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SEP 24 2018

ENVIRONMENTAL, ENGINEERING
AND PLANNING



"Protecting Public Health and the Environment"

CONTRACT No. B128

PASSAIC VALLEY SEWERAGE COMMISSION
600 WILSON AVENUE
NEWARK, NEW JERSEY 07105

CONTRACT AND SPECIFICATIONS

FOR

Attention

This contract document has been found acceptable as per Federal and/or State Regulations under the NJ Environmental Infrastructure Financing Program. This acceptance does not include nor imply any other approval pursuant to local, regional or other State project review requirements.

New Jersey Department of Environmental Protection
Division of Water Quality

MUNICIPAL FINANCE AND CONSTRUCTION ELEMENT

Project No. S340689-23 Date 12/11/18

Acceptable

Bureau Chief

Recommended for Acceptance

Section Chief

NJEP Project No. S340689-23

May 7th, 2018

Date: 5/2/18

THOMAS A. LAUSTSEN, P.E.

N.J. Professional Engineer - Lic. No. GE 38702



CDM Smith
110 Fieldcrest Ave., #8
6th Floor
Edison New Jersey 08837

EL AB
12/21/18

Date Issued: December 21, 2018

TO: All Plan Holders of Record

RE: Passaic Valley Sewerage Commission
Contract No. B128
Standby Power Generation Facility Site Preparation Contract

ADDENDUM NO. 1

This Addendum shall be part of the Contract Documents for the Passaic Valley Sewerage Commission, Standby Power Generation Facility Site Preparation Contract, Contract No. B128 as provided in the Instructions to Bidder.

Acknowledge receipt of this Addendum indicating so in the Bid Form. Failure to do so will subject the Bidder to disqualification.

SPECIFICATIONS REVISIONS

None

DRAWING REVISIONS

1. Sheet No. C-3

Delete in its entirety and replace with the attached.

2. Sheet No. C-4

Delete in its entirety and replace with the attached.

END OF ADDENDUM NO. 1

TECHNICAL DRAWINGS ATTACHED TO THESE ADDENDA ARE NOT
REPRINTED HERE DUE TO SIZE



3/14/19
1/14/19

CDM Smith
110 Fieldcrest Ave., #8
6th Floor
Edison New Jersey 08837

Date Issued: January 14, 2019

TO: All Plan Holders of Record

RE: Passaic Valley Sewerage Commission
Contract No. B128
Standby Power Generation Facility Site Preparation Contract

ADDENDUM NO. 2

This Addendum shall be part of the Contract Documents for the Passaic Valley Sewerage Commission, Standby Power Generation Facility Site Preparation Contract, Contract No. B128 as provided in the Instructions to Bidder.

Acknowledge receipt of this Addendum indicating so in the Bid Form. Failure to do so will subject the Bidder to disqualification.

SPECIFICATIONS REVISIONS

1. Section 00800 Supplementary Conditions
 - A. Page 00800 – 13, Paragraph 6.13.G, insert the following to the first paragraph immediately following the last sentence:

“OWNER’s Safety Rules “*Construction Safety & Health Manual for Contractors*” is accessible at:
https://www.nj.gov/pvsc/home/forms/pdf/Construction_Safety%20Health_Manual_Contractors_02022017.pdf)
2. Section 02 41 00 Demolition and Modifications
 - A. Page 02 41 00-1, insert after paragraph, 1.01.E,

“F. The Contractor is advised the Drawings show the envelope for limits of demolition and that a copy of Contract 191 original, selected, design drawings for Sedimentation



Tanks No. 2 are included in Attachment 1 to this specification. The attached Contract 191 design drawings may be used by the Contractor to assist the Contractor in defining the construction of the tankage to be demolished and approximate quantity/spacing of the piles for bidding purposes. The Owner and Engineer do not know if the facilities were constructed in accordance with the Contract 191 design drawings nor are they aware of the condition of the existing tankage."

B. Add the following to Specification 02 41 00:

"PART 4 – ATTACHMENTS

4.01 Attachment 1 – Contract 191 Original, Selected, Design Drawings for Sedimentation Tanks No. 2"

C. Insert after Page 02 41 00-4, Attachment 1 – Contract 191 Original, Selected, Design Drawings for Sedimentation Tanks No. 2, a copy of which is attached hereto.

DRAWING REVISIONS

None

END OF ADDENDUM NO. 2

ATTACHMENT 1

Contract 191 Original, Selected, Design Drawings for
Sedimentation Tanks No. 2



Elab
1/23/19

CDM Smith
110 Fieldcrest Ave., #8
6th Floor
Edison New Jersey 08837

Date Issued: January 23, 2019

TO: All Plan Holders of Record

RE: Passaic Valley Sewerage Commission
Contract No. B128
Standby Power Generation Facility Site Preparation Contract

ADDENDUM NO. 3

This Addendum shall be part of the Contract Documents for the Passaic Valley Sewerage Commission, Standby Power Generation Facility Site Preparation Contract, Contract No. B128 as provided in the Instructions to Bidder.

Acknowledge receipt of this Addendum indicating so in the Bid Form. Failure to do so will subject the Bidder to disqualification.

SPECIFICATIONS REVISIONS

1. Section 00010 – Invitation to Bid
 - A. Page 00010 – 1, first paragraph, last sentence, delete “February 1st, 2019.” Insert “February 8th, 2019”
 - B. Page 00010-1, second paragraph, first sentence, delete “February 1st, 2019.” Insert “February 8th, 2019”

END OF ADDENDUM NO. 3



rl as
1/29/19

CDM Smith
110 Fieldcrest Ave., #8
6th Floor
Edison New Jersey 08837

Date Issued: January 29, 2019

TO: All Plan Holders of Record

RE: Passaic Valley Sewerage Commission
Contract No. B128
Standby Power Generation Facility Site Preparation Contract

ADDENDUM NO. 4

This Addendum shall be part of the Contract Documents for the Passaic Valley Sewerage Commission, Standby Power Generation Facility Site Preparation Contract, Contract No. B128 as provided in the Instructions to Bidder.

Acknowledge receipt of this Addendum indicating so in the Bid Form. Failure to do so will subject the Bidder to disqualification.

GENERAL CONTRACT INFORMATION

1. Responses to Bidders Questions is attached hereto.

SPECIFICATIONS REVISIONS

1. Table of Contents
 - A. Page TOC-2, 00700 General Conditions, delete "00700-68", replace with "00700-62".
2. Section 00010 – Invitation to Bid
 - A. Page 00010 – 1, fifth paragraph, last sentence, delete "determining preliminary pile locations."



3. Section 00300 – Bid Form

- A. Delete the section in its entirety and replace with the attached.

4. Section 01025- Measurement and Payment

Delete section in its entirety and replace with the attached.

5. Section 01110 – Environmental Protection Procedures

- A. Page 01110-14, insert after page 01110-14, the attached page 01110-15.

6. Section 01360 – Schedule of Values

- A. Page 01360-1, delete 1.02 in its entirety and replace with the following:

“1.02 Minimum List of Categories

Title

General Conditions

Mobilization
Submittals
Project Schedule
Job Supervision
Record Documents
Project management requirements
Surveying of Piles
Demobilization

Civil

Excavation
Dewatering and Drainage
Geotechnical Instrumentation
Excavation Support
Demolition of Concrete Structures
Transportation and Disposal of Concrete Structures
Removal and disposal of existing underground slabs and structures
Backfill and grading
Site Restoration
Soil Resistivity Testing

Concrete



Installation of retaining wall”

7. Section 01500- Temporary Facilities

- A. Delete the specification in its entirety and replaced with the attached.

8. Section 02 41 00 Demolition and Modifications

- A. Page 02 41 00-2, insert after paragraph, 1.01.B,

“C. Furnish copies of all Waste Manifests and Bills of Lading for all materials disposed offsite.”

- B. Insert after 4.01:

“4.02 Attachment 2 – Part of Section 4 Sedimentation Basins – Unit No. 3, Twin Conduits”

- C. Insert after, Attachment 1:

Attachment 2 – Attachment 2 – Part of Section 4 Sedimentation Basins – Unit No. 3, Twin Conduits”, a copy of which is attached hereto.

SKETCHES

1. See attached SK-S1 for additional work.

DRAWING REVISIONS

1. Sheet No. C-3

Delete in its entirety and replace with the attached.

2. Sheet No. C-6

Delete in its entirety and replace with the attached.

3. Sheet No. C-7



Delete in its entirety and replace with the attached.

4. Sheet No. S-1

Delete in its entirety and replace with the attached.

5. Sheet No. S-2

Delete in its entirety and replace with the attached.

6. Sheet No. S-3

Delete in its entirety and replace with the attached.

7. Sheet No. S-4

Delete in its entirety and replace with the attached.

END OF ADDENDUM NO. 4

PASSAIC VALLEY SEWERAGE COMMISSION
NEWARK, NEW JERSEY

STANDBY POWER PLANT SITE PREPARATION CONTRACT
CONTRACT NO. B128

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SECTION 00010

INVITATION TO BID

Notice is hereby given for receiving sealed Proposals by the Passaic Valley Sewerage Commission (PVSC) for:

CONTRACT NO. B128
STANDBY POWER PLANT SITE PREPARATION CONTRACT

Proposals to be enclosed in opaque sealed envelopes, addressed to the Passaic Valley Sewerage Commission, Public Meeting Room, Administration Building, 600 Wilson Avenue, Newark, New Jersey 07105, with name and address of Bidder, Contract Number, Contract Name and Bid Opening Date plainly marked outside. Bids will be accepted by mail. They must be sealed and identified as indicated above, enclosed in a mailing envelope with proper postage, and received during the time set for receiving bids. Sealed Bid Proposals shall be received by PVSC, at the address above, on or before February 1st, 2019 at 10:00 in the morning, prevailing time for public opening and reading.

Bids shall be opened publicly and read aloud on February 1st, 2019 at 10:00 a.m.

All interested parties are invited to attend. The bid opening will take place at PVSC's Public Meeting Room in the Administration Building. Bids may be withdrawn or modified prior to the time for the opening of bids or the authorized postponement thereof. No bid may be withdrawn for a period of 60 calendar days after the date of the opening of bids, except as otherwise provided by law under the Local Public Contracts Law, N.J.S.A. 40A:11-1 et seq. ("LPCL"). PVSC reserves the right to reject any and all Bids and waive any Bid informalities, defects or irregularities pursuant to the LPCL, in accordance with applicable law, when in the best interest of PVSC and the project, and the New Jersey Environmental Infrastructure Trust (NJEIT). Any award will be made to the lowest responsible, responsive bidder.

No bid will be received unless in writing on the forms furnished, and unless accompanied by bid security in the form of a bid bond, cashier's check, or a certified check made payable to the PVSC in an amount equal to 10% of the amount of the total bid, but not exceeding \$20,000, executed by a Surety Company duly authorized to do business in the State of New Jersey. The successful Bidder must furnish a 100 percent construction performance bond, and a 100 percent construction payment bond, as well as a maintenance bond, and an environmental maintenance bond with a surety company acceptable to the Owner. Complete instruction for preparing Bids and a maintenance bond are included in the Bidding Documents.

Work to be performed under Contract No. B128 includes furnishing all labor, materials, supplies, equipment and other facilities required by the Contract Documents to prepare the project site located within at the Passaic Valley Sewerage Commission treatment facility for installation of a standby power plant, which installation will be under a separate contract. Work includes but is not limited to: removal of underground obstacles; locating any existing piles or structures that will remain in place; determining preliminary pile locations; and, installation of a retaining wall.

A non-mandatory pre-bid meeting and tour of the Project Area will be held on January 10th, 2019 at 10:00 AM. The meeting will take place at PVSC's OEM Main Conference Room, second floor, Operations Engineering & Maintenance (OEM) Building, 600 Wilson Avenue, Newark NJ, with site visit to follow. Bidders are strongly recommended to attend the pre-bid meeting and site visit.

Copies of the Bidding Documents will be available at the offices of CDM Smith, 110 Fieldcrest Ave., 6th Floor, Edison, New Jersey 08837, beginning on the date of this advertisement, during regular business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except federal and state holidays. The contact for obtaining bid documents is Mr. Thomas Laustsen, of CDM Smith (732-225-7000). The cost of complete full-sized Bidding Documents is \$250.00 per set (non-refundable) for each set of contract documents ordered, which is payable by business check to Passaic Valley Sewerage Commission. Bidding Documents (i.e. plans and specifications) will be available for examination at the Office of the Purchasing Department at Passaic Valley Sewerage Commission. If for any reason, the Contract is not awarded, refunds of the Bidding Documents fee will be returned to Bidders when the Bidding Documents are returned in reasonable condition within 90 days of notice that the Contract has not been awarded.

PVSC will take no responsibility for, and will be held harmless for, any mistakes, errors, omissions, missing information, or lack of notice related in any way to the bidding documents in any event where the bidder(s) have obtained the bid documents from any source other than from CDM Smith in the manner described herein.

The failure of the bidder to acknowledge the receipt of any and all addenda at the time of bid submission shall be considered a fatal defect in such Bidder's submission and said Bid shall be immediately rejected.

All Bidders and their subcontractors of any tier, shall be registered with the New Jersey Department of Labor And Workforce Development pursuant to the Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48, et seq. Certificate(s) must be submitted prior to award of the contract.

The Contract is expected to be funded in part with funds from the NJDEP and the NJEIT. The United States, the State of New Jersey, the NJEIT, and any of their departments, agencies, or employees are not, and will not at any time in the future, be a party to the Contract or any lower tier contract or subcontract. The Contract and any and all Subcontracts will be subject to regulations contained in N.J.A.C. 7:22-3.1 et seq., 4.1 et seq., 5.1 et seq., 9.1 et seq. and 10.1 et seq., Local Public Contract (N.J.S.A. 40a:11-1 et seq), Department of Labor And Workforce Development Current Wage Rate Determination, Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq), Contract Work Hours and Safety Standard Act (40 U.S.C. 3701 et seq), Copeland Act (18 U.S.C. 874 and 40 U.S.C. 3145 et seq), Davis Bacon Act (40 U.S.C. 3142 et seq), Buy American Clause (41 U.S.C. 83 et seq), Debarment and Suspension (N.J.S.A. 34:11-56.25 et seq), and Socially and Economically Disadvantaged (SED) (N.J.S.A. 34:1B-1 et seq.). Pursuant to N.J.S.A 10:5-33: "Bidders are required to comply with the requirements of P.L. 1975, c.127."

All bidders are encouraged to include a commitment to the use of small, minority, women's and labor surplus area businesses and shall be in conformity with N.J.A.C. 7:22-3.17(a)(24) and 7:22-4.17(a) with a goal of not less than 10% participation of small business enterprises owned and controlled by socially and economically disadvantaged individuals (SED's). Further details regarding special requirements of contractors to comply with the Project Plan developed by the Owner for SED participation are included in the Information for Bidders and the Supplemental General Conditions.

Passaic Valley Sewerage Commission
Joseph F. Kelly, Clerk

SECTION 00100

INSTRUCTIONS TO BIDDERS

1.01 Defined Terms

Terms used in these Instructions to Bidders have the meanings assigned to them in the General Conditions and Supplemental General Conditions (Specification Sections 00700 and 00800). The "OWNER" is the Passaic Valley Sewerage Commission. The "ENGINEERS" are identified in the Contract Agreement. The term "Bidder" means one who submits a bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the Bidder to whom OWNER (on the basis of OWNER'S evaluation) makes an award. The term "Bidding Documents" includes the Contract and Specifications, Contract Drawings and all Addenda issued prior to receipt of Bids.

1.02 Copies of Bidding Documents

- A. Complete sets of the Bidding Documents may be obtained from the ENGINEER as described in the Invitation to Bid. Bidding Documents will be available for examination at the OWNER'S office.
- B. Complete sets of the Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- C. OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the work and do not confer a license or grant for any other use.

1.03 Qualifications of Bidders

- A. To demonstrate qualifications to perform the Work, each Bidder must submit with his Bid a fully completed Bidder's Qualification Form (Specification Section 00400). Failure to submit a completed Bidder's Qualification Form may lead to rejection of the Bid. The information supplied by the Bidder on the Bidder's Qualification Form will be used to ascertain the Bidder's history, reputation, organization and capacity for satisfactory and faithful performance of their work and work of a similar character and will not otherwise be made public, except as provided by law.
- B. OWNER may, in accordance with applicable law, make such additional investigation as it deems necessary to determine the qualifications of Bidder to perform the Work and Bidder shall furnish to OWNER all such information and data for this purpose as OWNER may request. OWNER reserves the right, in accordance with applicable law, to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the OWNER that such Bidder is properly qualified to carry out the obligations of the Agreement, and to complete the Work contemplated therein. Conditional Bids shall not be accepted.

1.04 Examination of Contract Documents and Site

- A. It is the responsibility of each Bidder before submitting a Bid to (a) examine the Bidding Documents thoroughly, (b) consider Federal, State and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (c) study and carefully correlate Bidder's observations with the Bidding Documents, (d) notify ENGINEER of all conflicts, errors or discrepancies in the Bidding Documents.
- B. On request, OWNER will provide each Bidder access to the site to conduct such investigation and tests, as each Bidder deems necessary for submission of Bidder's Bid.
- C. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of the Bidding Documents, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Bidding Documents, and that the Bidding Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- D. The specifications provide model numbers, styles or other product references available from various dated and current manufacturer's product literature. In the event such model numbers styles or references no longer exist, the CONTRACTOR is to provide the named manufacturer's most current replacement product available at the time of bid and suitable for the intended application, or the equivalent product of an equal manufacturer. Verification will be required that the referenced equipment is no longer available from the manufacturer.

1.05 Interpretations and Addenda

- A. All questions about the meaning or intent of the Bidding Documents are to be directed to ENGINEER in writing. Interpretations or clarifications and replies considered necessary by ENGINEER, and approved by NJDEP, in response to such questions will be issued by Addenda, in accordance with N.J.S.A. 40A:11-23(c), and will further be mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than ten (10) working days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Verbal and other interpretations or clarifications will be without legal effect. All questions about the meaning or intent of the Bid Documents shall be received in writing by: CDM Smith., 110 Fieldcrest Ave., #8, 6th Floor, Edison, New Jersey 08837; Attn.: Thomas A. Laustsen, P.E., e-mail laustsent@cdmsmith.com.
- B. Addenda may also be issued without bidder questions to modify the Bidding Documents when and how deemed advisable by OWNER or ENGINEER, and as approved by NJDEP. Notice of revisions or addenda to advertisement or Bid Documents relating to Bids shall, no later than seven (7) working days prior to the date for acceptance of Bids, be made available in accordance with N.J.S.A. 40A:11-23(c), and by notification in writing by Certified Mail, fax, etc. to any person who has submitted a Bid or who has received the Bidding Documents from

the ENGINEER pursuant to the Instructions to Bidders. Issued addenda become part of the Contract Documents.

1.06 Bid Security

Each Bidder shall deliver a Bid Security with the bid, as stated in the Invitation to Bid which meets the requirements of the General Conditions and Supplemental General Conditions (Specification Sections 00700 and 00800). The total Bid (including Allowances) is the basis for establishing the amount of Bid Security. The Bid Security shall be payable via a certified or bank cashier's check drawn to the order of PVSC or in the form of a Bid Bond executed by a Surety Company duly authorized to do business in the State of New Jersey. The Bid Security shall be in the amount of the lesser of 10% of the total bid or \$20,000.

OWNER shall award the contract or reject all Bids within such time as may be specified in the Invitation to Bid, except that the Bids of any Bidders who consent thereto may, at the request of the OWNER, be held for consideration for such longer period as may be agreed. All Bid Security, except the security of the three (3) apparent lowest responsible Bidders, shall be returned unless otherwise required by the Bidder, within ten (10) working days after the opening of the Bids, and the Bids and such Bidders shall be considered as withdrawn. Within three (3) working days after the awarding and signing of the contract and the approval of the Contractor's Performance Bond, the Bid Security of the remaining unsuccessful Bidders shall be returned to them, pursuant to N.J.S.A. 40A: 11-24.

1.07 Contract Time

The numbers of days within which, or the dates by which, the Work is to be completed (the Contract Time) are set forth in the Contract Documents. For this Contract Substantial Completion is set at 210 calendar days from the Contract Award date. The number of days for Final Completion is set at 240 calendar days from the Contract Award date.

1.08 Damages

Provisions for damages are set forth in the Contract Documents.

It is the responsibility of each Bidder before submitting their bid to familiar themselves with the N.J.S.A. 40A:11-33 (Forfeiture of deposit in certain cases) and 40A:11-34 (Penalties for false statements) regarding the penalties for falsifications when submitting their bid.

1.09 Substitutes or "Or Equal" Items

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of cost changes based upon possible substitute or "or equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or an "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to ENGINEER, applications for such acceptance will not be considered by ENGINEER until after the Effective Date of the Contract. The procedure for submission of any such application by Contractor and consideration by ENGINEER is set forth in Article 6 of the General Conditions.

