOBO CONSTRUCTION CORP		85-06 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	AG	*****1641	OLYMPIA MECHANICAL PIPING & HEATING, INC.		3624 12TH AVENUE BROOKLYN NY 11218	08/18/2005	08/18/2010
DOL	DOL	*****1803	OMNI CONTRACTING COMPANY, INC.		3 ALAN B. SHEPARD PLACE YONKERS NY 10705	12/11/2006	12/11/2011
DOL	NYC	*****3855	OT & T INC		36-28 23RD STREET LONG ISLAND CITY NY 11106	01/15/2008	05/14/2013
DOL	AG	*****5133	P&T IRON WORKS		59 PLAIN AVENUE NEW ROCHELLE NY 10801	06/01/2005	06/01/2010
DOL	NYC	*****9833	PARADISE CONSTRUCTION CORP		6814 8TH AVENUE BROOKLYN NY 11220	12/03/2007	12/03/2012
DOL	DOL	*****3039	PARAGON PLATE GLASS, INC.		210 FACTORY STREET WATERTOWN NY 13601	11/07/2006	11/07/2011
DOL	DOL		PATRICK BURNS		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL		PATRICK SHAUGHNESSY		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	DOL		PERRY JACOBS		736 SHERMAN DRIVE BOX 8015UTICA NY 13505	12/04/2005	12/04/2010
DOL	AG		PETER GOUZOS		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****6164	PETTIT & PETTIT INC		7 SCHUYLER STREET BELMONT NY 14813	03/21/2005	03/21/2010
DOL	DOL	*****5419	PINE VALLEY LANDSCAPE CORP		RR 1, BOX 285-B BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		PRECISION DEVELOPMENT CORP		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL	*****9167	PRECISION SITE WORK, INC.		736 SHERMAN DRIVE BOX 8015UTICA NY 13505	12/04/2005	12/04/2010
DOL	DOL	*****9359	PRECISION STEEL ERECTORS INC		P O BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****2326	PUTMAN CONSTRUCTION COMPANY OF WESTERN NY		29 PHYLLIS AVENUE BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DOL	*****7438	R & H COMMERCIAL FLOORING, INC.		102 WILLOW AVENUE WATKINS GLEN NY 14891	06/20/2007	06/20/2012
DOL	DOL	*****1596	R & T SUPREME SPORTS FLOORING, LLC		66 RYBKA ROAD STUYVESANT FALLS NY 12174	03/02/2007	03/02/2012
DOL	DA	*****0358	R & W FACILITY CARE SYSTEMS INC		485 ATLANTIC AVENUE BROOKLYN NY 11217	11/22/2005	11/22/2010
DOL	DOL	*****1629	R S CONSTRUCTION COMPANY LLC		571 MILES SQUARE ROAD YONKERS NY 10701	04/04/2007	04/04/2012
DOL	AG	*****2626	RAINBOW RENOVATIONS, INC.		35-44 CRESCENT STREET LONG ISLAND CITY NY 11106	08/03/2006	08/03/2011
DOL	DOL	*****7294	REDWOOD FLOORING, INC.		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	DOL		ROBBYE BISSESAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROBERT DEMONTE		367 VETERANS MEMORIAL HWY COMMACK NY 11725	01/10/2005	01/10/2010
DOL	DOL		ROBERT DIMARSICO		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DOL		ROBERT O'HANLON		635 MIDLAND AVENUE GARFIELD NJ 07026	07/09/2007	07/09/2012
DOL	DOL		ROBERT STEVENSON		571 MILES SQUARE ROAD YONKERS NY 10701	04/04/2007	04/04/2012
DOL	DOL		ROBERT W. METZGAR	KING MACHINE	11365 CENTER ROAD SHERIDAN NY 14135	04/04/2005	04/04/2010
DOL	DOL	*****1721	ROBERTS CONSTRUCTION OF UPSTATE NEW YORK INC		5 SANGER AVENUE NEW HARTFORD NY 13413	01/28/2009	01/28/2014