1.10 Subcontractors, Suppliers, and Others

- A. The Bidder shall comply with N.J.S.A. 40A: 11-16.
- B. If OWNER or ENGINEER after due investigation object to any proposed subcontractor on the basis of responsibility and responsiveness, they may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid-price.
Bidder shall submit with its Bid the "Subcontractor listing" Form in Specification Section 00401. When necessary and appropriate, and so requested, Bidder shall also submit a certificate as provided for in the Subcontractor Listing form and/or Section 00401.

1.11 Bid Form

- A. A Bid Form for each Contract is included with the Bidding Documents in Specification Section 00300. All blanks on the applicable Bid Form must be completed in ink or by typewriter.
- B. Attention is directed to the fact that a complete set of Bidding and Contract forms are bound within these Bidding Documents. These forms may be detached.
- C. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- D. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature, and the official address of the partnership must be shown together with the places of residence for each partner.
- E. Bids by individuals must be executed in the name of individual and shall include the individual's business address and place of residence.
- F. Bids by limited liability companies must be executed in the LLC's name and signed by the managing member, whose title must appear under his signature. The LLC's address and State of formation must be shown below the signature. If a Member other than the managing member of the LLC executes the bid such signature shall be accompanied by evidence of authority to sign.
- G. Submission of the Bid constitutes an acknowledgement of receipt of all Addenda, the numbers and dates of which shall be filled in on the Specification Section 00307 Form.
- H. The address, telephone and fax numbers for communications regarding the Bid must be shown.
- I. All names must be typed or printed below the signature, which must be ink to be considered.
- J. Both a Statement of Ownership form and a Non-Collusion Affidavit must be signed by the Bidder in order for the bid to be considered complete.

1.12 Submission of Bids

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked as instructed in the Invitation to Bid and with the name and address of the Bidder and shall be accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "Bid Enclosed" on the face of it.

1.13 Modification and Withdrawal of Bids

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- B. Requests for withdrawal of bids after Bid opening due to clerical error shall be made in accordance with appropriate laws.

1.14 Opening of Bids

Bids will be opened as stated in the Invitation to Bid.

1.15 Bids to Remain Subject to Acceptance

All Bids will remain subject to acceptance for sixty (60) calendar days after the day of the Bid opening, but OWNER may, in accordance with applicable law, release any Bid and return the Bid security prior to that date.

1.16 Rejection of Proposal

Pursuant to law, the OWNER, at its discretion, may reject any or all Bids or parts thereof only when it has sound documented business reasons which are in the best interest of the OWNER, the project, and the New Jersey Environmental Infrastructure Financing Program. A Bid Proposal may be rejected if the Bid shows any omission, alterations of form, addition or deductions not called for, conditional or uninvited alternate bids, or irregularities of any kind. However, the OWNER reserves the right to waive any informalities, defects or irregularities in Bid proposals, pursuant to applicable law.

No contract for work shall be awarded to a Contractor or subcontractor who is included on the New Jersey State Treasurer's list of debarred, suspended and disqualified bidders. Submission of false, deceptive, or fraudulent statements or information by bidders shall result in bid rejection or, if applicable, revocation of an awarded contract. Additionally, any such bidder will be subject to the criminal and/or civil penalties provided by all applicable state and federal laws.

1.17 Award of Contract

- A. OWNER may reject bids, pursuant to applicable law, when it has sound, documented business reasons which are in the best interest of the OWNER. OWNER reserves the right to waive any and all informalities not involving price, time or changes in the Work and the

right to reject all nonconforming, nonresponsive, unbalanced or conditional Bids. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of words, and any summations or multiplications shall thereupon be recalculated accordingly.

- B. In evaluating Bids, OWNER will consider: the qualifications of the Bidders; whether or not the Bids comply with the prescribed requirements; and, such alternates, prices and other data, as may be requested in the Bid Form.
- C. OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors and Suppliers, must be submitted.
- D. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction, albeit in accordance with applicable law and within the time prescribed by law.
- E. If the Contract is to be awarded, it will be awarded to the lowest responsible, responsive Bidder.

1.18 Contract Security

Article 5 of the General Conditions and the Supplemental General Conditions set forth OWNER'S requirements as to Performance and Payment Bonds (Specification Section 00600). When the Successful Bidder delivers the executed Contract to OWNER, it must be accompanied by the required Performance and Payment Bonds, Insurance, Environmental Maintenance Bond, and Maintenance Bond.

1.19 Signing of Contract

When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Contract with all other written Contract Documents attached. Within ten (10) working days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Contract and attached documents to OWNER with the required Bonds. Thereafter OWNER shall deliver one (1) fully signed counterpart to CONTRACTOR.

If Successful Bidder shall fail or neglect to sign and execute the Contract and bonds within ten (10) working days after Notice of Award, such failure or neglect may be deemed to be an abandonment and breach of Contract by the Bidder, and shall be just cause for an annulment of the award and action for breach of contract. Upon such abandonment, OWNER shall have the authority, in its own discretion, to make an award to another Bidder or to re-advertise for Bids. In addition, OWNER may exclude Bidder from bidding on subsequent PVSC projects for such a period as the OWNER may deem appropriate. Further, the Bidder improperly failing to execute the contract shall be liable for all damages incurred, including but not limited to:

- The increased contract price incurred in awarding the contract to another Contractor.
- For an amount for any delay caused in said failure at the liquidated per diem rate for delay damages set forth in the Contract.
- The increased administrative and/or consultant costs incurred as a result of said failure.

It is understood and agreed by said Bidder that, upon notice of said failure, the surety shall pay the OWNER the amount provided for the Proposal Guarantee in accordance with the provisions of the Proposal and the OWNER shall be entitled to collect on any certified checks or Proposal, or Performance and Payment Bonds posted as security for execution.

1.20 Pre-bid Meeting

A pre-bid meeting and tour of the Project Area will be held as stated in the Invitation to Bid. The pre-bid meeting is strongly encouraged, but not mandatory. No technical questions will be answered at the meeting. ENGINEER will transmit to all prospective Bidders of record such Addenda as ENGINEER considers necessary in response to questions arising at the meeting.

1.21 Sales Tax

The OWNER is exempt from payment of sales tax on all materials to be incorporated into the project. CONTRACTOR shall follow requirements in Article 6 of the General Conditions on sales tax.

1.22 Retainage

Provisions concerning retainage are set forth in the General Conditions and Supplemental General Conditions.

1.23 Nondiscrimination Provisions

Bidders are required to comply with all applicable Federal and State Statutes, Rules and Regulations including but not limited to Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d et. Seq, and the discrimination and affirmative action provisions of N.J.S.A 10:2-1 through 10:2-4, the New Jersey Law against Discrimination, N.J.S.A 10: 5-1, et seq., and the rules and regulations promulgated pursuant thereto. Each Bidder must submit with their bid a signed affidavit stating that it shall comply with the affirmative action program as defined by Specification Section 00306.

Successful Bidders must, if requested, submit a list of all Subcontractors who will perform work on the Project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the Work, together with supporting information to the effect that said labor pools' practices and policies are in conformity with Executive Order No. 11246, and that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employees seeking employment and performing work under the Contract, or a certification as to what efforts have been made to secure such

statements when such agents or labor pools have failed or refused to furnish same prior to the Award of the Contract.

Successful Bidders must be prepared to comply in all respects with the Provisions for Projects Receiving Funding Assistance from Federal and State Government which are included in the Contract Documents.

1.24 Collusive Bids

The proposal of any Bidder or Bidders who engage in collusive bidding shall be rejected. Any Bidder who submits more than one proposal in such manner as to make it appear that the proposals submitted are on a competitive basis from different parties shall be considered a collusive Bidder. The OWNER may reject the Bid proposals of any collusive Bidder at any point after Bid opening. However, nothing in this section shall prevent a Bidder from superseding a Bid proposal by a subsequent proposal delivered prior to Bid opening which expressly revokes the previous Bid.

1.25 Wage Determination Rates

The successful bidder will be required to comply with all provisions of prevailing wage rates as determined by the New Jersey Department of Labor.

The CONTRACTOR's attention is directed to the prevailing wage rates contained in Exhibit 1 and to the applicable provisions of the New Jersey Prevailing Wage Act, (N.J.S.A. 34:11-56.25 et seq) governing the prevailing rates of wages for workmen who are employed on this project. All applicable provisions of said Prevailing Wage Act and Amendments thereto shall be considered part of this Contract and made a part hereof. The Contractor shall pay not less than the prevailing wage rate to workers employed in the performance of any contract for the project, in accordance with the rate determined by the Commissioner of New Jersey Department of Labor pursuant to N.J.S. A. 34:11-56.25 et seq. OR the United States Secretary of Labor pursuant to 29 CFR Part 5, whichever is greater. The Contractor shall refer to Exhibit 3 of the Supplemental General Conditions for the requirements of the Davis-Bacon Act.

The Bidder does also declare and represent that in the event of any change of such prevailing rates at any time before the execution and delivery of the Contract between the Bidder and the OWNER for the work of construction of the project, or at any time thereafter, the new rates, if applicable, will become minimum rates for work performed thereafter under said Contract. No increase in the Contract price shall be claimed by the Bidder and no such increase will be granted by the OWNER as a result of such change.

In the event it is found that any employee of the Contractor or any subcontractor covered by the contract, has been paid a rate of wages less than the minimum wage required to be paid by the contract, the Owner may terminate the Contractor's or subcontractor's right to proceed with the work, or such part of the work, as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The Contractor and his sureties shall be liable to the local government for any excess costs occasioned thereby.

1.26 Construction Drawings and Specifications Provided by ENGINEER

After the award and prior to signing of the Contract, the OWNER will furnish the successful Bidder with a complete set of conformed drawings "Issued for Construction". After the Contract has been awarded the CONTRACTOR will be furnished with five (5) sets of conformed drawings "Issued for Construction" and five (5) sets of the Specifications. The CONTRACTOR may purchase additional sets at cost.

1.27 Special Legal Requirements

This Contract will be awarded pursuant to the authority of PVSC's authorizing statute N.J.S.A. 58A:14-1 et seq. ("Authorizing Statute"). Where the Authorizing Statute is silent, it is PVSC's policy to be guided by the provisions of New Jersey Local Public Contracts Law, N.J.S.A. 40A:11 et seq.

Bidders are required to make the good faith efforts to assure that disadvantaged business enterprises, women's business enterprises and labor surplus area firms are used when possible as specified in 40 CFR part 33.

The Contract is expected to be funded in part with the funds from the New Jersey Department of Environmental Protection, the New Jersey Environmental Infrastructure Trust, and FEMA's Public Assistance Program and Hazard Mitigation Program. The United States, the State of New Jersey, the New Jersey Environmental Infrastructure Trust, or any of their departments, agencies, or employees is not, and will not be, a party to the Contract or any lower tier contract or subcontract. The Contract and any Subcontract will be subject to regulations contained in N.J.A.C. 7:22-3.1 et seq., 4.1 et seq., 5.1 et seq., 9.1 et seq. and 10.1 et seq., Local Public Contract (N.J.S.A. 40a:11-1 et seq), Department of Labor And Workforce Development Current Wage Rate Determination, Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq), Contract Work Hours and Safety Standard Act (40 U.S.C. 3701 et seq), Copeland Act (18 U.S.C. 874 and 40 U.S.C. 3145 et seq), Davis Bacon Act (40 U.S.C. 3142 et seq), Buy American Clause (41 U.S.C. 83 et seq), Debarment and Suspension (N.J.S.A. 34:11-56.25 et seq), and Socially and Economically Disadvantaged (SED) (N.J.S.A. 34:1B-1 et seq.).

All bids shall include a commitment to the use of small, minority, women's and labor surplus area businesses and shall be in conformity with N.J.A.C. 7:22-3.17(a)(24) and 7:22-4.17(a) with a goal of not less than 10% participation of small business enterprises owned and controlled by socially and economically disadvantaged individuals (SED's). Further details regarding required SED participation are included in the Information for Bidders and the Supplemental General Conditions.

Starting in January 2007, all business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

Bidder shall submit with their bid an executed "Two-Year Vendor Certification and Disclosure of Political Contributions" form (a copy of which can be found at http://www.state.nj.us/treasury/purchase/forms/eo134/c51_eo117_cd_02_10_09.pdf) if the Contractor does not have Two-Year Certification at the time of the Bid, as required by Executive Order 117.

1.28 American Goods and Products to be Used where Possible

In accordance with N.J.A.C. 40A:11-18 only manufactured and farm products of the United States, whenever available, will be used in the Work.

1.29 Public Works Contractor Registration

No Contractor shall bid on any contract for public work as defined in N.J.S.A. 34:11-56.26 unless the Contractor is registered pursuant to this act. No Contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to N.J.S.A. 34:11-56.48 et seq. at the time the bid is made. No Contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the Contractor or subcontractor is registered pursuant to that act. PVSA recommends the Bidder submit a copy of the Certificate(s) of Registration issued by the Commissioner of Labor with the Bid; and, the certificate(s) must be submitted prior to any contract award. The Public Works Contractor Registration Act requires bidders be registered under the Act at the time of bid, but allows the Contractor to submit the Certificate prior to contract award.

Each Contractor shall, after the bid is made and prior to the awarding of the contract, submit to the public entity the certificates of registration for all subcontractors listed in the bid proposal. Applications for registration shall not be accepted as a substitute for a certificate of registration for the purposes of this section, pursuant to N.J.S.A. 34:11-56.48 et seq.

1.30 New Jersey Business Registration Requirements

In accordance with N.J.S.A. 52:32-44 no contract shall be entered into by any contracting agency unless the Contractor provides proof of business registration prior to contract award. Proof of business registration shall be a copy of a Business Registration Certificate issued by the New Jersey Department of the Treasury, Division of Revenue.

As part of the Bid submission, the Bidder may include the BRC proofs of all named or listed subcontractors in the Bid including subcontractors listed for minority business enterprise utilization. The BRC regulations require Bidders to be registered and submit proof of registration prior to contract award. For all contracts with a value greater than 15 percent of the Owner's bid threshold, the requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the Contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used. Contractor shall submit subcontractors' business registration certificate to Owner/Engineer prior to executing subcontract with any subcontractor/vendor who knowingly supplies goods or services to a public agency. For the term of the contract, the Contractor and each of its affiliates and a subcontractor and each of its affiliates, as the term is defined by N.J.S.A. 52:32-44(g)(3), shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001, c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L.1977, c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

1.31 NJDEP and Environmental Infrastructure Trust Right to Stop Work

The NJDEP may order work to be stopped under this Contract for good cause pursuant to N.J.A.C. 7:22-3.43 and 7:22-4.43. Such stoppage may be treated under the clauses of this Contract, entitled "Suspension of Work and Termination".

1.32 Investment Activities in Iran

In accordance with N.J.S.A. 52:32-58, Bidder shall certify and submit with their bid as set forth therein on a form of Certification promulgated by State of New Jersey Division of Purchase and Property entitled "Disclosure of Investment Activities in Iran". The form of Certification and accompanying list dated January 28, 2013 can be found at http://www.state.nj.us/treasury/purchase/forms/DPA_Form_Packet.pdf (page 6 of 17) and <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>, respectively. **It is the responsibility of Bidder to insure that the most up to date list issued by the Division of Purchase and Property is attached to the Certification submitted with this Bid.**

1.33 Article 43 – American Iron and Steel

Bidders on this work are required to comply with the State of New Jersey Clean Water State Revolving Fund American Iron and Steel Requirements.

1.34 New Jersey Office of State Comptroller Records Retention language (N.J.A.C. 17:44-2.2)

The Contractor shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request. N.J.A.C. 17:44-2.2.

1.35 Americans with Disabilities Act Provisions

The CONTRACTOR and the OWNER do hereby agree that the provisions of the Title (1 of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. § 12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the OWNER pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the CONTRACTOR, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this Contract, the CONTRACTOR shall defend the OWNER in any action or administrative proceeding commenced pursuant to this Act. The CONTRACTOR shall indemnify, protect, and save harmless the OWNER, its agents, servants, and employees from and against any and all suits, claims, losses

demands, or damages, or whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith, in any and all complaints brought pursuant to the OWNER grievance procedure the CONTRACTOR agrees to abide by any decision of the OWNER which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the OWNER or if the OWNER incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The OWNER shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceedings is brought against the OWNER or any of its agents, servants and employees, the OWNER shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the OWNER or its representatives. It is expressly agreed and understood that any approval by the OWNER of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the OWNER pursuant to this paragraph. It is further agreed and understood that the OWNER assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out to their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the CONTRACTOR from any liability, nor preclude the OWNER from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

1.36 Notice of Executive Order 125 Requirement for Posting of Winning Proposal and Contract Documents

Pursuant to Executive Order No. 125, signed by Governor Christie on February 8, 2013, the Office of the State Comptroller ("OSC") is required to make all approved State contracts for the allocation and expenditure of federal reconstruction resources available to the public by posting such contracts on an appropriate State website. Such contracts are posted on the New Jersey Sandy Transparency website located at:

<http://nj.gov/comptroller/sandytransparency/contracts/sandy/>

The contract resulting from this project is subject to the requirements of Executive Order No. 125. Accordingly, the OSC will post a copy of the contract, including the project, the winning bidder's proposal and other related contract documents for the above contract on the Sandy Transparency website.

In submitting its proposal, a bidder may designate specific information as not subject to disclosure. However, such bidder must have a good faith legal and/ or factual basis to assert that such designated portions of its proposal (i) are proprietary and confidential financial or commercial information or trade secrets or (ii) must not be disclosed to protect the personal privacy of an identified individual. The location in the proposal of any such designation should be clearly stated in a cover letter, and a redacted copy of the proposal should be provided.

The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the winning bidder accordingly. The State will not honor any attempt by a winning bidder to designate its entire proposal as proprietary, confidential and/or to claim copyright protection for its entire proposal. In the event of any challenge to the winning bidder's assertion of confidentiality with which the State does not concur, the bidder shall be solely responsible for defending its designation.

1.37 N.J.S.A. 10:5-31 et.seq Mandatory Equal Employment Opportunity Language

During the performance of this contract, the Contractor agrees as follows:

The Contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the Contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The Contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The Contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The Contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the Contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program, may, in its discretion, exempt a Contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the Contractor or subcontractor is employing workers provided by a union

which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The Contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the Contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the Contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the Contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the Contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the Contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the Contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the Contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the Contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the Contractor does not have a referral agreement or arrangement with a union for a construction trade, the Contractor or subcontractor agrees to take the following actions:

(1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the Contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the Contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the Contractor or subcontractor:

(i) The Contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the Contractor or subcontractor shall in good faith determine the qualifications of such individuals. The Contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a Contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the Contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the Contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said Contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the Contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The Contractor or subcontractor agrees that nothing contained in (B) above shall preclude the Contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the Contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the Contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the Contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the Contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its web site, for distribution to and completion by the Contractor, in accordance with N.J.A.C. 17:27-7. The Contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the public agency compliance officer.

The Contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The Contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

END OF SECTION

SECTION 00200

CHECK LIST FOR BIDDERS

- A. Failure to submit items, 2, 3, 4, 7, 9, 10, 13, 15, and 20 with the bid is a mandatory cause for the bid to be rejected (N.J.S.A. 40A:11-23.2). Failure to submit items 1, 5, 6, 8, 11, and/or 12 with the bid may be cause for the bid to be rejected (N.J.S.A. 40A:11-23.1). Items 14, 16, 17, 18, and 19 shall be submitted prior to contract award.**

<u>Item</u>	<u>Description of Item</u>	<u>Contract Section</u>	<u>Initial if Completed</u>
1	Bid Form	00300	_____
2	Bid Bond or Certified Check (Bid Guarantee Required by NJSA 40A:11-21)	00301	_____
3	Consent of Surety (NJSA 40A:11-22)	00302	_____
4	Surety Disclosure Statement & Certification	00302A	_____
5	Bidder's Affidavit	00303	_____
6	Non-Collusion Affidavit	00304	_____
7	Statement of Ownership (NJSA 52:25-24.2)	00305	_____
8	Affirmative Action Affidavit	00306	_____
9	If applicable, Acknowledgement of Receipt of Notices or Revisions or Addenda Of an Advertisement, Specifications or Changes to Bid Document Form	00307	_____
10	Certification of Nonsegregated Facilities	00308	_____
11	Certification of Bidder's Status	00309	_____
12	Bidder's Qualification Form	00400	_____
13	Subcontractor Listing (NJSA 40A: 11-16)	00401	_____
14	Business Registration Certificate (NJSA 52:32-44)	(00100, paragraph 1.30)	_____
15	Executive Order 117 Certification	(00100, paragraph 1.27)	_____
16	Public Works Contractor Registration	00402	_____
17	Certificate of Equal Opportunity	00403	_____
18	Certification of Affirmative Action Plan Contractors and Subcontractors	00404	_____
19	American Iron and Steel Certification	00405	_____
20	Disclosure of Investment Activities in Iran (N.J.S.A. 52:32-58)	(00100, paragraph 1.32)	_____

The undersigned hereby acknowledges and has submitted the above listed requirements.

Name of Contractor

Signature of Representative

Print:

Title:

Date:

Note: This form is to help the bidder in preparing his proposal. All information must be filled out in this Section.

END OF SECTION

SECTION 00300

BID FORM

To: PASSAIC VALLEY SEWERAGE COMMISSION:

Bid Submitted For:

CONTRACT NO. B128

STANDBY POWER PLANT SITE PREPARATION CONTRACT

Pursuant to and in compliance with your Invitation to Bid and the Instructions to Bidders relating thereto, the undersigned hereby proposes to furnish all labor, materials, supplies, equipment and other facilities necessary or proper for or incidental to the above Contract, as required by and in strict accordance with the Bidding Documents for the amount named in the proposal hereinafter described. In making this proposal the Bidder hereby declares that all provisions of Addenda which have been issued have been complied with in preparing bids.

Name of Bidder:

Bidder:

(Individual, Partnership, Corporation, Joint Venture; L.L.C. as case may be)

Bidder's Business Address:

Telephone No.: _____ Fax No.: _____

Date of Bid: _____

(If Bidder is an Individual, fill in the following blanks)

Name of Individual:

Residence of Individual:

(If Bidder is a Partnership, fill in the following blanks)

Name and Title of Partner:

(If Bidder is a Corporation, fill in the following blanks)

Organized under the laws of the State of:

Name and Residence of President:

Name and title of person signing this bid form if not President (copy of authority to sign must be attached)

Name and Residence of Secretary:

(If Bidder is a Limited Liability Company, fill in the following blanks)

Formed under the laws of the State of:

Name of Managing Member:

Name and title of person signing this bid form if other than Managing Member (copy of authority to sign must be attached)

The undersigned, as Bidder, declares that he/she is authorized to sign this Bid Form on behalf of Bidder ; that he/she has carefully examined the annexed proposed form of contract and bond and the drawings therein referred to; and that he proposes and agrees, if this proposal is accepted, to contract with the Passaic Valley Sewerage Commission (PVSC), in the form of the copy of the Contract deposited in the office of the PVSC, to perform all the work described in the Contract Specifications in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefor the sums, exclusive of all taxes, proposed herein.

If this proposal shall be accepted by the PVSC, and the undersigned shall fail to contract as aforesaid, as specified in the General Conditions according to the address herewith given, that the contract is ready for signature, then the PVSC may at their option determine that the bidder has abandoned the contract and thereupon the proposal and acceptance shall be null and void, and the certified check and/or Bid Bond and the proceeds thereof for _____dollars (Bid Security) accompanying this proposal shall become the property of the PVSC and additionally the bidder shall be liable to PVSC for any and all damages accruing to PVSC by reason of said default; otherwise the accompanying check and/or Bid Bond, shall be returned to the undersigned.

Signature of Bidder with residence and business address:

Dated: _____ Corporate Seal:

Attest: _____

Name: _____

Print: _____

Title: _____

Other (Specify): _____

THE BIDDER AFFIRMS AND DECLARES:

- A. That he has carefully examined the site of the work and that, from his own personal investigations and research, has satisfied himself as to the nature and location of the work; the character, quality and quantity of existing materials. All difficulties likely to be encountered; the kind and extent of labor, equipment, other facilities needed for the performance of the work; the general and local conditions; and all other items and conditions which may, in any way, affect the work or its performance.
- B. The Bidder also declares that he has carefully examined and fully understands all the component parts of this Contract, that the work can be performed as called for by the Contract, and that he will execute the Contract and will completely perform it in strict accordance with its terms for the prices.
- C. That the Bidder will execute work for the Allowance items as directed by the Engineer. It is also understood and agreed that the Final Contract Payment for allowance Items will be based upon such actual payments, and not on the approximate amount cited herein.
- D. That the Bidder declares the attached "Qualification Form" is in all respects a true and complete statement of the qualifications and financial condition of the Bidder.
- E. The price is exclusive of N.J. State and Federal Taxes.
- F. Prices shall also include all transportation charges on materials removed from site and charges pertaining to disposal and other costs pertaining to the execution of the work.
- G. He shall maintain for the duration of the work to be done under this contract, insurance in the amounts specified in the Contract. Upon execution of the Contract, the contractor shall furnish all certificates of insurance as required and set forth herein.
- H. That he understands and agrees to the conditions for liquidated damages.
- I. Upon completion, inspection and acceptance by PVSC of the work, CONTRACTOR shall turn over to PVSC the Maintenance Bond (Specification Section 00601) for the one (1) year Correction Period specified in the Contract Documents.
- J. The Bidder has clearly marked on the outside of the sealed envelope that contains his/her bid, the Bidder's name, contract name and number, and bid opening date.

DETERMINATION OF LOW BID. Determination of low bid will be made by comparing the total estimated bid prices of each bidder, which shall include the total lump sum bid price including all allowances.

A BID ON
CONTRACT NO. B128
STANDBY POWER PLANT SITE PREPARATION CONTRACT

ITEM	QUANTITY	LUMP SUM OR UNIT PRICE WRITTEN IN WORDS	UNIT PRICE WRITTEN IN FIGURES		TOTAL PRICE WRITTEN IN FIGURES	
			Dollars	Cents	Dollars	Cents
1	LUMP SUM	Site Preparation Lump Sum (Must be written in words) FOR _____ Dollars Cents				
2	20,000 Tons	Furnishing Clean Backfill Unit Price (Must be written in words) FOR _____ Dollars Cents				
3	10,000 Tons	Transportation and Disposal of Unsuitable Backfill Materials Unit Price (Must be written in words) FOR _____ Dollars Cents				
4	ALLOWANCE	ALLOWANCE FOR PVSC SECURITY TO PROVIDE TRAFFIC CONTROL FOR <u>ONE HUNDRED AND EIGHT THOUSAND</u> <u>ZERO</u> Dollars Cents	\$108,000	0	\$108,000	0
5	ALLOWANCE	ALLOWANCE FOR DEMOLITION AND DISPOSAL OF CONCRETE STRUCTURES FOR <u>FOUR HUNDRED THOUSAND</u> <u>ZERO</u> Dollars Cents	\$400,000	0	\$400,000	0
6	ALLOWANCE	ALLOWANCE FOR RELOCATION OF UTILITIES FOR <u>TWO HUNDRED THOUSAND</u> <u>ZERO</u> Dollars Cents	\$200,000	0	\$200,000	0
7	ALLOWANCE	ALLOWANCE FOR CIVIL SITE WORK FOR <u>FOUR HUNDRED THOUSAND</u> <u>ZERO</u> Dollars Cents	\$400,000	0	\$400,000	0

TOTAL BID PRICE (Sum of Item No. 1 through No. 7) (in Figures) \$ _____

Amount Written:

_____ **Dollars and** _____ **Cents**

The "**Allowance Items**" are intended to provide for work that may later be determined to be necessary for the completion of the project but is not covered in the bid specifications. Written authorization by the OWNER for utilization of any part of the allowances for any such work shall be required.

SECTION 00301

BID BOND

KNOW ALL MEN BY THESE PRESENTS that we, the undersigned, _____, as Principal; and _____ Surety, are hereby held and firmly bound unto the Passaic Valley Sewerage Commission in the penal sum of _____ for the payment of which, well 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 the Passaic Valley Sewerage Commission a certain Bid, attached hereto, and hereby made a part hereof, to enter into a contract in writing, to:

CONTRACT NO. B128 – STANDBY POWER PLANT SITE PREPARATION CONTRACT

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 his faithful performance of said CONTRACT, 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 obligations of said Surety and its bond shall be in no way impaired or affected by any extension of time within which the Principal may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have set their hands and seals, and such of them as are corporations having 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.

Principal: _____

Surety: _____ by: _____

SECTION 00302

CONSENT OF SURETY

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of \$1.00, lawful money of the United States, the receipt whereof is hereby acknowledged, paid the undersigned corporation, and for other valuable consideration, the _____
_____(Name of Surety) corporation organized and existing under the laws of the State of _____ and licensed to do business in the State of New Jersey, certifies and agrees, that if CONTRACT NO. B128 – STANDBY POWER PLANT SITE PREPARATION CONTRACT is awarded to _____ undersigned corporation will execute the Bond or Bonds as required by the CONTRACT Documents and will become surety in the full amount of the CONTRACT price for the faithful performance of the contract and for payment of all persons supplying labor or furnishing materials in connection hence with.

Signature of Surety by: _____

Print Name: _____

Title: _____

Address: _____

(To be accompanied by the usual proof of authority of officers of surety company to execute the same.)

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

Surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of R.S. 17:17-6 or R.S. 17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, _____ (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):

(3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. § 6305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S. 17:18-9 as of (date on which such limitation was so established) is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

(4) The amount of the bond to which this statement and certification is attached is:

SURETY DISCLOSURE STATEMENT AND CERTIFICATION (continued)

(5) if, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3)(a) or (3)(b) above, or both, then for each such contract of reinsurance:

- (a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:

;and

- (b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5)(a) satisfies the credit for reinsurance requirement established under P.L. 1993, c.243 C 17:51B-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

CERTIFICATE

(to be completed by an authorized certifying agent
for each surety on the bond)

I _____ (Name of Agent), as _____ (Title of Agent) for
_____ (Name of Surety), a corporation/mutual insurance company/other
(circle one) domiciled in _____ (state of domicile), DO
HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me
are true, and ACKNOWLEDGE that, if any of those statements are false, this bond is
VOIDABLE.

(Signature of certifying agent)

(Printed name of certifying agent)

Title of certifying agent)

SECTION 00303

BIDDER'S AFFIDAVIT

State of)

ss:

County of)

_____ being duly sworn, deposes and says that he resides at

_____ that he is the _____ (Title)

of _____
(Name of Bidder)

who signed the above Proposal or Bid, that he was duly authorized to sign, and that the Bid is a true offer of the Bidder, and the seal attached is the seal of the Bidder and that all the declarations and statements contained in the Bid are true to the best of his knowledge and belief.

(Affiant)

Sworn to and subscribed before me

this _____ day of _____, 20__

Notary Public in and for

_____ County, _____

My Commission Expires

_____, 20__

SECTION 00304

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY, COUNTY OF _____ ss.:

I, _____, of the City of _____ in the
County of _____ and the State of _____ of full age, being duly
sworn according to law on my oath depose and say that:

I am _____ of the firm of _____ the bidder
making the Bid for the above-named contract, and that I executed the said Bid with full authority
so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated
in any collusion, or otherwise taken any action in restraint of free, competitive bidding in
connection with the within Contract; and that all statements contained in said Bid and in this
Affidavit are true and correct, and made with full knowledge that the **Passaic Valley Sewerage
Commission** relies upon the truth of the statements contained in said Bid and in the statements
contained in this Affidavit in awarding the Contract.

I further warrant that no person or selling agency has been employed or retained to solicit
or secure such Contract upon an agreement or understanding for a commission, percentage,
brokerage or contingent fee, except bona fide employees or bona fide established commercial or
selling agencies maintained by the bidder for the purpose of securing business.

For breach or violation of this warranty the Owner shall have the right to annul the Con-
tract without liability or in its discretion to deduct from the Contract price or consideration the
full amount of such commission, percentage, brokerage or contingent fee.

(Affiant)

Sworn to and subscribed before me

this _____ day of _____, 20____

Notary Public in and for

_____ County, _____

My Commission Expires

_____, 20____

SECTION 00305

STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of

Organization: _____

Organization

Address: _____

Part I Check the box that represents the type of business organization:

- ☐ Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- ☐ Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- ☐ For-Profit Corporation (any type) ☐ Limited Liability Company (LLC)
- ☐ Partnership ☐ Limited Partnership ☐ Limited Liability Partnership (LLP)
- ☐ Other (be specific): _____

Part II

- ☐ The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

OR

- ☐ No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN PUBLICLY TRADED COMPANIES

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Part IV DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II other than for any publicly traded parent entities referenced above. **The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address

Part V Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am

authorized to execute this certification on behalf of the bidder/proposer; that the Linden Roselle Sewerage Authority is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with Linden Roselle Sewerage Authority to notify the Linden Roselle Sewerage Authority in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the Linden Roselle Sewerage Authority to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

SECTION 00306

AFFIRMATIVE ACTION AFFIDAVIT

(to be completed by firms with more than 50 employees)

_____ of the firm of _____
(name)

being sworn according to law on his oath deposes and says that:

1. I am authorized to make this affidavit on behalf of:

(name of firm)

2. Agree to comply with an Affirmative Action Program for equal employment opportunity heretofore submitted as part of the conditions of this contract for a similar program. I/we do hereby further affirm that I/we will comply with the rules and regulations which will be promulgated by the State Treasurer as of the effective date therefor pursuant to the Affirmative Action Law (P.L. 1975, c. 127), as amended.

Name and Title

Signature of Authorized Representative

Subscribed and sworn to
before me this _____

day of _____ 20__.

Seal Notary Public of New Jersey

AFFIRMATIVE ACTION AFFIDAVIT

(to be completed by firms with fewer than 50 employees)

I _____, of the (City, Town, Borough) of _____ in the County of _____, State of _____, of full age, being duly sworn according to law on my oath depose and say that:

1. I am _____, of the firm of _____, a bidder making a proposal upon

CONTRACT NO. B128
STANDBY POWER PLANT SITE PREPARATION CONTRACT

2. _____ does not have 50 employees or more inclusive of all officers and employees of every type.
3. I am familiar with the affirmative action requirements of P.L. 1975, c. 127 and rules and regulations issued by the Treasurer, State of New Jersey, pursuant thereto.
4. _____ has complied with all the affirmative action requirements of the State of New Jersey, including those required by the P.L. 1975, c. 127 and rules and regulations issued by the Treasurer, State of New Jersey, pursuant thereto.
5. I am aware that if _____ does not comply with P.L. 1975, c. 127 and rules and regulations issued pursuant thereto, that no monies will be paid by the State of New Jersey, County of _____, (City, Town, Borough) of _____ until an affirmative action plan is approved. I am also aware that the contract may be terminated and the _____, may be debarred from all public contracts, for a period of up to five (5) years.
6. In the event my workforce increases to 50 employees, I must contact the State Affirmative Action Office and complete an Employee Information Report.

Name and Title

Signature of Authorized Representative

Subscribed and sworn to
before me this _____

day of _____, 20____.

Seal Notary Public of New Jersey

AFFIRMATIVE ACTION
AFFIDAVIT

00306-2

*SECTION 00307

ACKNOWLEDGEMENT OF RECEIPT OF CHANGES TO BID DOCUMENTS FORM

PASSAIC VALLEY SEWERAGE COMMISSION

STANDBY POWER PLANT SITE PREPARATION CONTRACT	B128
(Name of Construction Project)	(Contract No.)

The undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notices, revision or addendum. Note that the PVSC's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be cause for rejection of the bid.

Addendum No.	How Received (mail, fax, Pick-up, etc)	Date Received

- If no addendum received, indicated NA under Addendum No.

Acknowledgement by bidder:

Name of Bidder: _____

By Authorized Representative:

Signature: _____

Printed Name and Title: _____

Date: _____

SECTION 00308

CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to contracts, subcontracts, and agreements with Applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause.)

The Federally assisted Construction Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Federally assisted Construction Contractor certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Federally assisted Construction Contractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certificate, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation and entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin, because of habit, local custom, or otherwise. The Federally assisted Construction Contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files.

Signature

Date

Name and Title of Signer (Please Type)

NOTE: The penalty for making false statements in offers is prescribed in 18 USC 1001.

SECTION 00309

CERTIFICATION OF BIDDER'S STATUS ON
THE STATE TREASURER'S LIST OF
DEBARRED, SUSPENDED AND DISQUALIFIED BIDDERS

STATE OF _____

COUNTY OF _____

I, _____ of the City of, in the State of, _____
full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____, the
bidder making the Bid for the above named project; that I executed the said Bid, this
affidavit and all other bidding documents with full authority to do so; and that said bidder
is not now at the time of submission of this bid included on the State of New Jersey
Treasurer's List of Debarred, Suspended and Disqualified Bidders.

By: _____
Deponent's Signature

Date: _____

Deponent's Printed Name and Title

Subscribed and sworn to _____

before me this _____ day of _____, 20____.

Notary Public of
My Commission expires _____, 20____.

SECTION 00400

BIDDER'S QUALIFICATION FORM

1. Name of Contractor _____
2. How many years experience have you had in construction work of the same general type as this Contract? _____
3. Give information about the construction experience of the principals of your present organization who will be involved in the Contract:

Individual's Name	Present Position in Organization	Years of Construction Experience	Size and Type of Work	Proposed Position For This Contract

4. Give information about your present contract workload, or contracts to which you are committed:

Contract Price	Type of Construction	Location Of Work	Percentage Complete	Expected Completion Date	Name and Phone No. of Owner

5. Has your organization, or any other partner thereof, failed to complete a construction contract? ____yes ____no

6. **Provide five (5) references of projects similar in scope and size to that required under this Contract.** Give only engineers, architects or owner's representatives for whom you have done similar work.

<u>Name</u>	<u>Business Address</u>	<u>Telephone</u>	<u>Project</u>
-------------	-------------------------	------------------	----------------

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

7. Is any litigation pending or threatened against your organization?

8. Has your organization been denied award of any construction project where it was the lowest bidder? _____

If yes, give details: _____

9. Give as reference a surety company or companies regarding your organization's financial responsibility and general reliability:

Name of Surety Company _____

Name of Local Agent (if different) _____

Local Address: _____

Telephone _____

Person familiar with Bidder's account: _____

10. Give the names and telephone numbers of personnel in your organization authorized to participate in discussions of the proposed contract

Name

Telephone

SECTION 00401

SUBCONTRACTOR LISTING

Failure to complete this Section is cause for the bid to be rejected (See NJSA 40A:11-16).

Before submitting his bid, the Bidder shall completely familiarize himself with Section 40A:11-16 of the New Jersey Local Public Contracts Law (New Jersey Statutes Annotated 40A:11-16). On contracts for the erection, alteration or repair of any public building, if the Bidder will use subcontractors for the plumbing work and gas fitting and all kindred work, steam and hot water heating and ventilating apparatus, steam power plants and kindred work, electrical work, structural steel and ornamental iron work he shall list below the name and address of each subcontractor to be used for these respective and kindred categories of work.

_____ Initial here if no work will be subcontracted.

WORK CATEGORY	NAME	ADDRESS
Plumbing and Gas Fitting and all kindred work		
Steam Power Plants, Steam and Hot Water Heating and Ventilating Apparatus and all kindred work		
Electrical Work		
Structural Steel and Ornamental Iron Work		

(Attach additional pages as required)

NOTE: Submission of the names and addresses of the subcontractors required by N.J.S.A. 40A:11-16 is essential and non-waivable. The names and addresses for subcontractors must be provided for each work category above, otherwise the bid will be deemed nonresponsive. Where more than one subcontractor is named for a work category, the bidder must identify, in the Bid, the scope of work that is to be performed by each subcontractor, as required by N.J.S.A. 40A:11-16. Failure to comply with these statutory requirements will result in the Bid being deemed nonresponsive.

Name and Title of Authorized Representative

Signature of Authorized Representative

SECTION 00402

PUBLIC WORKS CONTRACTOR REGISTRATION

1. In accordance with "The Public Works Contractor Registration Act," N.J.S.A. 34:11 – 56.48 et seq.:

"No contractor shall bid on any contract for public work as defined in section 2 of P.L. 1963, c150 (C34:11 – 56.26) unless the contractor is registered pursuant in this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L. 1999, c238 (C34:11 – 56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor is registered pursuant to that act." N.J.S.A. 34:11 – 56.51.

"Contractor means a person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract which is subject to the provisions of the "New Jersey Prevailing Wage Act," P.L., 1963, c.150, (C.34:11 – 56.25 et seq.) and includes any subcontractor or lower tier subcontractor of a contractor defined herein" N.J.S.A. 34:11 – 56.50.

2. Proof of registration is required before an award can be made:

"Each contractor shall, after the bid is made and prior the awarding of the contract, submit to the public entity the certificates of registration for all subcontractors listed in the bid proposal. Applications for registration shall not be accepted as a substitute for a certificate of registration for the purposes of this section." N.J.S.A. 34:11-56.55.

3. Contractors and their listed subcontractors bidding on covered work shall provide proof of the required registration prior to the contract award. [As a practical matter, PVSC recommends proof of registration be submitted with the Bid]
4. By signing this form, the Contractor certifies that they shall provide proof of the required registration(s) prior to the contract award.

(Signature)

(Date)

(Name and Title of Signer -
Please Type)

END OF SECTION

PUBLIC WORKS CONTRACTOR
REGISTRATION

00402-1

CERTIFICATE OF EQUAL OPPORTUNITY

The undersigned currently hold contract(s) numbered _____ with _____ which has received funds from the New Jersey Environmental Infrastructure Trust or (a) subcontract(s) with a prime contractor of the (grantee).

This notice is furnished to you pursuant to the provisions of the above contract(s) or subcontract(s) and Executive Orders 11246 and 11375.