DOL	DOL	*****3467	ROCKERS AND NOCKERS LLC		207 RIVERVIEW ROAD REXFORD NY 12148	10/23/2007	10/23/2012
DOL	DOL		ROGER A HOEK JR		22 BLACK HAW ROAD PINE BUSH NY 12566	06/10/2005	06/10/2010

DOL	DOL		RONALD R SAVOY	C/O CNY MECHANICAL ASSOCIATES INC	P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	DOL		ROSARIO CARRUBBA		5755 NEWHOUSE ROAD EAST AMHERST NY 14051	10/10/2007	10/10/2012
DOL	DOL		RUDOLPH NEUSS		8 FAR HORIZONS DRIVE NEWBURGH NY 12550	09/06/2006	09/06/2011
DOL	AG	*****2326	RUSMAR ENVIRONMENTAL SERVICES CORP.		703 ATLANTIC AVENUE ROCHESTER NY 14609	12/22/2004	12/22/2009
DOL	DOL		RUSSELL TUPPER		8346 BREWERTON ROAD CICERO NY 13039	07/06/2007	07/06/2012
DOL	DOL		RUTH H SUTTON		939 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL	*****9066	SAMAR PAINTING & DECORATING INC		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	NYC	*****0987	SCHWARTZ ELECTRIC CONTRACTORS INC		89 WALKER STREET NEW YORK NY 10013	01/04/2008	01/04/2013
DOL	DOL	*****6348	SEABURY ENTERPRISES LLC		22562 SEA BASS DRIVE BOCA RATON FL 33428	10/10/2007	10/10/2012
DOL	NYC	*****4020	SERVI-TEK ELEVATOR CORP		2546 EAST TREMONT AVENUE BRONX NY 10461	07/16/2009	07/16/2014
DOL	NYC	*****8252	SEVERN TRENT ENVIRONMENTAL SERVICES INC		16337 PARK ROW HOUSTON TX 77084	06/12/2007	06/12/2012
DOL	DOL	*****0256	SIERRA ERECTORS INC		79 MADISON AVE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL	*****0415	SIGNAL CONSTRUCTION LLC		199 GRIDER STREET BUFFALO NY 14215	11/14/2006	11/14/2011
DOL	DOL	*****8469	SIGNATURE SEALCOATING & STRIPPING SERVICE		345 LIVINGSTON AVENUE JAMESTOWN NY 14702	04/04/2007	04/04/2012
DOL	DOL	*****9397	SKY COMMUNICATIONS, INC.		PO BOX 278 DEWITT NY 13214	02/20/2007	02/20/2012
DOL	AG		SN CONTRACTING CORP		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	AG	*****7480	SNA CONTRACTING CORP		131 47TH STREET BROOKLYN NY 11232	01/26/2007	01/25/2012
DOL	AG	*****2738	SNA CONTRACTING CORP.		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	AG		SOLOMON WERZBERGER		56 LYNCREST DRIVE MONSEY NY 10952	08/18/2005	08/18/2010
DOL	DOL	*****0918	SPECTRUM CONTRACTING GROUP INC		875 THIRD AVENUE NEW YORK NY 10022	12/11/2006	12/11/2011
DOL	AG	*****1355	SPIRIDON ANTHOULIS		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	AG		STACEY GOUZOS		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	NYC	*****6650	START ELEVATOR CONSTRUCTION, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****3896	START ELEVATOR MAINTENANCE, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****1216	START ELEVATOR REPAIR, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	NYC	*****2101	START ELEVATOR, INC.		4350 BULLARD AVENUE BRONX NY 10466	01/28/2008	01/28/2013
DOL	DOL		STEPHEN BALZER		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/01/2013
DOL	DOL		STEVE J NICTAS		C/O J BARR CONS. 119-51 METROPOLITAN AVEJAMAICA NY 11415	12/14/2004	12/14/2009