Date _____

- END OF SECTION -

CERTIFICATION OF AFFIRMATIVE ACTION PLAN
FOR
CONTRACTOR AND SUBCONTRACTORS

Bidder's Name: _____

Address: _____

The Bidder hereby certifies that it shall comply with and shall require its subcontractors to comply with the discrimination and affirmative action provisions of N.J.S.A. 10:2-1 through 10:2-4, the New Jersey Law Against Discrimination (N.J.S.A. 10:5 et seq.), and the rules and regulations promulgated pursuant thereto, including but not limited to N.J.A.C. 17:27-1 et seq.

Pursuant to N.J.S.A. 10:2-1, this contract shall be subject to the following provisions:

- a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;
- c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and
- d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

An affirmative action plan for construction contractors and subcontractors shall consist of the following elements:

1. Provisions in the construction contract containing language required by N.J.A.C. 17:27-3, 4(a) and N.J.A.C. 17:27-7.4, or
2. 41 CFR Part 60-2 and any existing Federally approved or sanctioned affirmative action program.

(Date)

(Signature)

SECTION 00405

AMERICAN IRON AND STEEL CERTIFICATION

The Contractor acknowledges to and for the benefit of the _____ ("Purchaser") and the _____ (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

ACKNOWLEDGEMENT BY BIDDER:

Name Bidder

Name and Title By Authorized Representative

Signature of Authorized Representative

Date

- END OF SECTION -

SECTION 00406

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Project Name: _____

Bidder Name: _____

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOXFAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE

Pursuant to Public Law 2012, c.25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that NEITHER the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.tis/treasury/purchase/pdf/Chapter25List.pdf>. Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the New Jersey Director at the Division of Purchase and Property finds a person or entity to be in violation of law, he/she shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking suspension of the party.

PLEASE CHECK THE APPROPRIATE BOX:

- ☐ I certify, pursuant to Public Law 2012, c.25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c.25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below: QR
- ☐ I am unable to certify as above because the bidder and/or one of its parents, subsidiaries or affiliates is listed on the Department's Chapter 25 List. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-resonsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN.

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION\I. IF YOU NEED ADDITIONAL ROOM, ADD ADIIITIONAL PAGES.

Name _____ Relationship to Bidder/Owner _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/offoror Contact Name _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey and the Owner of the project are relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State of New Jersey and the Owner to notify the State of New Jersey and tire Owner in writing of any changes to the answers of information contained herein, I acknowledge that I am aware of that it is a criminal offense to make a false statement or *misrepresentation* in this certification, and if I do so, I recognize that I are subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of flew Jersey and/or the Owner and that the State and/or the Owner at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____

Title: _____ Date: _____

SECTION 00500

CONTRACT NO. B128
PASSAIC VALLEY SEWERAGE COMMISSION
600 WILSON AVENUE
NEWARK, NEW JERSEY 07105

CONTRACT AGREEMENT

STANDBY POWER PLANT SITE PREPARATION CONTRACT

THIS AGREEMENT, made and executed this _____ day of _____, 20____, by and between the PASSAIC VALLEY SEWERAGE COMMISSION, a corporate body politic of the State of New Jersey, hereinafter called the "OWNER", _____ a corporation chartered under the laws of the State of _____, partnership, individual, with principal offices at _____, hereinafter called the "CONTRACTOR". OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1 - Work

In consideration of the payments to be made as hereinafter provided, and of the performance by OWNER of all the matters and things to be performed by OWNER as herein provided; CONTRACTOR agrees, at its own sole cost and expense, to perform all the labor and services and to furnish all labor, materials, plant and equipment necessary to complete, in good, substantial, workmanlike and approved manner, all the Work as specified, described or indicated in the Contract Documents, as defined herein, including any Addenda formally issued, within the time hereinafter specified and in accordance with the terms, conditions and provisions of the Contract Documents and Addenda.

Article 2 - ENGINEER

The Project has been designed by CDM Smith Inc., 110 Fieldcrest Ave., #8, 6th Floor, Edison, New Jersey 08837, who are hereinafter called ENGINEER and who are to act as OWNER's representative, assume all duties and responsibilities, 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 3 - Contract Times

The CONTRACTOR shall commence work on the day specified in the Notice to Proceed. TIME BEING OF THE ESSENCE of this Contract. The CONTRACTOR shall prosecute the work diligently and uninterruptedly, at a rate to ensure completion sufficient for final acceptance of all work within 240 consecutive calendar days and substantial completion within 210 consecutive calendar days from the day of the CONTRACTOR's receipt of the written Notice to Proceed.

Article 4 - Contract Price

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents, in current funds, and at the prices agreed upon in the CONTRACTOR's Bid Form attached to this Agreement.

Article 5 - Payment Procedures

OWNER will make partial payments on account of the Contract in accordance with the provisions of Article 14 in the General Conditions.

Article 6 - CONTRACTOR's Representations

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

- 6.1 CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance of or furnishing of the Work.
- 6.2 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.
- 6.3 CONTRACTOR is financially solvent and is experienced and competent to perform the type of work or to furnish the plant, materials, supplies or equipment to be performed or furnished by him.

Article 7 - Liquidated Damages and other DAMAGES

The OWNER and CONTRACTOR recognize that TIME IS OF THE ESSENCE of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the Contract Time specified in Article 3, plus any extensions thereof allowed in accordance with the General Conditions. Because some of this damage is difficult or impossible to calculate or estimate, the parties agree that the Contractor shall pay OWNER liquidated damages in the amounts set forth in the Contract Agreement in lieu of the above stated actual damage. The Contractor agrees that as liquidated damages (but not as a penalty) for delay beyond the Contract Times specified in Article 3 above, (Exclusive of Additional) architectural/engineering services as provided for below, the Contractor shall pay the Owner for:

- 7.1 Each and every calendar day that the Contractor is not in compliance with the Contract Times and Milestones, the sum of Two Thousand Seven Hundred Dollars (\$2,700.00), which sum is hereby agreed upon, not as a penalty but as liquidated damages, which the parties hereto have agreed to be proper and reasonable, and which the Owner will suffer by reason of such default. The Owner shall assess liquidated damages on each of the contract milestones given in Article 3. The Owner reserves the right to retain and/or

release liquidated damages until the Contractor has corrected the delay in the schedule or has met subsequent milestones.

7.2 In addition to liquidated damages the CONTRACTOR shall pay to the OWNER all costs incurred by the OWNER for additional architectural and engineering services required as a result of the delay. This amount, above and beyond the specified liquidated damages amount, shall be determined by and be equal to the actual architectural and engineering services invoices received by the OWNER. Copies of such invoices will be provided to CONTRACTOR. CONTRACTOR shall pay to the OWNER via reduction made by OWNER from the CONTRACTOR monthly payment request the full amount of each invoice. If unpaid contract balance is insufficient to reimburse OWNER the additional architectural and engineering services invoice amount, CONTRACTOR shall pay OWNER directly any amount not covered by deductions from the contract balance within 30 calendar days from the CONTRACTOR's receipt of a copy of each invoice from the OWNER.

7.3 In the event the Contractor by delay or otherwise has caused Owner damages beyond the amount specified in the liquidated damage provision of any contract between the Owner and Contractor, the Owner shall have the right to seek damages for said additional monies and shall not be limited by any said liquidated damage provision for the amount to be recovered. In addition, the Owner shall have the right to withhold from monies due or to become due the Contractor an amount sufficient to completely pay for said additional damages.

Provided, that CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is for reasons included in Article 12 of the General Conditions. Further, that CONTRACTOR shall, furnish OWNER the required notification of such delays in accordance with Article 12 of the General Conditions.

Article 8 - Contract Documents

The Contract Documents which comprise the Contract between OWNER and CONTRACTOR are attached hereto and made a part hereof and consist of the following:

- 1) Invitation To Bid.
- 2) Instructions To Bidders.
- 3) Bid and any post Bid documentation submitted prior to the Notice of Award.
- 4) This Agreement and Notice to Proceed.
- 5) Construction Performance Bond, Construction Payment Bond and other required Bonds.
- 6) Certificate of Insurance.
- 7) Standard General Conditions, EJCDC Document C700, 2007 edition.
- 8) Supplementary Conditions.
- 9) Specifications (as listed in Table of Contents).

- 10) All drawings (Site and Traffic) inclusive.
- 11) Addenda numbers _____ to _____, inclusive.
- 12) Any modification, including Change Orders, duly delivered after execution of Agreement.

Article 9 - Miscellaneous

- 9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 9.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 9.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.
- 9.4 This Agreement shall be construed in accordance with the laws of the State of New Jersey.
- 9.5 CONTRACTOR agrees that:
 - A. It hereby voluntarily and irrevocably submits itself to the jurisdiction and venue of any court of competent jurisdiction over the subject matter of this Agreement located within the State of New Jersey in which any litigation is brought based on or arising out of this Agreement.
 - B. Any legal process or notice connected with any litigation may be served on CONTRACTOR by United States registered mail, postage prepaid, addressed to CONTRACTOR at its address stated in this Agreement for the furnishing of notices to CONTRACTOR or at CONTRACTOR's last known address, and that service in such manner shall constitute good and valid service of process upon CONTRACTOR.
 - C. CONTRACTOR hereby waives any defense which might be available to it in any such litigation based on or alleging lack of jurisdiction or venue, or, if process is served in the manner provided in subparagraph "B" immediately above, invalid service of process, and that it will duly enter its appearance in any such action.

- D. This Agreement may be presented in court as conclusive evidence of the foregoing agreement.

IN WITNESS WHEREOF: The parties hereto have executed this agreement the day and year first above mentioned.

PASSAIC VALLEY SEWERAGE COMMISSION

(SEAL)

BY: _____

ATTEST BY: _____
PASSAIC VALLEY SEWERAGE COMMISSION

CONTRACTOR NAME

BY: _____
CONTRACTOR

(SEAL)

ATTEST BY: _____
CONTRACTOR

Note: If CONTRACTOR is a corporation, an affidavit giving the principal the right to sign the Agreement must accompany the executed Agreement.

NAME OF CORPORATION:

BY: _____

(CORPORATE SEAL)

ATTEST BY: _____

(ADD TYPED OR PRINTED NAMES OF OFFICER AND ATTESTING WITNESS)

Date: _____

SECTION 00600
PERFORMANCE AND PAYMENT BONDS

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____, as Principal and _____, a corporation organized and existing under the laws of the State of _____, as surety, are held and firmly bound unto the Passaic Valley Sewerage Commission as hereinafter set forth, in the full and just several sums of:

- (a) _____ (One hundred percent (100%) of the amount of the contract) for faithful PERFORMANCE of the Contract No. A970A – HEAT TREATMENT SUPERNATANT RETURN (HTPSR) PIPELINE IMPROVEMENTS PROJECT; and,
- b) _____ (One hundred percent (100%) of the amount of the contract) for PAYMENT of labor and materials

Signed this _____ day of _____ 20__.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named principal did on the _____ day of _____, 20__, enter into a contract with the Passaic Valley Sewerage Commission, which said contract is made a part of this bond the same as through set forth herein; NOW, if the said principal shall sell and faithfully do and perform the things agreed by the said principal to be done and performed according to the terms of said contract, and shall pay all lawful claims of subcontractors, materialmen, laborers, persons, firms or corporations for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward performing or undertaking shall be for the benefit of any subcontractor, materialman, laborer, person, firm or corporation having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; 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 said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any way affect the obligation of said surety on its bond.

IN WITNESS WHEREOF, the said _____ as principal has caused its corporate seal to be hereto affixed and these presents to be signed by _____ its _____ and attested by _____ its _____ and the said _____ as surety, has caused its corporate seal to be hereto affixed and these presents to be signed by its _____ and attested by its _____ this _____ day of _____ 20__.

By: _____

Attest: _____

Attest: _____

SECTION 00601

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____, hereinafter
called Principal, as Principal, and _____, a corporation of the State of
_____, hereinafter called Surety, as Surety, are held and firmly bound unto
_____, hereinafter called

Obligee in the sum of _____ DOLLARS, lawful money
of the United States of America, to be paid to the said Obligee, or its successors or assigns, to the
payment of which sum well and truly to be made, we do bind ourselves, our heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED, sealed and dated this _____ day of _____, 20__

WHEREAS, the Principal entered into a contract with the said Obligee, dated _____
_____ for _____ and

WHEREAS, the Obligee requires that these presents be executed on or before the final completion and
acceptance of said contract and

WHEREAS said contract was completed and accepted on the _____ day of
_____, 20__.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall
remedy, without cost to the Obligee, any defects which may develop during a period of _____
from the date of completion and acceptance of the work performed under the contract, caused by
defective or inferior materials or workmanship, then this obligation shall be void; otherwise it shall be
and remain in full force and effect.

Attest:

By: _____
Principal

Attest:

By: _____
Surety

SECTION 00602

ENVIRONMENTAL MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that _____

(Name of Contractor)

(Address of Contractor)

_____ a _____
Corporation, Partnership or Individual

hereinafter called Principal, and _____
(Name of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

dollars \$_____, in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 20____, a copy of which is hereto attached and made a part hereof for the construction of:

CONTRACT NO. B128

STANDBY POWER PLANT SITE PREPARATION CONTRACT

PASSAIC VALLEY SEWERAGE COMMISSION
600 WILSON AVENUE
NEWARK, NEW JERSEY 07105

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice of the Surety and during the one year guaranty period, and during the one year following the guaranty period, and if he shall satisfy all claims and demands incurred under such contract with respect to Environmental sections of the Specifications and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all

outlay and expense which the OWNER may incur in making good any default; then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the 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 of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts,
(number)

each one of which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal)

(Principal) Secretary

(SEAL)

BY: _____

(Address)

Witness as to Principal

(Address)

(Surety)

ATTEST:

By: _____

Attorney-In-Fact

Witness as to Surety

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is all partners should execute BOND.

The Environmental Maintenance Bond shall be supplied in the amount of \$25,000 or 50% of the bid price for the materials needed to fulfill the environmental specifications, whichever is greater, when the contract documents are finalized.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

Associated General Contractors of America
2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308
(703) 548-3118
www.agc.org

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.1 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *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 signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.2 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.2 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.3 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.4 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.5 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.6 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.7 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of

the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.2 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.3 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. Resolving Discrepancies:

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.4 Amending and Supplementing Contract Documents

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.5 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. 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 its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.6 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.1 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the

Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

- 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
- 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

- 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.3 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

- 1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
- 2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other

professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.4 *Underground Facilities*

A. *Shown or Indicated:* 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 Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price

or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.5 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument 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 or property monuments by professionally qualified personnel.

4.6 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by

Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.1 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.2 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.3 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.4 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.5 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.6 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property

insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.7 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery

against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.8 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.9 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.1 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work 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 solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.2 *Labor; Working Hours*

- A. 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 maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.3 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.4 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.5 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and

- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.6 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or

other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the 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.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.7 *Patent Fees and Royalties*

- A. 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, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.8 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. 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. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.9 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all

court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor

shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading Structures*: 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.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop

Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor,

Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.1 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.2 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.3 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.1 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.2 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.3 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.4 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.5 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.6 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.7 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.8 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.9 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.1 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.2 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits

and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.3 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.4 *Authorized Variations in Work*

- A. 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 Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.5 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.6 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.7 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.8 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.9 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.1 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.2 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.3 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.4 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.5 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The

opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.1 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but 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' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on

Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
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.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.2 *Allowances*

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

- a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
- b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. 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.

11.3 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
2. there is no corresponding adjustment with respect to any other item of Work; and
3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.1 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
 1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.2 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.3 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the

control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.2 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.3 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.

- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E 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.

13.4 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed 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.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.5 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.6 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.7 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute

resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.8 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.9 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, 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, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend 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 Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.2 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment 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 a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the

Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner 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.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or

- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or

- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.3 *Contractor's Warranty of Title*

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

14.4 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities

pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.5 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 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.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.6 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner 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 complete such Work or remedy such deficiencies.

14.7 *Final Payment*

A. Application for Payment:

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed 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 for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment 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 for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.8 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.9 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.2 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure 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 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. 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);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.3 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.4 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.1 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.1 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.2 *Computation of Times*

- A. 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 day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.3 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto 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 Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.4 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.5 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.6 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00800

SUPPLEMENTAL GENERAL CONDITIONS

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3	Contract Documents: Intent, Amending and Reuse	00800-5
4	Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points	00800-5
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6	CONTRACTOR's Responsibilities	00800-9
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11	Cost of Work; Allowances; Unit Price Work.....	00800-15
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18	Liquidated Damages.....	00800-23
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19.01	Affirmative Action Requirements	
19.02	Anti-Discrimination (NJSA 10:2-1)	
19.03	Foreign Corporations (NJSA 14A:13-3)	
19.04	Statement of Ownership (NJSA 52:24-24.2)	
19.05	Use of Domestic Materials (NJSA 52:33-1 to 52:33-3)	
19.06	Prevailing Wage Rates (NJSA 34:11 - 56:25)	
19.07	State Treasurer's List of Debarred, Suspended and Disqualified Bidders (NJSA 34:11)	
19.08	Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals (SEDs) (NJAC 7:22-9)	
19.09	Termination of Loans	
19.10	Davis Bacon Act	
19.11	Construction of Wastewater Treatment Facilities (NJAC 7:14-2)	

Exhibit No. List of Exhibits

- 1 Prevailing Wage Rates
- 2 List of Debarred Contractors and Subcontractors
- 3 Davis Bacon Act -- Labor Standards Provisions for Federally Assisted
Construction Contracts (EPA Form 5720-4) and USEPA Attachment 6 --
Requirements for Subrecipients that are Government Entities
- 4 Contract Modification Proposal and Acceptance Form
- 5 NJAC 7:22-9 and NJAC 7:22-10.11, 12
- 6 SED Participation Building Phase Quarterly Report (Form OEO-002)
- 7 SED Participation Monthly Progress Report (Form OEO-003)
- 8 PVSC SED Utilization Plan
- 9 NJAC 7:14-2
- 10 NJSA 2A:44-143, 144
- 11 List of Drawings
- 12 Prompt Payment Certification

SECTION 00800

SUPPLEMENTAL GENERAL CONDITIONS

These Supplemental General Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. C700, 2007 Edition) given as Specification Section 00700 and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

Add the following Section at the beginning of this Article:

1.00 Terms

- A. The terms used in these Supplemental General Conditions which are defined in the Standard General Conditions of the Construction Contract (No. C700, 2007 Edition) given as Specification Section 00700 have the meanings assigned to them in the General Conditions.

1.01 Defined Terms

Definition 18. Omit the word “two”.

Delete Definition 42. in its entirety and replace with the following:

“Specifications – All the terms and stipulations contained in the General Requirements and in the Detailed Specifications. The requirements of the General Requirements shall be considered part of each Item of the Detailed Specifications.”

Definition 43. Omit “Work at the Site” and substitute “on the Project”.

In the second line of Definition 44. Substantial Completion, delete:

“of ENGINEER”, and add “of ENGINEER, and approved by OWNER”

Insert the following at the end of Definition 44. Substantial Completion.

“The date of Substantial Completion shall be certified by the ENGINEER.”

Add the following new definition:

- “52. *Conditions of the Contract* - The combined General Conditions and Supplemental General Conditions.”

ARTICLE 2 – PRELIMINARY MATTERS

Add the following Section to the beginning of this Article:

“2.00 *Execution of Agreement*”

- A. At least six counterparts of the Agreement will be executed and delivered by the CONTRACTOR to the OWNER within ten (10) working days of the Notice of Award and receipt of Contract Documents by the CONTRACTOR for execution; and thereafter OWNER will execute and deliver one counterpart to CONTRACTOR."

2.01 *Delivery of Bonds and Evidence of Insurance*

Delete Part B. Evidence of Insurance in its entirety and substitute the following:

- "B. *Evidence of Insurance:* Before any Work at the site is started, Contractor shall deliver to Owner, with copies to Engineer and each additional insured identified in Article 5 of the Supplemental General Conditions, certificates of insurance (and other evidence requested by Owner) which Contractor is required to purchase and maintain in accordance with the requirements of Article 5."

2.03 *Commencement of Contract Times; Notice to Proceed*

Delete in its entirety and substitute the following:

- "A. Except as otherwise provided in (ii) hereinafter, the Contract Time will commence to run on the day indicated in the Notice to Proceed; but in no event will the Contract Time commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement. By mutual consent of the parties to the Contract, these time limits may be changed.
- B. Notwithstanding the provisions of subsection (i) above, if award of the Bid is challenged, and the Owner determines that a hearing is required on the challenge, or a Court or governmental entity having jurisdiction issues a stay of the award or performance of the Contract, the Contract Time and Effective Date of the Agreement shall be stayed for the time necessary for Owner to conduct a hearing and make a determination on the challenge and/or the time that the Contract award or performance are stayed by a Court or governmental entity having jurisdiction, not to exceed an additional 180 days."