DOL	DOL		STEVE PAPASTEFANOU		1445 COMMERCE AVENUE BRONX NY 10461	10/09/2007	10/09/2012
DOL	AG		STEVEN TISCHLER		1465 46TH STREET BROOKLYN NY 11212	08/18/2005	08/18/2010
DOL	DOL	*****4081	STS CONSTRUCTION OF WNY		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL	*****5966	SUPREME SPORT SURFACES, INC.		66 BENEDICT STREET CASTLETON NY 12033	03/02/2007	03/02/2012
DOL	DOL	*****2036	SURACI ENTERPRISES INC		364 BLEAKER ROAD ROCHESTER NY 14609	10/25/2007	10/25/2012
DOL	AG		TAO GENERAL CONTRACTORS INC		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL		THEODORE F FAULKS		18 FIREWEED TRAIL HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		THOMAS ASCHMONEIT		79 MADISON AVENUE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL		THOMAS E. MOONEY		164 WINSLOW STREET WATERTOWN NY 13601	11/07/2006	11/07/2011
DOL	DOL		THOMAS GORMALLY		250 KNEELAND AVENUE YONKERS NY 10705	07/09/2007	07/09/2012

DOL	DOL		TIMOTHY P SUCH		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL	*****3983	TOMMASO ALLOCCA		15 PINE AIRE DRIVE BAY SHORE NY 11706	08/01/2005	08/01/2010
DOL	DOL	*****9640	TROPIC CONSTRUCTION CORP		59-45 56TH AVENUE MASPETH NY 11378	08/16/2005	08/16/2010
DOL	DOL	*****8430	TROPIC ROOFING CORP.		59-45 56TH AVENUE MASPETH NY 11378	08/16/2005	08/16/2010
DOL	NYC	*****5184	UDDIN USA CORP		663 DEGRAW STREET BROOKLYN NY 11217	05/17/2007	05/17/2012
DOL	AG		UN HAK KIM		75 WEST EDSALL BOULEVARD PALISADES PARK NJ	04/14/2005	04/14/2010
DOL	DOL	*****8663	URBAN-SUBURBAN RECREATION INC		3 LUCON DRIVE DEER PARK NY 11728	06/20/2007	06/20/2012
DOL	DA		VASILIOS TSIMITRAS		235 91ST STREET BROOKLYN NY 11209	11/27/2006	11/27/2011
DOL	DOL		VIRGINIA L CAPONE		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	NYC	*****5466	VIVA VICTORIA ENTERPRISES LTD		10317 90TH STREET OZONE PARK NY 11417	06/12/2006	06/12/2011
DOL	DOL	*****0725	W & B MECHANICAL CORP		303 TEN EYCK STREET BROOKLYN NY 11206	03/05/2005	03/05/2010
DOL	DOL	*****6854	W J GRINDER ROOFING		1765 MT READ BOULEVARD ROCHESTER NY 14606	10/18/2004	10/18/2009
DOL	DOL	*****0329	WET PAINT CO. OF OSWEGO, INC		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL		WHITE AND BLUE SHEET METAL INC.		303 TEN EYCK STREET BROOKLYN NY 11206	03/05/2005	03/05/2010
DOL	DOL		WILLIAM PUTNAM		50 RIDGE ROAD BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DA		WILLIAM TSIMITRAS		235 91ST STREET BROOKLYN NY 11209	11/27/2006	11/27/2011
DOL	DOL		WINSTON J. GOINS, SR.		87 MALLING DRIVE ROCHESTER NY 14621	05/01/2006	05/01/2011
DOL	AG		YANG GENERAL CONTRACTING LTD		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	AG	*****0288	YIN CONSTRUCTION LTD		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	AG	*****1564	ZARBEN GENERAL CONSTRUCTION INC		131 47TH STREET BROOKLYN NY 11232	01/25/2007	01/25/2012
DOL	DOL		ZEPHENIAH DAVIS		2068 ANTHONY AVENUE BRONX NY 10457	12/26/2007	12/26/2012