2.06 *Pre-construction Conference; Designation of Authorized Representatives*

Delete in its entirety and substitute the following:

- "A. Within ten (10) days after the Contract Times start to run, but before any Work at the site is started, a pre-construction conference shall be attended by, but without limitations to, the following: Contractor's Representatives, Owner's Representatives, Utility Companies, the New Jersey Department of Environmental Protection, and all other Regulatory Agencies as required. The conference will establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment and maintaining required records."

ARTICLE 3- CONTRACT DOCUMENTS: INTENT, AMENDING AND REUSE

3.01 *Intent*

Add the following subparts to Part A:

- “1. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.
2. The Contract Documents indicate the extent and general arrangement of the work. It is the intent of the Contract Documents to obtain an operable Project. Equipment, components, systems, etc., therein shall be made operable by the CONTRACTOR.
3. The Contract Drawings may be supplemented from time to time with additional drawings by the ENGINEER as may be required to illustrate the work or, as the work progresses, with additional Drawings, by the CONTRACTOR, subject to the approval of the ENGINEER. Supplementary Drawings, when issued by the ENGINEER or by the CONTRACTOR, after approval by the ENGINEER, shall be furnished in sufficient quantity to all those who, in the opinion of the ENGINEER, are affected by such Drawings.”

3.03 Reporting and Resolving Discrepancies.

A. 3. “or should have known.”

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.02 *Subsurface and Physical Conditions*

Part B: In the sixth line delete “The Supplementary Conditions”, and substitute “Contract Documents”

Add the following Paragraph to Section 4.02:

C. It shall be understood and agreed that the CONTRACTOR will not use any of the information made available to him, or obtained in any examination made by him, in any manner as a basis or ground of claim or demand of any nature against the OWNER or the ENGINEER, arising from or by reason of any variance which may exist between the information offered and the actual materials or structures encountered during the construction.

4.04 *Underground Facilities*

Delete Part B. in its entirety and substitute the following:

B. All information given on the Drawings, or in the Contract Documents, relative to subsurface and latent physical conditions or otherwise affecting the performance of the Work is from the present sources available to the OWNER and the ENGINEER. It is understood and agreed that the OWNER and the ENGINEER do not warrant or guarantee that the materials, conditions, and pipes, or other

structures encountered during the construction will be the same as those indicated on the Drawings or in the Contract Documents. Each Bidder must inform himself fully of the conditions relating to the construction and labor under which the work will be performed; and in particular as to subsurface and groundwater conditions; failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated work for the considerations and he makes his bid with a full knowledge of conditions, and the kind, quality, and quantity of work required.

It is also understood and agreed that the Bidder or the CONTRACTOR will not use any of the information made available to him, or obtained in any examination made by him, in any manner as a basis or ground of claim or demand of any nature against the OWNER or the ENGINEER, arising from or by reason of any variance which may exist between the information offered and the actual materials or structures encountered during construction.

4.05 *Reference Points*

Part A: Add the following after "provide" in the first line:

" , if available,"

Add the following paragraphs:

"B. ENGINEER may check the lines, elevations, reference marks, batter boards, etc., set by CONTRACTOR, and CONTRACTOR shall correct any errors disclosed by such check. Such a check shall not be considered as approval of CONTRACTOR's work and shall not relieve CONTRACTOR of the responsibility for accurate construction of the entire Work. CONTRACTOR shall furnish personnel to assist ENGINEER in checking lines and grades."

"C. No separate payment will be made to the CONTRACTOR for the cost of establishing lines and grades or for the cost of assisting the ENGINEER in checking of such work or for the delay in checking such work, but the cost thereof shall be included in the prices bid for the various items."

4.06 Hazardous Environmental Condition at Site.

G. Omit in its entirety and substitute the following: "Owner, in its sole discretion, shall have the right to dispose of the contamination, either on its own or through an independent Contractor, or negotiate a Change Order with the Contractor."

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment and Other Bonds*

Part A: Add the following after "payment bonds" in the first line:

"within ten (10) working days of Notice of Award".

Delete the second sentence and replace with the following:

"The Performance Bond shall remain in effect until completion and acceptance by the OWNER as specified in paragraph 14.07".

Add the following Paragraphs to Section 5.01:

"D. As surety that the CONTRACTOR will faithfully maintain the Work during the twelve (12) month Correction Period, the CONTRACTOR agrees to furnish to the OWNER before final payment shall be made under the terms of this Contract, a suitable Maintenance Bond in the amount of one hundred percent (100%) of the Contract price less the amount of the Environmental Maintenance Bond, with a surety company (licensed by the Commissioner of Banking and Insurance of New Jersey), as surety, running from the date of substantial completion to date twelve (12) months after the date of substantial completion and acceptance as herein before described.

The CONTRACTOR shall note that the form of Maintenance Bond shall be approved by the OWNER prior to the execution thereof by the CONTRACTOR and acceptance thereof by the OWNER. Should the CONTRACTOR fail to commence within one week of notice from the OWNER to make the repairs or replacements required under the terms of the Correction Period set forth above, the OWNER may have said replacements made or repairs done and the expense thereof shall paid by the CONTRACTOR or by the CONTRACTOR's Surety."

"E. The Environmental Maintenance Bond, furnished by the Contractor shall be supplied in the amount of \$25,000 or 50% of the bid price for the Environmental Protection bid items, whichever is greater, and shall remain in full force and effect for one (1) year beyond the end of the Correction Period".

5.03 *Certificates of Insurance*

Add the following paragraph to 5.03:

"F. Wherever in this Article the terms "The Insured" and OWNER occurs with respect to coverage in a policy, it shall mean the OWNER and its agent and agencies, all municipalities where work is being performed under the contract, the ENGINEER, and any other parties specifically designated below, who shall be named as insured in each policy issued. The insurance policies required herein shall not contain any Third Party Beneficiary Exclusion. The State of New Jersey and its venues, employees and officers shall be named insured on each certificate of Insurance."

5.04 *CONTRACTOR's Insurance*

Add the following to the end of the paragraph of Part A:

"The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by law:"

Add the following to Part A, Subparts 1 and 2:

"Workers' Compensation	
(1) Worker's Compensation	Statutory

- (2) Employer's Liability \$2,000,000"

Add the following to Part A, Subparts 3, 4 and 5:

"Comprehensive General Liability including Premise/Operations; Explosion, Collapse and Underground Property Damage; Products/Completed Operations, Broad Form Contractual, Independent CONTRACTORS; Broad Form Property Damage; and Personal Injury liabilities:

- (1) Bodily Injury: \$2,000,000 Each Occurrence
\$2,000,000 Annual Aggregate
- (2) Property Damage:* \$1,000,000 Each Occurrence
\$2,000,000 Annual Aggregate

*Property Damage shall include Explosion, Collapse and Underground Coverages. Property Damage shall include property in the care, custody and control of the insured.

- (3) Personal Injury, with
employment exclusion
deleted. \$2,000,000 Annual Aggregate"

Add the following to Part A, Subparts 6:

"Comprehensive Automobile Liability including all owned (private and others), hired and non-owned vehicles:

- (1) Bodily Injury \$1,000,000 Each Person
\$2,000,000 Each Accident
- (2) Property Damage \$1,000,000 Each Occurrence"

Add the following Paragraph to Part B:

"7. CONTRACTOR may purchase and maintain excess liability insurance in the umbrella form in order to satisfy the limits of liability required for the insurance to be purchased and maintained in accordance with paragraph 5.04. Evidence of such excess liability shall be delivered to OWNER in accordance with paragraph 5.03 in the form of a certificate indicating the policy numbers and limits of liability of all underlying insurance. The umbrella liability insurance shall have a combined single limit of not less than \$5,000,000."

5.05 OWNER's Liability Insurance

Delete Part A of Section 5.05 in its entirety and insert the following in its place:

A. CONTRACTOR shall purchase and maintain a separate OWNER's Protective Liability Policy, issued to OWNER at the expense of CONTRACTOR, including OWNER and ENGINEER as named insured. This insurance shall provide coverage for not less than the following amounts:

- | | | |
|----|-----------------|---|
| 1. | Bodily Injury | \$2,000,000 Each Occurrence |
| 2. | Property Damage | \$1,000,000 Each Occurrence
\$2,000,000 Annual Aggregate |

5.06 *Property Insurance*

Delete the first sentence of Part A and replace with the following:

“CONTRACTOR shall purchase and maintain property insurance upon the Work at the site, written on the completed value form, in an amount equal to the total bid price for the completed construction.”

Add a sentence immediately after the paragraph of Part A, Subpart 2 as follows:

“The policy shall contain endorsements covering damage from flood and earthquake. The value of the coverage for damage from flood shall have a minimum limit of 10% of the Total Bid Price, but in no case less than \$100,000.”

Delete Part B in its entirety.

5.10 *Partial Utilization, Acknowledgement of Property Insurer*

Add a new paragraph as follows:

“B. OWNER will continually occupy all facilities involved in this project and will require temporary access to the Work prior to substantial completion. Endorsements to the property insurance policies provided by the CONTRACTOR that protect the interests of all parties shall be provided.”

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendant*

Add the following:

“C. CONTRACTOR will be held responsible for the conduct of all personnel on site employed by or through Contract. CONTRACTOR shall employ only competent persons to perform the work of this contract. Whenever OWNER shall notify CONTRACTOR, in writing, that any person on the work, including superintendents and other Supervisors, appears to be incompetent, disorderly, or who disregards the authority of the ENGINEER and/or OWNER, or is otherwise unsatisfactory, such person shall be removed from the Project within the time frame specified by the OWNER, and shall not again be employed on it except with the consent of OWNER.”

6.06 *Concerning Subcontractors, Suppliers and Others*

Change this Section Title to read ‘Concerning Assignment, Subcontractors, Suppliers and Others:’

Add the following to Part A:

“CONTRACTOR shall not assign, transfer, convey or otherwise dispose of the Contract, or of his legal right, title, or interest in or to the same or to any part

thereof, without the prior written consent of the OWNER. CONTRACTOR shall not assign by power of attorney or otherwise any monies due him and payable under this Contract without the prior written consent of the OWNER. Such consent, if given, will in no way relieve the CONTRACTOR from any of the obligations of this Contract. OWNER shall not be bound to abide by or observe the requirements of any such assignment. Acceptance of any Subcontractor, other person or organization by OWNER shall not constitute a waiver of any right of OWNER to reject defective work.

The CONTRACTOR agrees that it is as fully responsible to OWNER for the acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

CONTRACTOR shall comply with the New Jersey Regulations governing minority and female CONTRACTOR and subcontractor participation on Construction Contracts as required by NJSA 52:32-17. The regulations, which are more specifically set forth in NJAC 17:14-1.1 et seq., are incorporated herein by reference and made a part hereof."

Add the following changes to Part B:

First line, delete: "If the Supplementary Conditions", and substitute "Contract Documents". The fourth line, delete: "Supplementary Conditions", and substitute "Contract Documents".

6.07 *Patent Fees and Royalties*

Delete Part A in its entirety and substitute the following:

"A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the work of any invention, design, process, products or device which is the subject of patent rights or copyrights held by others. CONTRACTOR shall indemnify and hold harmless OWNER AND ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses, including attorney's fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the work or furnished by him in fulfillment of the requirements of this Contract. In the event of any claim or action by law on account of such patents or fees, it is agreed that the OWNER may retain out of the monies which are or which may become due to the CONTRACTOR under this Contract, a sum of money sufficient to protect itself against loss, and to retain the same until said claims are paid or satisfactorily adjusted."

6.09 *Laws and Regulations*

Delete Part B in its entirety and substitute the following:

"B. If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, he shall give ENGINEER prompt written notice thereof. If CONTRACTOR performs any work knowing it to be contrary to such Laws or Regulations, and without such notice to ENGINEER, he shall bear all costs arising therefrom. The CONTRACTOR shall, at all times, observe and comply with and shall cause all his agents and employees and all his

Subcontractors to observe and comply with all such existing Laws or Regulations, and shall protect and indemnify the OWNER and the ENGINEER and the municipalities in which work is being performed, and their officers and agents against any claim or liability arising from or based on the violation of any such Law or Regulation, whether by himself or his employees or any of his Subcontractors.”

Add the following paragraph:

“D. The CONTRACTOR shall keep itself fully informed of all existing and future state and Federal Laws and Regulations and Municipal Ordinances and Regulations, in any manner affecting the work and the persons engaged or employed in the work, or the materials used in the work, or in any affecting the performance of the work, either with respect to hours of labor or otherwise, and of all such laws, ordinances, regulations, orders and decrees, and shall protect and indemnify OWNER and their officers and agents against any claims or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by itself, or by its agents or employees.”

6.10 *Taxes*

Add the following to Part A:

“The materials and supplies to be used in the work of this contract are exempt from sales tax of the State of New Jersey. CONTRACTOR shall obtain the proper certificates, maintain the necessary records and otherwise comply with the requirements of state law.”

6.13 *Safety and Protection*

Add the following Paragraph:

“G. The CONTRACTOR throughout the work of this contract shall comply with the OWNER Safety Rules, as well as the Federal Occupational Safety and Health Act and the applicable New Jersey Department of Labor Administrative Codes. The CONTRACTOR shall obtain a copy of the OWNER Safety Rules, these rules, including the wearing of protective head gear, shall be strongly enforced by the CONTRACTOR in respect to his own employees, Subcontractors employees, and other personnel engaged in business with the CONTRACTOR on OWNER’s property.

CONTRACTOR’s (and Subcontractors) personnel when on OWNER property shall prominently display Company name or logo on their safety helmet (hard hat).

The CONTRACTOR is advised of the 15-MPH speed limit on all plant roads, and will be held responsible for his employees (and Subcontractors) compliance with this and all rules for traffic safety in the plant.

All CONTRACTORs personnel shall wear OSHA approved hard hats and shall display a clearly visible company logo on the hat.

The CONTRACTORs attention is directed toward several New Jersey Labor Department Administrative Codes that influence the conduct of his work in specific areas:

1. NJAC 12:100-9 – Work in Confined Space
2. NJAC 12:100-11 – Control of Hazardous Energy
(Electrical energy lockout and other energy sources such as steam, air, liquids)
3. NJAC 7:31-1-6 – Toxic Catastrophe Prevention Act.

Before any work commences on OWNER property, the CONTRACTOR's Superintendent shall contact the OWNER Facility Supervisor at the site. The OWNER Supervisor will inform the CONTRACTOR of the OWNER emergency plant evacuation plan and where he is to assemble his personnel.

The CONTRACTOR shall instruct and show his personnel where to assemble, at the sound of the OWNER emergency evacuation siren. The facility Supervisor will notify the CONTRACTOR's personnel of the emergency evacuation route they are to follow. At the assembly point, the CONTRACTOR's person in charge shall account for all his personnel, supply transportation, and see that they utilize the prescribed evacuation route.

Every third Wednesday of each month at 11:00 a.m. the evacuation siren is put through a test cycle, it is not required to assemble for the test cycle.

Where portions of the work of the contract fall under the authority of these Administrative Codes for Public Employees, the CONTRACTOR shall at all times maintain safety standards for his employees equivalent to that imposed by the Codes. This includes, for example, monitoring of air in confined spaces with appropriate instrumentation for noxious or toxic gases, and lockout of hazardous energy such as electrical, steam, air, or liquids under pressure.

The CONTRACTOR shall be responsible for providing first aid, and emergency medical assistance for any of his employees injured on the work site. The CONTRACTOR shall be responsible for arranging emergency assistance with local hospitals, and/or EMT services. The CONTRACTOR's arrangements shall be submitted in writing, with required telephone numbers to OWNER's Security Department. OWNER Security will summon the CONTRACTOR's emergency personnel, if the CONTRACTOR calls OWNER Security from any in plant telephone.

CONTRACTOR's personnel will not be treated in the OWNER Dispensary for minor injuries, cuts or services."

6.15 *Hazardous Communication Program*

Add the following paragraph:

"B. All hazardous material whether sold, delivered, and/or used to perform a service on the OWNER site, shall be properly labeled in accordance with the New Jersey Worker and Community Right to Know (P.L. 1983, C315, NJSA 34:56A-1 et seq.). The bidder shall provide prior to arrival on site the Material Safety Data Sheets to the OWNER for all the products that he intends to utilize under this contract."

6.19 *CONTRACTOR's General Warranty and Guarantee*

After the first sentence of Part A add the following:

"All materials or equipment delivered to the site shall be accompanied by certificates, signed by an authorized officer of the supplier, and notarized guaranteeing that the materials or equipment conform to specification requirements. Such certificates shall be immediately turned over to the OWNER. Materials or equipment delivered to the site without such certificates will be subject to rejection."

Omit the entire second sentence of Part A.

6.20 *Indemnification*

Delete Part A in its entirety and substitute the following:

"A. To the fullest extent permitted by Laws and Regulations, and except for the willful misconduct of OWNER, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of ENGINEERS, architects, attorneys and other professionals and all court or arbitration of other dispute resolution costs including appeals) caused by, arising out of or resulting from the performance of the Work, provided that any such claim, cost, loss or damage is caused in whole or in part by any negligent act or omission of the CONTRACTOR, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity."

Add the following new Paragraphs as follows:

"D. Wherever in this Agreement a provision imposes upon the CONTRACTOR an obligation of indemnification, that obligation shall be as set forth in the preceding paragraphs of this provision. CONTRACTOR acknowledges that it is the intent of the parties that any indemnification obligation imposed upon CONTRACTOR pursuant to any provision of this Agreement shall be the broadest called for under this Agreement.

E. Nothing in the Contract Documents shall create or give to third parties any claim or right of action against the CONTRACTOR, the OWNER or the ENGINEER beyond such as may legally exist irrespective of the Contract."

ARTICLE 7 – OTHER WORK AT THE SITE

7.02 *Coordination*

Delete this Section in its entirety.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.02 *Replacement of ENGINEER*

Delete this Section in its entirety.

8.06 *Insurance*

Delete this Section in its entirety.

8.11 *Evidence of Financial Arrangements*

Delete this Section in its entirety.

ARTICLE 9 – ENGINEER’S STATUS DURING CONSTRUCTION

9.01 *OWNER’s Representative*

Delete Part A in its entirety and substitute the following:

“A. ENGINEER will be the OWNER’s representative during the construction period, and his instructions shall be carried into effect promptly and efficiently.”

9.03 *Project Representative*

Part A: In the first sentence delete “If OWNER and ENGINEER agree” and substitute “At OWNER’s option”.

Add the following paragraphs:

“B. The Resident Project Representative will serve as the ENGINEER’s liaison with the CONTRACTOR, working principally through the CONTRACTOR’s superintendent to assist him in understanding the intent of the Contract Documents.

C. The Resident Project Representative shall conduct on-site observations of the work in progress to confirm that the work is proceeding in accordance with the Contract Documents. He will verify that tests, equipment and systems start-ups and operating and maintenance instructions are conducted as required by the Contract Documents. He will have the authority to disapprove or reject defective work in accordance with Article 13.”

9.09 *Limitations on ENGINEER’s Authority and Responsibilities*

Add the following to Part E:

“Except upon written instructions of the ENGINEER, the Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
2. Shall not exceed limitations of ENGINEER’s authority as set forth in the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, Subcontractors or CONTRACTOR’s superintendent, or expedite the work.
4. Shall not advise on or issue directions to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract.
5. Shall not advise on or issue directions as to safety precautions and programs in connection with the work.”

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

Add the following to the end of Part B:

“CONTRACTOR certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of CONTRACTOR’s knowledge and belief, and that the amount or time requested accurately reflects the contract adjustment for which CONTRACTOR believes OWNER is liable.”

ARTICLE 11 – COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

Delete the fourth sentence in the paragraph of Part A, Subpart 1 in its entirety and replace with the following:

Such employees shall include all labor categories listed in the New Jersey Department of Labor Prevailing Wage Rate Determination.

Delete the second sentence in the paragraph of Part A, Subpart 3 “If required ... be acceptable.”

Delete Part A, Subpart 5a in its entirety.

Add the following before the last sentence of the paragraph of Part A, Subpart 5c:

“These rates shall include all fuel, lubricants, insurance, etc. Equipment rental charges shall not exceed the prorated monthly rental rates listed in the current edition of the “‘Compilation’ of Rental Rates for Construction Equipment” as published by the Associated Equipment Distributors. Charges per hour shall be determined by dividing the monthly rates by 176.”

Delete Part A, Subpart 5.f. in its entirety.

Delete Part A, Subpart 5.g. in its entirety.

Delete Part A, Subpart 5.h. in its entirety.

Delete Part A, Subpart 5.I. in its entirety

11.03 *Unit Price Work*

In Part D, Subpart 1, delete “materially and significantly”, and insert “by more than plus or minus twenty percent (20%)”.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change in Contract Price*

Delete part B, Subpart 2 in its entirety and replace with the following:

"2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed upon lump sum which includes an allowance for overhead and profit in accordance with paragraph 12.01.C.2"

Delete Part C, Subpart 1 in its entirety.

Add the following to Part C, Subpart 2.a.:

"CONTRACTOR's fee shall not be applied to payroll taxes, social security contributions, or unemployment taxes. CONTRACTOR's fee of fifteen percent shall not be applied to moveable equipment (i.e., cranes, furniture etc.) purchased and supplied to the OWNER under a change in the contract price or a construction allowance. CONTRACTOR will be allowed a five percent fee in this case."

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR
ACCEPTANCE OF DEFECTIVE WORK

13.03 *Tests and Inspections*

Delete Part B in its entirety and substitute the following:

"B. OWNER shall employ and pay for all inspections and testing services specifically noted as such in the Contract. All others required shall be the responsibility of the CONTRACTOR."

Delete Parts C and D in their entirety and substitute the following:

"C. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to be specifically inspected, tested or approved by any public entity, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing or approval.

D. The OWNER reserves the right to independently perform at its own expense, laboratory tests on random samples of material or performance tests on equipment delivered to the site. These tests, if made, will be conducted in accordance with appropriate referenced standards or Specifications requirements. The entire shipment represented by a given sample, samples or piece of equipment may be rejected on the basis of the failure of samples or pieces of equipment to meet specified test requirements. All rejected materials or equipment shall be removed from the site, whether stored or installed in the work, and the required replacement shall be made, all at no additional cost to the OWNER."

13.05 *OWNER May Stop the Work*

Insert the following in the third line between "Documents," and "OWNER":

"or if the work interferes with the operation of the existing facility

Add the following at the end of the paragraph of Part A.

"If the OWNER stops work under Paragraph 13.05, Contractor shall be entitled to no extension of Contract Time or increase in Contract Price."

13.06 *Corrections or Removal of Defective Work*

Add the following Paragraph:

"C. At any time during the progress of the work and up to the date of final acceptance, the ENGINEER shall have the right to reject any work which does not conform to the requirements of the Contract Documents, even though such work has been previously inspected and paid for. Any omissions or failure on the part of the ENGINEER to disapprove or reject any work or materials at the time of inspection shall not be construed as an acceptance of any defective work or materials."

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

Add the following at the end of the paragraph of Part A:

"The CONTRACTOR shall submit for the ENGINEER's approval, a complete breakdown of all Lump Sum Items in the Proposal. This breakdown, modified as directed by the ENGINEER, will be used as a basis for preparing estimates and establishing progress payments.

14.02 *Progress Payments*

A. Applications for Payments

Delete Subpart 3 in its entirety and substitute the following:

"3. Any Contract, the total price of which exceeds \$100,000.00, entered into by the OWNER involving the construction, reconstruction, alteration, repair or maintenance of any building, structure, facility or other improvement to real property, shall provide for partial payments to be made at least once each month as the work progresses, unless the contractor shall agree to deposit bonds with the contracting unit pursuant to P.L. 1979, c.152 (N.J.S.A.40A:11-16.2)

Application for Progress Payment request shall include the total amount of the work completed to the month prior to date of application for Progress Payment and the amount earned by the CONTRACTOR for the payment period. The payment period may conclude on the last day of the preceding month, or other mutually agreed upon day of the month accompanied by such data and supporting evidence as OWNER or ENGINEER may require.

Forms to be used shall be prepared by the CONTRACTOR and submitted to the ENGINEER for approval.

The OWNER shall withhold two (2) percent of the amount due on each application for Progress Payment pursuant to NJSA 40A: 11-16.3, unless the CONTRACTOR makes the deposits referred to in NJSA 40A:11-16.1. Such withholding shall be in addition to any retainage otherwise authorized by law or the Contract Documents.

The OWNER shall make payments to the CONTRACTOR once each month as the work progresses. Payment may be withheld at any time if the work is not proceeding in accordance with the Contract Documents.

The OWNER will not pay for equipment stored on or off-site and payments will be made on completed work only; unless by special approval. Upon application to the OWNER, the OWNER may, at its own discretion, approve payments for stored equipment provided the equipment has been inspected and approved by the ENGINEER at its stored location.

Where instruction manuals and parts list are specified in the Contract Documents. Payment will not be made until approved Instruction Manuals and Parts Lists have been received and approved by OWNER.

The CONTRACTOR shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within thirty days of payment by OWNER. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and removal of the cost of related materials and equipment from the next submitted application for Progress Payment.

Upon Substantial Completion the retainage withheld by the OWNER pursuant to NJSA 40A:11-16.3 shall be paid to the CONTRACTOR as provided by law. The OWNER may reinstate the retainage if it is determined that the CONTRACTOR is not making satisfactory progress or there is other specific cause for such retainage.

The NJAC 7:14-2.8 requirements will be followed as needed.”

B. Review of Applications:

Add the following to Subpart 1:

“Should CONTRACTOR neglect to pay any undisputed claims, made in writing to OWNER within thirty days after completion of the Work, but continuing unsatisfied for a period of ninety days, OWNER may pay such claim and deduct the amount thereof from the balance due CONTRATOR. OWNER may also, with the written consent of CONTRACTOR, use any monies retained, due, or to become due under this Contract for the purpose of paying for both labor and materials for the Work, for which claims have not been filed.

Security is provided both by the Payment Bond and the power of OWNER to retain any monies for claims, but payment by one shall in no way impair or discharge the liability of the other.

Any and all liens for work and materials may be paid off by OWNER within a reasonable time after filing for record in accordance with State and local laws, a notice of such liens except where claim on which the lien is filed is being litigated by CONTRACTOR, and in such case OWNER may pay the amount of any final judgement or decree or any such claim within reasonable time after such final judgement or decree shall be rendered.

All monies paid by the OWNER in settlement of liens as aforesaid, with the costs and expenses incurred by OWNER in connection therewith, shall be charged to CONTRACTOR, shall bear interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank, and shall be deducted from the next payment due CONTRACTOR under the terms of this Contract.”

14.03 *CONTRACTOR's Warranty of Title*

Add the following Paragraph to Section 14.03:

"B. The Application for payment shall be accompanied by such data, satisfactory to OWNER, as will establish OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. Each subsequent Application for Payment shall include an Affidavit of CONTRACTOR stating that all previous progress payments received on account of the work have been applied to discharge in full all of CONTRACTOR's obligations reflected in prior Applications for Payment.

No materials or supplies for the Work shall be purchased by CONTRACTOR or Subcontractor subject to any chattel mortgage or under conditional sales contract or other agreement by which an interest is retained by the seller. CONTRACTOR warrants that he/she has good title to all materials and supplies used by him/her in the Work, free from all liens, claims or encumbrances.

CONTRACTOR shall indemnify and save OWNER harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers or machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. CONTRACTOR shall at OWNER's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If CONTRACTOR fails to do so, then OWNER may, after having served written notice on the said CONTRACTOR either pay unpaid bills, of which OWNER has written notice, direct, or withhold from the CONTRACTOR's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to CONTRACTOR shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon OWNER to either CONTRACTOR or his/her Surety.

In paying any unpaid bills of the CONTRACTOR, OWNER shall be deemed the agent of CONTRACTOR and any payment so made by the OWNER, shall be considered as payment made under the Contract by OWNER to CONTRACTOR and OWNER shall not be liable to CONTRACTOR for any such payment made in good faith."

14.04 *Substantial Completion*

Delete Parts A, B, and C in its entirety and substitute the following:

"A. CONTRACTOR may, in writing to OWNER and ENGINEER, certify that the entire Project is substantially complete and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Project to determine the status of completion. If ENGINEER and OWNER do not consider the Project substantially complete, ENGINEER will notify CONTRACTOR in writing giving his reasons therefor. If ENGINEER and OWNER consider the Project substantially complete, ENGINEER will prepare

and deliver to OWNER a tentative certificate of Substantial Completion and the responsibilities between OWNER and CONTRACTOR for maintenance, heat and utilities. There shall be attached to the certificate a tentative list of items to be completed or corrected before Substantial Completion, and the certificate shall fix the time within which such items shall be completed or corrected, said time to be within Contract Time."

14.05 *Partial Utilization*

Delete Part A, and its subparts, in its entirety and substitute the following:

"A. Prior to Substantial Completion of the Project, OWNER may advise CONTRACTOR in writing to permit him to use a specified part of the Project which OWNER believes may be used without significant interference with construction of the other parts of the Project. Upon receipt of such notice, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Project is substantially complete and request the ENGINEER to issue a certificate of Substantial Completion for that part of the Project. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Project to determine its status of completion. If ENGINEER and OWNER do not consider that it is substantially complete, ENGINEER will notify CONTRACTOR in writing giving his reasons therefor. If ENGINEER and OWNER consider that part of the Project to be substantially complete, ENGINEER will execute and deliver to OWNER and CONTRACTOR a certificate to that effect, fixing the date of Substantial Completion as to that part of the Project, attaching thereto a tentative list of items to be completed or corrected before Substantial Completion of the entire Project and fixing the responsibility between OWNER and CONTRACTOR for maintenance and utilities as to that part of the Project. OWNER shall have the right to exclude CONTRACTOR from any part of the Project which ENGINEER has so certified to be substantially complete, but OWNER shall allow CONTRACTOR reasonable access to complete items on the tentative list."

14.07 *Final Payment*

Delete Part B, subpart 1 in its entirety and replace with the following:

"B. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will indicate in writing a recommendation of payment and present the Application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. 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. If the Application and accompanying documentation are appropriate as to form and substance, OWNER shall, within sixty-five days after receipt thereof pay CONTRACTOR the amount recommended by ENGINEER."

No final or semi-final payment shall be made until the CONTRACTOR has executed and delivered a release to OWNER and every member, agent or employee thereof, from all claims and liability to the CONTRACTOR for everything and anything done or furnished, or any act or neglect of OWNER or of any person relating to or affecting the work.

Before final or semi-final payment, the CONTRACTOR shall deliver to OWNER an affidavit of payment of all claims of suppliers and Subcontractors. In the event that any supplier or Subcontractor has not been paid and the claim is disputed by the CONTRACTOR, the CONTRACTOR shall submit all of the facts in its affidavit and OWNER shall be authorized, in the exercise of its discretion, to withhold from the payment the sum of money sufficient to guarantee payment of the claims. Nothing contained herein, however, shall incur any responsibility by OWNER to any materialman or Subcontractor, nor shall anything contained herein give rise to a cause of action by any Subcontractor or supplier against OWNER.

Before final acceptance and final or semi-final payment by OWNER, the CONTRACTOR shall deliver to OWNER a complete release of all liens arising out of the Contract. CONTRACTOR agrees that at no time shall any municipal liens, mechanic's liens, notices of intention, or secured instrument be filed against the work and should OWNER be compelled to remove or discharge a municipal lien, mechanic's lien, notice of intention or secured instrument, the CONTRACTOR shall reimburse OWNER for all costs.

Before final or semi-final payment, the CONTRACTOR shall deliver to OWNER a consent of the Surety to the final payment."

Upon acceptance of the work performed pursuant to the contract for which the CONTRACTOR has agreed to the withholding of payments pursuant to NJSA 40A:11-16.3 a., all amounts being withheld by the contracting unit shall be released and paid in full to the CONTRACTOR within 45 days of the final acceptance date agreed upon by the CONTRACTOR and the OWNER, without further withholding of any amounts for any purpose whatsoever, provided that the contract has been completed as indicated.

Delete Part C in its entirety.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.02 *OWNER may Terminate for Cause*

Add the following subparts to Part A:

"5. If the CONTRACTOR should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency.

6. If the CONTRACTOR should fail to make prompt payment to Subcontractors for material, labor or equipment rental.

7. If CONTRACTOR abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of OWNER, or if the Contract or any claim thereunder shall be assigned by CONTRACTOR otherwise than as herein specified;"

Add the following to the end of Part F:

“The termination of the employment of the CONTRACTOR under the provisions of this paragraph shall not relieve the surety of its responsibility”.

Add the following Section to the end of Article 15:

“15.05 *Three (3) Days Notice:*

A. If the CONTRACTOR or his Subcontractors should neglect to prosecute the work properly or fail to perform any provisions of the Contract Documents, the OWNER, after three (3) days written notice to the CONTRACTOR may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the CONTRACTOR.”

ARTICLE 16 – DISPUTE RESOLUTION

16.01 – *Methods and Procedures*

Delete in its entirety and replace with the following:

“A. All Services under this Contract shall be performed to the satisfaction of the OWNER, which shall in all cases determine the amount and acceptability of the Services which is to be paid for hereunder, and decide all questions which may arise as to the fulfillment of this Agreement on the part of the CONTRACTOR, and its determination and decision thereon shall be final and conclusive, and such determination and decision, in case any question shall arise, shall be a condition precedent to the right of the CONTRACTOR to receive any money hereunder.”

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

Add the following subpart to Part A:

“3. No oral statement of any person whosoever shall in any manner or degree modify or otherwise affect the terms of this Contract. Any notice to the CONTRACTOR, from OWNER and ENGINEER, relative to any part of this Contract shall be in writing.”

Add the following Section to the end of Article 17:

17.07 *CONTRACTOR's Legal Address*

A. Both the address given in the Bid Form upon which this Agreement is founded, and CONTRACTOR's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to CONTRACTOR shall be certified, mailed, or delivered. The delivering at the above named place, or depositing in a postpaid wrapper directed to the first-named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to CONTRACTOR shall be deemed sufficient service thereof upon CONTRACTOR; and the date of said service shall

be the date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by CONTRACTOR, and delivered to OWNER and ENGINEER. Nothing herein contained shall be deemed to preclude or render inoperative the service, of any notice, letter, or other communication upon CONTRACTOR personally.

Add the following additional Article:

ARTICLE 18 - LIQUIDATED DAMAGES

18.01 If the CONTRACTOR shall fail to complete the work within the Contract Time, or extension of time granted by the OWNER in accordance with Article 12, then the CONTRACTOR will pay to the OWNER the amount for damages as specified in the Agreement for each calendar day that the Contract work remains incomplete.

18.02 For the purposes of calculating the number of calendar days for damaged assessment, such calculation shall include the day on which date of completion occurs, but shall not include the day of scheduled completion.

18.03 *Penalties and Fines*

In the event OWNER is penalized by any governmental entity, including but not limited to the NJDEP, due to any act or omission by the CONTRACTOR, the CONTRACTOR shall be solely responsible for the payment of same. CONTRACTOR shall reimburse OWNER for payment of any such fine and penalty within ten (10) days of receiving notice of payment of such fine or penalty from OWNER. Any monies paid by the CONTRACTOR pursuant to this provision shall not relieve the CONTRACTOR of liability to OWNER for damages sustained by OWNER by virtue of any other provision of this Agreement.

Add the following additional Article:

ARTICLE 19 - FEDERAL AND STATE GOVERNMENT PROVISIONS

19.01 *Affirmative Action Requirements*

During the performance of this contract, the contractor agrees as follows:

- A) The CONTRACTOR or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the CONTRACTOR will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

- B) The CONTRACTOR or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.
- C) The CONTRACTOR or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the CONTRACTOR's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D) The CONTRACTOR or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.
- E) When hiring or scheduling workers in each construction trade, the CONTRACTOR or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, a, b and c, as long as the Division is satisfied that the CONTRACTOR or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The CONTRACTOR or subcontractor agrees that a good faith effort shall include compliance with the following procedures:
- a) If the CONTRACTOR or subcontractor has a referral agreement or arrangement with a union for a construction trade, the CONTRACTOR or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the CONTRACTOR or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the CONTRACTOR or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the CONTRACTOR or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the CONTRACTOR's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the CONTRACTOR or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the CONTRACTOR or subcontractor further agrees to take said action immediately if it determines or is so notified by the Division that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

- b) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the CONTRACTOR does not have a referral agreement or arrangement with a union for a construction trade, the CONTRACTOR or subcontractor agrees to take the following actions:
- 1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
 - 2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
 - 3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the CONTRACTOR or subcontractor has a referral agreement or arrangement with a union for the construction trade;
 - 4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the CONTRACTOR or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
 - 5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
 - 6) To adhere to the following procedure when minority and women workers apply or are referred to the CONTRACTOR or subcontractor:
 - (i) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the CONTRACTOR or subcontractor shall in good faith determine the qualifications of such individuals. The CONTRACTOR or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a CONTRACTOR or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the CONTRACTOR or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.
 - (ii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in paragraph (i) above, whenever vacancies occur. At the request of the Division, the CONTRACTOR or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

- (iii) If, for any reason, said CONTRACTOR or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the CONTRACTOR or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.
- 7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.
- c) The CONTRACTOR or subcontractor agrees that nothing contained in (B) above shall preclude the CONTRACTOR or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the county employment goal, the CONTRACTOR or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the CONTRACTOR or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the CONTRACTOR or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.
- d) After notification of award, but prior to signing a construction contract, the CONTRACTOR shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) provided to the public agency by the Division for distribution to and completion by the CONTRACTOR, in accordance with N.J.A.C. 17:27-7. The CONTRACTOR also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.
- e) The CONTRACTOR agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.
- f) The CONTRACTOR and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (NJAC 17:27).

19.02 *Anti-Discrimination (NJSA 10:2-1)*

Every contract for or on behalf of the State or any county or municipality or other political subdivision of the State, or any agency of or authority created by any of the foregoing, for the construction, alteration or repair of any public building or public work or for the acquisition of materials, equipment, supplies or services shall contain provisions by which the CONTRACTOR agrees that:

- a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this Contract, no CONTRACTOR, nor any person acting on behalf of such CONTRACTOR or Subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- b. No CONTRACTOR, Subcontractor, nor any person on his behalf shall in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation;
- c. There may be deducted from the amount payable to the CONTRACTOR by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidate in violation of the provisions of the contract; and
- d. This Contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the CONTRACTOR from the contracting public agency of any prior violation of this section of the contract.

19.03 *Foreign Corporations (NJSA 14A: 13-3)*

1. No foreign corporation shall have the right to transact business in this State until it shall have procured a certificate of authority so to do from the Secretary of State. A foreign corporation may be authorized to do in this State any business which may be done lawfully in this State by a domestic corporation, to the extent that it is authorized to do such business if the jurisdiction of its incorporation, but no other business.
2. Without excluding other activities which may not constitute transacting business in this State, a foreign corporation shall not be considered to be transacting business in this State, for the purposes of this act, by reason of carrying on in this State any one or more of the following activities;
 - a. maintaining, defining or otherwise participating in any action or proceeding, whether judicial, administrative, arbitative or otherwise, or effecting the settlement thereof or the settlement of claims or disputes;
 - b. holding meetings of its directors or shareholders;

- c. maintaining bank accounts or borrowing money, with or without security, even if such borrowings are repeated and continuous transactions and even if such security has a situs in this State;
 - d. maintaining offices or agencies for the transfer, exchange and registration of its securities, or appointing and maintaining trustees or depositories with relation to its securities.
3. The specification in subsection 14A: 13-3(2) does not establish a standard for activities which may subject a foreign corporation to service of process or taxation in this State.

19.04 *Statement of Ownership (NJSA 52:25-24.2)*

No corporation or partnership shall be awarded any contract nor shall any agreement be entered into for the performance of any work or the furnishing of any materials or supplies, the cost of which is to be paid with or out of any public funds, by the State, or any county, municipality or school district, or any subsidiary or agency of the State, or of any county, municipality or school district, or by any authority, board, or commission which exercises governmental functions, unless prior to the receipt of the bid or accompanying the bid, of said corporation or said partnership, there is submitted a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own 10% or more of its stock, of any class or of all individual partners in the partnership who own a 10 % or greater interest therein, as the case may be. If one or more such stockholder or partner is itself a corporation or partnership, the stockholders holding 10% or more of that corporation's stock, or the individual partners owning 10% or greater interest in that partnership, as the case may be, shall also be listed. The disclosure shall be continued until all names and addresses of every non-corporate stockholder, and individual partner, exceeding the 10% ownership criteria established in this act, has been listed (see Section 00305).

19.05 *Use of Domestic Materials (NJSA 52:33-1 52:33-3)*

Notwithstanding any inconsistent provision of any law, and unless the head of the department, or other public officer charged with the duty by law, shall determine it to be inconsistent with the public interest, or the cost to be unreasonable, only domestic materials shall be acquired or used for any public work.

This section shall not apply with respect to domestic materials to be used for any public work, if domestic materials of the class or kind to be used are not mined, produced or manufactured, as the case may be, in the United States in commercial quantities and of a satisfactory quality.

Every contract for the construction, alteration, or repair of any public work in this state shall contain a provision that in the performance of the work the CONTRACTOR and all Subcontractors shall use only domestic material in the performance of the work; but if the head of the department or other public officer authorized by law to make the contract shall find that in respect to some particular domestic materials it is impracticable to make such requirement or that it would unreasonably increase the cost, an exception shall be noted in the specifications as to that particular material, and a public record made of the findings which justified the exception.

19.06 *Prevailing Wage Rates (NJSA 34:11-56.25)*

The Contractor shall pay not less than the prevailing wage rate to workers employed in the performance of any contract for the project, in accordance with the rate determined by the Commissioner of New Jersey Department of Labor pursuant to N.J.S. A. 34:11-56.25 et seq. OR the United States Secretary of Labor pursuant to 29 CFR Part 5, whichever is greater. The Contractor shall refer to section 19.10 for the requirements of the Davis-Bacon Act.

In accordance with the New Jersey Prevailing Wage Act no worker shall be paid less than such prevailing rates (included in Contract Documents). In the event it is found that any CONTRACTOR covered by said contract paid a rate of wages less than the prevailing wage required to be paid, OWNER may terminate the CONTRACTOR's right to proceed with the contract, or such part of work as to which there has been a failure to pay required wages, and to prosecute the work to completion or otherwise. The CONTRACTOR and his sureties shall be liable to the OWNER for any excess cost occasioned thereby. Nothing in this act shall prohibit the payment of more than the prevailing rate to any worker employed on a public work.

The CONTRACTOR and Subcontractor shall post the prevailing wage rates for each craft and classification involved, as determined by the Commissioner of Labor, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the work, or at such place or places as are used by them to pay workmen their wages.

The New Jersey Prevailing Wage Act, NJSA 34:11-56.25 et seq. requires that all public works employers shall submit a certified payroll record to the public body or lessor which contracted for the public work project each payroll period within ten (10) days of the payment of wages. The public body shall receive, file and make available for inspection during normal business hours the certified payroll records.

Attention is directed to the Prevailing Wage Rate List and to the applicable provision of "The New Jersey Prevailing Wage Act" N.J.S.A. 34:11-56.25 et. Seq., governs the prevailing wage rates of wagers for workmen who are employed on this Project. The provisions of said Wage Act and Amendment thereto, shall be considered as part of this Contract and made part hereof.

The Bidder by submitting the Proposal represents to the OWNER that bidder is aware of the provision of said Wage Act with relation to prevailing rates of wages for workmen to be employed on this Project.

The Bidder further represents that in the event of any re-determination of such prevailing rates at any time before the execution and delivery of the Contract between the Bidder and the OWNER for the work of construction of the Project, or at any time thereafter, the new rates, if any, will become the applicable minimum rates for work performed thereafter under said Contract. No increase in the contract price will be claimed by the Bidder and no such increase in the contract price will be claimed by the Bidder and no such increase will be granted by the OWNER as a result of such determination.

Prospective bidders are advised to contact the New Jersey Department of Labor and Industry with respect to questions relating to the Wage Rate Determination.

19.07 *State Treasurer's List of Debarred, Suspended and Disqualified Bidders (NJSA 34: 11)*

The CONTRACTOR, or an officer or partner of the bidder shall not, at the time of the bid, be included on the State Treasurer's List of debarred, suspended, or disqualified bidders. The CONTRACTOR shall immediately notify the OWNER whenever it appears that the CONTRACTOR is on the State Treasurer's List. The CONTRACTOR may be debarred, suspended, or disqualified from contracting with the State and the Department if the CONTRACTOR commits any of the acts listed in NJAC 7:1-5.2. Enclosed with the State Wage Rate Determination is a list of contractors and subcontractors who are debarred from public works pursuant to NJSA 34:11-56.37 and 38, no contract will be awarded or made to the listed CONTRACTOR's or subcontractors.

19.08 *Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals (SEDs) (NJAC 7:22-9)*

It is the policy of the PVSC to promote award of contracts to Socially and Economically Disadvantaged (SED) small business enterprises by stipulating specific requirements for involving such businesses in contracting. The failure of the Contractor to demonstrate a good faith effort to achieve the goals set forth herein by utilizing best efforts to implement the SED utilization plan will constitute an event of default of the Agreement. PVSC shall designate a compliance officer who shall be responsible for coordinating SED utilization efforts for the Agreement and for monitoring compliance with the plan. PVSC reserves the right to audit the Contractor's SED records to insure compliance with this provision. Socially and economically disadvantaged businesses definitions and associated terms are defined in the NJAC 7:22-9.2.

The CONTRACTOR is advised that not less than ten (10) percent of the total amount of all contracts for building, materials or services for the project shall be awarded to small business concerns owned and controlled by socially and economically disadvantaged individuals as defined in Section 637 (a) and 637 (d) of the Small Business Act (15USC, 637 (a) and 637 (d)), and any regulations promulgated thereto.

When soliciting services from subcontractors, the Contractor must include the 10% goal in its Proposals. Contract work cannot commence until the PVSC has approved the Contractor's SED Utilization Plan.

The CONTRACTOR's Plan to meet SED Utilization Requirements shall be submitted by the successful bidder within 30 days of Contract award to the PVSC. To be approvable, the SED Utilization Plan for subcontractors, suppliers and construction, must detail the steps taken or be taken by the CONTRACTOR to provide for SED utilization for the total fair share percentage established by the Agreement. It must further provide adequate documentation to evidence the CONTRACTOR's efforts to date and planned efforts toward achieving the goal over the duration of the project.

Additional guidance on implementation of SED Requirements is included under NJAC 7:22-9 et seq. as given in the attached. Copies of Form OEO-002, SED Participation Building Phase Quarterly Reporting Form for Contracting Agencies and Contractors; and Form OEO-003, SED Participation Monthly Progress Report are included for CONTRACTOR's use. The CONTRACTOR shall comply with all requirements imposed by the OWNER in order to fulfill the SED Utilization Requirements, as further clarified in PVSC's SED Utilization Plan as given in the attached. (See exhibits 5 through 8 for the aforementioned documents).

19.09 Termination of Loans

Termination of loans by the Department shall be conducted as follows:

1. The Department may terminate a Fund loan in whole or in part for good cause. The term "good cause" shall include but not be limited to:
 - i. Substantial failure to comply with the terms and conditions of the Fund loan agreement;
 - ii. Default by the recipient;
 - iii. A determination that the Fund loan was obtained by fraud;
 - iv. Without good cause therefor, substantial performance of this project work has not occurred;
 - v. Gross abuse or corrupt practices in the administration of the project have occurred; or
 - vi. Fund moneys have been used for non-allowable costs.
2. The Department shall give written notice to the recipient (certified mail, return receipt requested) of its intent to terminate a Fund loan, in whole or in part, at least 30 days prior to the intended date of termination.
3. The Department shall afford the recipient an opportunity for consultation prior to any termination. After such opportunity for consultation, the Department may, in writing (certified mail, return receipt requested), terminate the Fund loan in whole or in part.

- (b) Project termination by the recipient shall be subject to the following:
1. A recipient shall not unilaterally terminate the project work for which a Fund loan has been awarded, except for good cause and subject to negotiations and payment of appropriate termination settlement costs. The recipient shall promptly give written notice to the Department of any complete or partial termination of the project work by the recipient.
 2. If the Department determines that there is good cause for the termination of all or any portion of a project for which the Fund loan has been awarded, the Department may enter into a termination agreement or unilaterally terminate the Fund loan effective with the date of cessation of the project work by the recipient. The determination to terminate the Fund loan shall be solely within the discretion of the Department. If the Department determines not to terminate, the recipient shall remain bound by the terms and conditions of the Fund loan agreement.
 3. If the Department determines that a recipient has ceased work on a project without good cause, the Department may unilaterally terminate the Fund loan pursuant to this section.
- (c) The Department and recipient may enter into a mutual agreement to terminate at any time pursuant to terms which are consistent with this subchapter. The agreement shall establish the effective date of termination of the project and the schedule for repayment of the Fund loan.
- (d) Upon termination, the recipient may be required to immediately refund or repay to the State the entire amount of the Fund loan moneys received. If the loan is guaranteed by a security/deficiency agreement may have to be brought into effect to ensure the entire repayment of the Fund loan. The Department may, at its discretion, authorize the immediate repayment of a specific portion of the Fund loan and allow the remaining balance to be repaid in accordance with a revised Fund loan repayment schedule.
- (e) The recipient shall reduce the amount of outstanding commitments insofar as possible and report to the Department the uncommitted balance of Fund moneys awarded under the Fund loan. The recipient shall make no new commitments without the Department's specific approval thereof. The Department shall make the final determination of the allowability of termination costs.
- (f) In addition to any termination action, the Department retains the right to pursue other legal remedies as may be available under federal, State and local law as warranted.

19.10 Davis Bacon Act

The CONTRACTOR shall comply with the requirements of the Davis Bacon Act as given in the attached Exhibit 3.

19.11 Construction of Wastewater Treatment Facilities (NJAC 7:14-2)

Chapter 7:14 of NJAC shall have precedence over other potentially contradictory language elsewhere in the contract documents. A copy of Chapter 14 is available from the State of New Jersey and is available for review at the offices of the Passaic Valley Sewerage Commission.

EXHIBIT NO. 1

PREVAILING WAGE RATES

A copy of the Essex County, State and Federal Wage Rates are included in this Exhibit.

The CONTRACTOR is reminded that it is responsible to utilize the current and applicable rates for the work being performed.

PREVAILING WAGE SCHEDULES FOR THIS PROJECT ARE NOT REPRINTED
HERE DUE TO SIZE



State of New Jersey

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PO BOX 389
TRENTON, NEW JERSEY 08625-0389

September 4, 2018

LISTED CONTRACTORS AND SUBCONTRACTORS

PURSUANT TO N.J.S.A 34:11-56.37 AND 34:11-56.38 OF THE PREVAILING WAGE ACT

NO PUBLIC WORKS CONTRACT MAY BE AWARDED TO ANY OF THE FOLLOWING CONTRACTORS AND SUBCONTRACTORS OR TO ANY FIRM, CORPORATION OR PARTNERSHIP IN WHICH THEY HAVE AN INTEREST UNTIL THE EXPIRATION DATE GIVEN.

<u>CONTRACTORS AND SUBCONTRACTORS</u>	<u>ADDRESS</u>	<u>EXPIRATION DATE</u>
A P Roofing & Siding, LLC	259 Main Street, Chester, NJ 07930	12/20/2020
A. Perin Roofing & Siding, LLC		
Adelino Perin, President	12 Valley Place, Chester, NJ 07930	
Ackerson Contracting Inc.	182 Van Dyke Road, Hopewell, NJ 08525	03/05/2020
Denise Ackerson, President	182 Van Dyke Road, Hopewell, NJ 08525	
Antage Sport USA, Inc.	1 Tigan Street, Winooski, VT 05404	01/19/2019
Maurice Guariglia, Owner / Officer	494 North Barbor Road, Colchester, VT 05446	
All American Demolition & Dismantling, LLC	9 Silver Spring Court, East Hanover, NJ 07936-2529	08/05/2021
All Merican Demolition & Dismantling LLC		
Theodore Fiore Jr, Owner	9 Silver Spring Court, East Hanover, NJ 07936-2529	
All Jersey Fence Co.	10 Route 46 West, Clifton, NJ 07011	09/14/2019
Charles Viola, President	266 Columbus Avenue, Hasbrouck Heights, NJ 07604	
Agostino Ducato, Vice-President	223 Spring Valley Road, Paramus, NJ 07652	
Alvarez Painting, LLC	907 Madison Ave., Apt 1L, Elizabeth, NJ 07201	08/20/2021
Elvin Alvarez, Owner	907 Madison Avenue, Elizabeth, NJ 07201	
Anchor Marine of Toms River	1991 Rte-9, Toms River, NJ 08755	12/18/2019
Lawarence Koos, Owner	1391 White Oak Botton Rd, Tom River, NJ 08755	
Antiveros Construction, Inc.	677 Old Highway 64, Etowah, NC 28729	10/19/2018
Donnie Antiveros, President	677 Old Highway 64, Etowah, NC 28729	
Olga Conteras, Vice-President	677 Old Highway 64, Etowah, NC 28729	
Apex Tower Services, Inc.	245 Sharp Road, Marlton, NJ 08053	02/09/2019
Richard Pluese, Vice-President	66 E Cedar Avenue, Marlton, NJ 08053	
Aracon Mechanical LLC	136 Ocean Ave, Monmouth Beach, NJ 07750-0775	09/18/2020
Alexander Arcadia, Principal	136 Ocean Avenue, Monmouth Beach, NJ 07750-0775	
Arete Development Inc.	20 Industrial Road, Fairfield, NJ 07004	01/04/2019
te Development Inc.		
Justin Ettere, Vice-President	52 Brass Castle Road, Washington, NJ 07882	
John Ettere, Owner	1453 Tooz Place, South Plainfield, NJ 07080	
Matthew Ettere, Vice-President	8 Brookside Drive, Warren, NJ 07059	
Jonathan Ettere, President	7 Craig Road, Readington, NJ 08853	

CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

Aztech Management, Inc. Aztech Management, Inc. Constantine Vivian, President	86 Christopher Street, Montclair, NJ 07042	11/17/2019
Barbos HVAC, LLC Ihor Shcherbii, Owner	86 Christopher Street, Montclair, NJ 07042	
Bogert Millwork Company, Inc. Anthony Yaniero, Vice-President Susan Yaniero, Owner	3 - C Brynwood Gardens, Apt 18, Old Bridge, NJ 08857	08/01/2021
Bravo General Contractors Inc John Hunsecker, Vice-President	3-C Brynwood gardens, Apt 18, Old Bridge, NJ 08857	
Brian Parker, LLC Brian Parker, Owner	105 Johnson Ave., Hackensack, NJ 07601	06/08/2019
Build Rite LLC Louis Pacelli, Manager	848 Bogert Road, River Edge, NJ 07661	
C & E Contracting, Inc. Donald Fleming, President	848 Bogert Road, River Edge, NJ 07661	
CAM Contractors Inc. Michelle Gamache-Caravella, President Joseph Caravella, Manager	72 Charlotte Drive, Churchville, PA 18966	11/20/2020
Cam Flooring Installations LLC Jose Fernandes Da Silva, Owner	72 Charlotte Drive, Churchville, PA 18966	
CBC Enterprises LLC Leo Baiocco, President	115 Ardmore Avenue, Haddonfield, NJ 08033	08/06/2020
CertaPro Painters of South Jersey LLC Mark Kahn, Owner	115 Ardmore Avenue, Haddonfield, NJ 08033	
CJC Builders Corp. Curillo Guaman, Owner	16 Darlington Drive, Wayne, NJ 07470	01/17/2020
Cleworth & Son, Inc. Dorothy Cleworth, President Ernest Cleworth, Vice-President	16 Darlington Drive, Wayne, NJ 07470	
Clifford Pool Tile & Coping LLC Clifford Alphonso, Owner	PO Box 690, Boonton, NJ 07005	12/15/2018
Conex Construction Corp. Armando Piedade, President	340 Reservoir Road, Boonton, NJ 07005	
Confortini Plumbing & Heating, LLC Andrew Confortini, Vice-President Anthony Confortini, Owner	179-15 Route 46 West, Suite 135, Rockaway, NJ 07866	12/06/2019
Cougar Power and Electric, LLC Kevin F. Mandel, Owner	179-15 Route 46, Suite 135, Rockaway, NJ 07866	
CRC Concrete Raising of South Jersey, Inc. Theresa Frajdenberg, President	179-15 Route 46, Rockaway, NJ 07866	
Dan Seeman Dan Seeman, Owner	26 Washington Street, Long Branch, NJ 07718	08/31/2019
Dane DeForest Demolition, Inc. Dane DeForest, President	26 Washington St., Long Branch, NJ 07718	
	424 Commerce Lane, West Berlin, NJ 08091	03/05/2021
	2383 Atco Avenue, Atco, NJ 08004	
	910 Cedar Street, Millville, NJ 08332	02/03/2019
	910 Cedar Street, Millville, NJ 08332	
	220 Mount Pleasant Ave., Newark, NJ 07104	01/07/2019
	197 Broad Street, Newark, NJ 07104	
	3150 Highway 27, Kendall Park, NJ 08824	07/22/2021
	3150 Highway 27, Kendall Park, NJ 08824	
	5 Burnham Court, Kendall Park, NJ 08824	
	84 Tecumseh Trail, Medford Lakes, NJ 08055	08/16/2020
	84 Tecumseh Trail, Medford Lakes, NJ 08055	
	265 Wilson Avenue, Kearny, NJ 07032	01/19/2019
	265 Wilson Avenue, Kearny, NJ 07032	
	491 West County Drive, Somerville, NJ 08876	07/05/2019
	491 West County Drive, Somerville, NJ 08876	
	41 Bunnvale Road, Clifton, NJ 07830	
	126 Fountain Avenue, Piscataway, NJ 08854	01/05/2020
	186 Sunshine Drive, Piscataway, NJ 08854	
	110 South Harding Highway, Landisville, NJ 08326	02/01/2019
	110 South Harding Highway, Landisville, NJ 08326	
	1363 North Winchester Dr., Greenfield, IN 46140	03/26/2021
	1363 North Winchester Dr., Greenfield, IN 46140	
	1508 Beaver Dam Road, Point Pleasant, NJ 08742	02/15/2019
	2406 Herbertsville Road, Point Pleasant, NJ 08742	

CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE****Dan's Tile and Marble LLC****Dan's Tile and Marble LLC**

Dan Jarrell, Owner / Officer

Industrial, LLC**Industrial Limited Liability Company**

Vincent Manganiello, Managing Member

Dawkins Plumbing & Construction LLC.

Michael Dawkins, Manager

DCI Signs & Awnings Inc.

Danny Castillo, President

DG Construction & Renovations LLC

Dean Gallo, Owner

Harry Gallo, Secretary

DiClemente Contractors, Inc.**DiClemente Contractors, Inc.**

Gail Maiello, President

Discovery Floor Covering LLC

Segundo Gallegos, Owner

Arianna Rengito Miranda, Owner

Duke Electric LLC**Duke Electric LLC**

Craig Dutka, Member

Eileen Dutka, Member

E & S Enterprises, LLC

Helen Henriquez, Owner

M Contracting, Inc

John Makris, Jr., President

EDP Painting Company

Edward Del Priore, Principal

Efficient Electric LLC**Efficient Electric LLC**

Malachi Velez, Member

Elite Demolition, LLC

Stephen DiFilippi, Owner

Elite Terrazzo Flooring, Inc.

Christopher Picinic, Owner

Empire Construction

Louis Malfitano, Owner

Everest Masonry Construction, Inc.

Rafael Ramos, President

Everest Masonry Constructors, Inc.

Mark Rodrigues, President

Felipe Villagomez

owner

Felipe Villagomez, Owner

in Construction, LLC

Sheree Severini-Fittin, Member

Thomas Fittin, Owner / Officer

336 McClelland Ave, Glassboro, NJ 08028**06/10/2021**

336 McClelland Ave, Glassboro, NJ 08028

41 Pine Street, Rockaway, NJ 07866**01/08/2020**

2 Perona Road, Andover, NJ 07821

1057 Haddon Ave, Camden, NJ 08103**01/01/2021**

1057 Haddon Avenue, Camden, NJ 08103

110 Riverside Avenue, Newark, NJ 07104-0710**04/10/2020**

645 Bancroft Road, Brick, NJ 08724

245 Emanuel St., Trenton, NJ 08610**04/04/2019**

245 Emanuel Street, Trenton, NJ 08610

245 Emanuel Street, Trenton, NJ 08610

1515 10th Street, Fort Lee, NJ 07024**12/27/2020**

1515 10th Street, Fort Lee, NJ 07024

658 Pennsylvania Ave, Elizabeth, NJ 07201**02/05/2021**

528 Linden Ave, Suite 2, Elizabeth, NJ 07202

658 Pennsylvania Ave, Apt 4, Elizabeth, NJ 07201

600 Rt 33 West, Millstone, NJ 08535**05/02/2021**

17 Old Church Road, Monroe Township, NJ 08831-0883

17 Old Church Road, Monroe Township, NJ 08831-0883

P. O. Box 2050, Vineland, NJ 08360**01/27/2019**

101 South Orchard Road, Vineland, NJ 08360

270 Crescent Place, Yonkers, NY 10704**10/01/2020**

270 Crescent Place, Yonkers, NY 10704

7 Wilson Avenue West, East Hanover, NJ 07936**03/26/2021**

7 Wilson Avenue West, East Hanover, NJ 07936

c/o Malachi Velez, 6 Hampton Court, Jersey City, NJ 07302**02/05/2021**

6 Hampton Court, Jersey City, NJ 07302

120 Springbrook Trail, Sparta, NJ 07871**04/10/2020**

120 Springbrook Trail, Sparta, NJ 07871

185 Fifth Ave., Paterson, NJ 07524**10/18/2019**

164 President Blvd, Washington Township, NJ 07676

560 Mountain Ave, North Caldwell, NJ 07006**09/06/2020**

560 Mountain Ave, North Caldwell, NJ 07006

163 E Main Street, Suite 311, Little Falls, NJ 07424**11/08/2018**

120 Cantello Street, Union City, NJ 07087

1 Orient Way, Suite 226, Rutherford, NJ 07070**11/08/2018**

523 Hamilton Avenue, Kingston, PA 18704

160 Lincoln Street, Bridgeton, NJ 08302**03/08/2019**

160 Lincoln Street, Bridgeton, NJ 08302

2243 Edgar Rd., Point Pleasant Beach, NJ 08742**02/23/2019**

2243 Edgar Rd., Point Pleasant Beach, NJ 08742

2243 Edgar Rd, Point Pleasant Beach, NJ 08742

CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

G.F.I. Siteworks, Inc. G.F.I. Siteworks, Inc. James DiLorenzo, Vice-President Salvatore A Casella III, President	P.O. Box 296, Clarksboro, NJ 08020 440 Mantua Avenue, Paulsboro, NJ 08066 362 Friendship Road, Clarksboro, NJ 08020	02/02/2019
Gen II Contracting Co. Inc. Jaimie-Lyn Knight, President	395 A Millstone Road, Clarksburg, NJ 08510 395 Millstone Road, Clarksburg, NJ 08510	11/20/2019
Griffin Sign, Inc. Michelle Angerame, President	464 North Randolph Avenue, Cinnaminson, NJ 08077 12 Pendleton Court, Medford, NJ 08055	03/13/2019
Harold Arenberg Inc. Jeffrey Arenberg, President Daniel Arenberg, Vice-President	1711 Route 9 North, Swainton, NJ 08210 741 Dias Creek Road, Cape May Court House, NJ 08210 1711 Route 9 North, Swainton, NJ 08210	12/29/2019
Heritage Hills Estates Frank Carpine, Owner	3730 S. Delsea Dr, Vineland, NJ 08360 100 Liberty Dr, Millville, NJ 08332	01/03/2019
Hernandez Drywall Construction, Inc. Oscar Hernandez, President	421 N. Warrick Road, Magnolia, NJ 08049 421 N. warrick Road, Magnolia, NJ 08049	09/24/2020
High Mountain Construction, Inc. Infinity Flooring Infinity Performance Inc. George Atkinson, President	296 Oakwood Avenue, North Haledon, NJ 07508 7002 N. Park Ave., Indianapolis, IN 46220 6735 N. Meridian St., Indianapolis, IN 46260	04/09/2020 01/08/2021
Install It All. LLC Laurence Koos, Owner	575 Prospect Street, Unit 261 B, Lakewood, NJ 08701 1391 White Oak Bottom Rd., Toms River, NJ 08755	12/18/2018
J G Roofing, LLC Manuel Chaguan, Owner	85 Prospect Ave. Apt.1, Irvington, NJ 07111 85 Prospect Ave., Irvington, NJ 07111	04/25/2019
J&D Plumbing & Heating Inc. John J. Benedetti Jr., President	193 Natrona Avenue, Mercerville, NJ 08619 193 Natrona Avenue, Mercerville, NJ 08619	11/01/2018
J. MOTA Construction, LLC J.C. Maintenance & Repair Emanuel Cucco, Owner	1016 Highway 33, Freehold, NJ 07728 6725 13th Avenue, Brooklyn, NY 11219 1435 71st Street, Brooklyn, NY 11228	11/30/2019 03/14/2019
Jamali Developers, LLC Hussain Burhanpurwala, Member	238 Fresh Ponds Road, Suite 100, Monroe, NJ 08816 553 Marc Drive, North Brunswick, NJ 08902	03/26/2020
JB Contracting, Inc. William Allan Crayne, Partner Stanley Kapusta, President	12 Commodore Drive, Lake Hopatcong, NJ 07849 178 Espanong Road, Lake Hopatcong, NJ 07849 12 Commodore Drive, Lake Hopatcong, NJ 07849	05/17/2020
Jersey Heavy Drywall Ruben Gonzalez, Owner	107 Jefferson Street, Passaic, NJ 07055 107 Jefferson Street, Passaic, NJ 07055	07/04/2020
Jerzee Container Corp. SUSPENDED PENDING DEBARMENT Jon Whelan, Vice-President Sandra Morizzo, Member Thomas Whelan, President Joseph Filoon Jr, Manager	123 Bartlett Avenue, West Creek, NJ 08092 48 8th Avenue, New York, NY 10014 165 Oak Ave, West Creek, NJ 08092 PO Box 155, Spring Lake, NJ 07762 195 Lakeshore Dr, Manahawkin, NJ 08050	SUSPENDED
Jesus Aparicio-Santos, LLC Jesus Aparicio-Santos, Owner	26 Sunset Street, South River, NJ 08882 26 Sunset Street, South River, NJ 08882	05/14/2020
Joe Antonaccio Electric Joseph Antonaccio, President	167 2nd St., Keyport, NJ 07735 167 2nd St., Keyport, NJ 07735	06/07/2019
John Jackson Masonry & Construction John Jackson, CEO	1133 W. America Rd., Camden, NJ 08104 1771 Norris St., Camden, NJ 08101	09/03/2021




CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

Johnson Tree Transplanting LLC	1340 LeJack Circle, Forest, VA 24551	07/14/2019
Nathan Johnson, Owner	5352 Lake Road, Newfield, NJ 08344	
Jessica Johnson, Member	5352 Lake Road, Newfield, NJ 08344	
J Drywall Contractor, Inc.	705 Taft Avenue, North Plainfield, NJ 07063	03/16/2019
Jonny Ayala, Owner	68 Westervelt Avenue, Plainfield, NJ 07060	
K Hanrahan Enterprises, Inc.	20-21 Wagaraw Road, Bldg 36, Fair Lawn, NJ 07410	12/26/2020
K Hanrahan Enterprises, Inc.		
Kevin Hanrahan, President	17 Oakwood Drive, Ringwood, NJ 07456-0745	
KBD Construction LLC	118 B Donor Avenue, Elmwood Park, NJ 07407	07/08/2021
KBD Construction LLC		
Dusan Budinoski, President	118 B Donor Avenue, Elmwood Park, NJ 07407	
Kalinka Budinoski, Owner	118 B Donor Avenue, Elmwood Park, NJ 07407	
Kosakowski Plumbing & Heating Inc.	27 Center Avenue, Morristown, NJ 07960	07/12/2020
Edward Kosakowski, Owner	27 Center Avenue, Morristown, NJ 07960	
KS Exteriors, LLC	650 Ohio Ave., Trenton, NJ 08638	03/08/2019
KS Exteriors, LLC		
Kris Brezinska, Owner	650 Ohio Ave., Trenton, NJ 08638	
L & N General Contractors LLC	529 Forest Court, Williamstown, NJ 08094	08/13/2021
Sammie Nelson, Member	529 Forest Ct., Williamstown, NJ 08094	
Lab Construction Inc.	607 Jackson Road, Williamstown, NJ 08094	06/14/2020
Lab Construction Inc.		
Lee Barnes, President	607 Jackson Road, Williamstown, NJ 08094	
Low Bid, Inc.	125 East Broadway, Suite 507, Long Beach, NY 11561	08/18/2019
George McNulty, President	125 East Broadway, Suite 507, Long Beach, NY 11561	
A.C. Installation LLC	305 10th Ave, Roselle, NJ 07203	07/05/2021
Iberico Goncalves, Owner	305 E. 10th Ave, Roselle, NJ 07203	
Ma Na Lu Transportation Corporation	799 Kearny Avenue, Apt #1, Kearny, NJ 07032	06/07/2019
Blanca Segarra, President	799 Kearny Ave., Apt 1, Kearny, NJ 07032	
Matos Construction, LLC	77 Williamson Court, Bridgewater, NJ 08807	01/12/2020
Wagner Matos		
Nimali Matos, Owner	77 Williamson Court, Bridgewater, NJ 08807	
Wagner Matos, Owner	77 Williamson Court, Bridgewater, NJ 08807	
Matrix Management Const. LLC	2 New Castle Lane, Willingboro, NJ 08046	11/28/2020
Kenneth Hicks, Owner	2 New Castle Lane, Willingboro, NJ 08046	
McArthur Park, Inc./ dba Bleacherman	105 Mill Street, Corinth, NY 12822	11/01/2019
Louis R. McArthur Jr., Owner / Officer	13 Luzerne Place, Hadley, NY 12835	
McGarrigle's Carpet, LLC	1500 Carlene Street, Langhorne, PA 19047	07/05/2020
David McGarrigle, Owner	1500 Carlene St., Langhorne, PA 19047	
Metropolitan Stone & Tile, LLC	102 Richards Ave, Dover, NJ 07801	09/23/2018
Margaret Farina, Owner	30 Monsignor Deluca Plaza, Nutley, NJ 07110	
Mirror and Glass Depot LLC	8555 Tonnelle Avenue, Ste-202, North Bergen, NJ 07047	05/02/2021
Sandra Agudelo, Owner	30 Madison Street, East Rutherford, NJ 07073	
MNC General Contracting Inc.	PO Box 503, Oakhurst, NJ 07755	01/02/2020
Maria Abreu, President	2 Beach Haven Way, Waretown, NJ 08758	
Mullen & Sons Contractors, Inc.	PO Box 773, West Caldwell, NJ 07006	02/28/2019
John Mullen, Sr, President	45 Fairfield Place, West Caldwell, NJ 07006	
John Mullen, Jr., Owner	45 Fairfield Place, West Caldwell, NJ 07006	

CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

New Jersey State Flooring, Inc.	109 Greentree Road, Brick, NJ 08724	02/10/2019
Roy C. Apgar, President	109 Greentree Road, Brick, NJ 08724	
Cheryl Apgar, Vice-President	109 Greentree Road, Brick, NJ 08724	
Niceta Electric	2119 Merritt Drive, Northfield, NJ 08225	10/19/2018
Joseph Niceta, Owner	2119 Merritt Drive, Northfield, NJ 08225	
NT&P Construction Inc.	105 White Oak Lane, Old Bridge, NJ 08857	11/22/2018
Nicola Pengue, President	4 Camelot Avenue, Monroe Township, NJ 08831	
OTS-NJ, LLC	21 Traxler Street, Butler, OH 44822	07/04/2019
OTS of New Jersey, LLC	707 Main Street, Avon-by-the-Sea, NJ 07717	
James T. O'Connor, Managing Member	P.O. Box 1288, East Windsor, NJ 08520	
Paint-Pro, Inc.		08/21/2020
George Demetriades, President	125 Heritage St., Robbinsville, NJ 08691	
Palazzo Fence Co	96 Taylor Dr, Levittown, PA 19054	06/26/2019
Troy Palazzo, Owner	96 Taylor Dr, Levittown, PA 19054	
Patrick Concrete Constructors Inc.	2455 State Route 21, Canandaigua, NY 14424	06/13/2020
John Bell, President	2455 State Route 21, Canandaigua, NY 14424	
Paul F. Roscitt Electric, Inc.	262 Harmon Avenue, Fort Lee, NJ 07024	11/08/2018
Paul F Roscitt, President	262 Harmon Avenue, Fort Lee, NJ 07024	
Paul Kochiss, LLC	41 Little Punkup Rd, Oxford, CT 06478	07/31/2021
Paul Kochiss, Managing Member	41 Little Punkup Rd, Oxford, CT 06478	
Perfection Erectors, LLC	349 West Prospect Avenue, Keyport, NJ 07735	02/23/2019
Perfection Erectors, LLC	349 W. Prospect Ave., Keyport, NJ 07735	
Marianne Cammarata, Manager	349 W. Prospect Avenue, Keyport, NJ 07735	
Vincent Frank Cammarata, Owner		
Perrone Trucking LLC	74 Glen Roy Road East, Fairfield, NJ 07004	10/27/2018
James Perrone, Owner	74 Glenroy Road East, Fairfield, NJ 07004	
Pin Tribal Construction, LLC	50 Drift Avenue, Lawrence, NJ 08648	01/29/2021
Mark W. Holmes Sr., President	50 Drift Avenue, Lawrence, NJ 08648	
PL&J Construction Corp.	73 Chestnut St., West Orange, NJ 07052	11/28/2020
Luis Palaguachi, Owner	73 Chestnut Street, West Orange, NJ 07052	
PSM Rojas Construction, LLC	161 E. 16th St, Paterson, NJ 07524	12/06/2019
Mikey Rojas, Operating Agent	161 East 16th St., Paterson, NJ 07524	
Quality Plus Builders, Inc.	PO Box 1040, Weirsdale, FL 32195	01/26/2020
Quality Plus Builders, Inc.	16320 SE 162nd Ct., Weirsdale, FL 32195	
Gerry G. Smith, President	16320 SE 162nd Ct., Weirsdale, FL 32195	
Laurie M. Smith, Vice-President		
Remcon Enterprises LLC	25 Pine Street, Suite 9, Rockaway, NJ 07866	02/12/2020
Joshua Jackson, President	4 Lynn Dr., Andover, NJ 07821	
Jon Warbeck, Vice-President	680 Pine Brook Road, Lincoln Park, NJ 07035	
Resco, LLC	P.O. Box 806, Old Saybrook, CT 06475	10/21/2018
Hallmark Electric, LLC	15 Elm Street, Old Saybrook, CT 06475	
David Peckham, Owner		
Rian Seeman	12433 Pineneddle Drive, Indianapolis, IN 46236	03/26/2021
Rian Seeman, Owner	12433 Pineneddle Drive, Indianapolis, IN 46236	
Richard Werley	601 Poplar St., Catasauqua, PA 18045	07/31/2021
Richard Werley, Owner	601 Poplar St., Catasauqua, PA 18032	

CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

Ricky Plumbing LLC Ricky Plumbing LLC Enrique Trabal, Managing Member  k Systems, Inc. Marlene Overgaard, Owner Steve Overgaard, Vice-President Stacey Overgaard, President Rizzo New York Inc. Rizzo New York Inc. Rizwan Ahmad, President Robert Foss Electric, LLC Caroline Foss, Owner Robert Foss, Vice-President RW Assembly & Install LLC Richard Weling, Managing Member S&J Floor Covering Shawn Dougherty, Owner S. Moyer Enterprises Steve Moyer, Owner SCA Technologies, LLC Scott Ahart, Member SDT Transport LLC Stephen Tripodi, Owner  inole Construction, L.L.C. SUSPENDED PENDING DEBARMENT Sandra Morizzo, Managing Member Joseph Filoon Jr., Manager Somerset Electrical Services Ralph Epright, Owner Southern State Contracting Services LLC Joseph F. Gleason Jr., President Spectrum of Floors, LLC Donna DeBenedetto, President William Koch, Vice-President Squillace Steel Fabricators, LLC Squillace Steel Fabricators, LLC Rachel Squillace, Manager Richard Squillace, President Steven Keares, Inc. Keares Electrical Contractor, Inc. Steven P. Keares, CEO Steven Trucking Corp Fabian Martinez, President Team Revolution LLC dba Superior Landscaping  William Hattrich, Owner Timster Trucking Inc. SUSPENDED PENDING DEBARMENT Sandra Morizzo, Partner Joseph Filoon Jr., President	1792 Margarets Walk Road, Fleming Island, FL 32033 1792 Margarets Walk Road, Fleming Island, FL 32003 1103 Hershey Street, Albert Lea, MN 56007 1713 Hale Drive, Albert Lea, MN 56007 3033 Bridge Avenue, Albert Lea, MN 56007 410 Hammer Road, Albert Lea, MN 56007 109-02 Jamaica Avenue, Richmond Hill, NY 11418 9157 97th St, Wood Haven, NY 11421 1084 Bethlehem Pike, Montgomeryville, PA 18936 1344 Meadow Lane, Perkasio, PA 18944 1344 Meadow Lane, Perkasio, PA 18944 110 Stevens Avenue, Cedar Grove, NJ 07009 110 Stevens Avenue, Cedar Grove, NJ 07009 10 Ealey St, Glassboro, NJ 08028 10 Ealey Street, Glassboro, NJ 08028 6271 W. Basalt Cove, West Jordan, UT 84081 6271 W. Basalt Cove, West Jordan, UT 84081 3579 Route 46, Apt 52b, Parsippany, NJ 07054 3579 Route 46, Apt 52 b, Parsippany, NJ 07054 12 Clifford Rd, Wanaque, NJ 07465 12 Clifford Rd, Wanaque, NJ 07465 128 Bartlett Ave, West Creek, NJ 08092 165 Oak Ave., West Creek, NJ 08092 195 Lakeshore Dr, Manahawkin, NJ 48 Junction Rd., Flemington, NJ 08822 48 Junction Rd., Flemington, NJ 08822 51 Pine Dr S., Brick, NJ 08723 51 Pine Dr. S, Brick, NJ 08724 3700 William Penn Highway, Easton, PA 18045 65 Crest Blvd., Easton, PA 18045 225 Applewood Dr., Easton, PA 18045 771 Amsterdam Avenue, Roselle, NJ 07203 771 Amsterdam Ave., Roselle Park, NJ 07203 771 Amsterdam Avenue, Roselle Park, NJ 07203 633 Jeffers Circle, Exton, PA 19341 211 Downing Road, Downingtown, PA 19335 47 Railroad Ave, Netcong, NJ 07857 28 Bowlby Street, Dover, NJ 07801 6 Warren Dr. Unit D, Vernon, NJ 07462 1 Zinnia Dr., Glenwood, NJ 07462 128 Bartlett Avenue, West Creek, NJ 08092 165 Oak Ave, West Creek, 165 Oak Avenue, West Creek, NJ 08092	09/17/2020 08/26/2021 01/19/2019 12/27/2019 07/12/2020 04/23/2021 03/26/2021 03/26/2021 08/25/2019 SUSPENDED 02/05/2021 06/26/2019 07/31/2021 05/31/2019 02/02/2020 10/17/2019 05/30/2021 SUSPENDED
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CONTRACTORS AND SUBCONTRACTORS**ADDRESS****EXPIRATION DATE**

TJB Air Conditioning And Heating Timothy Babbitt, Owner	2305 Garry Rd. Suite A, Cinnaminson, NJ 08077 2305 Garry Rd. Suite A, Cinnaminson, NJ 08077	02/28/2019
Top Notch Tree & Landscape, LLC James Van Wyckhouse, Owner	70 East Allendale Rd., Saddle River, NJ 07458 46 Tam O Shanter Rd, Mahwah, NJ 07430	12/06/2018
TQM Construction Corporation Balwant DeVre, President	21 Patriot Xing, Rockaway, NJ 07866-4826 21 Patriot Crossing, Rockaway, NJ 07866	03/22/2019
Tropical Landscaping LLC Marcos De Oliveira, Managing Member	3 Christopher Street, Sayerville, NJ 08872 3 Christopher Street, Sayerville, NJ 08872	10/23/2020
Turfscapes LLC Jeffrey Grize, Owner	PO Box 950, Williamstown, NJ 08094 3477 S. Blackhorse Pike, Williamstown, NJ 08094	08/22/2019
Twin Industries Jeanne Crispino, Vice-President	15 Lewis Street, Eatontown, NJ 07724 15 Lewis Street, Eatontown, NJ 07724	04/04/2019
Ultimate Roofing, LLC Paige Moriarty, Member	1013 Grandview Avenue, Union, NJ 07083 1013 Grandview Avenue, Union, NJ 07083	12/12/2019
Ultra Construction LLC Ultra Construction Limited Liability Company Christopher Zimmermann, Manager Suzanne Zimmermann, Member	PO Box 1843, Toms River, NJ 08755 2303 Owen Court, Toms River, NJ 08755 2303 Owen Court, Toms River, NJ 08755	12/14/2020
Unique Contractors Unique Contractors Juan Garro, Owner	3606 Academy Road, Philadelphia, PA 19154 3606 Academy Road, Philadelphia, PA 19154	01/11/2020
Van Peenen Landscape Contractors, Inc. Van Peenen Landscape Contractors, Inc. Raymond Van Peenen, President	555 Preakness Avenue,, Suite 210, Totowa, NJ 07512 3 Gates Place, Wayne, NJ 07470	11/22/2018
Vision Construction Group, Inc. Vision Construction Group, Inc. Andrew Bello, President Gerard Chiusolo, Member	10 Liberty Street, Edison, NJ 08837 2341 Achilles Street, Port Charlotte, FL 33980 674 Edgewood Place, North Brunswick, NJ 08902	08/27/2020
Warbeck Construction Group LLC Jon J Warbeck, President	63 Beaver Brook Road, Suite 305, Lincoln Park, NJ 07035 680 West Pine Brook Road, Lincoln Park, NJ 07035	02/28/2019
Warren Contractors LLC Joseph Zawada, Manager	85 Tracey Station Road, Manalapan, NJ 07726 211 Brewers Bridge Road, Jackson, NJ 08527	06/14/2020
Weather Tight Foam Insulation, Inc. Mohamed A. Abdou, Owner / Officer Tariq Adma, Owner / Officer	1156 Livingston Avenue, North Brunswick, NJ 08902 1156 Livingston Avenue, N. Brunswick, NJ 08902 222 Sanford Street, New Brunswick, NJ 08901	04/10/2020
Whittendale Excavating Corp. Whittendale Excavating Corp. Ashley Whittendale, Partner Roland J. Whittendale, Vice-President Matthew Whittendale, Partner Diane Whittendale, President Timothy Whittendale, Vice-President	1490 Glen Avenue, Moorestown, NJ 08057 737 Haverford Avenue, Maple Shade, NJ 08052 309 Fairview Avenue, Moorestown, NJ 08057 112 Homestead Court, Moorestown, NJ 08057 1490 Glen Ave., Moorestown, NJ 08057 201 Cambridge Drive, Cinnaminson, NJ 08077	05/07/2021
Woerner Plumbing & Heating Joseph Woerner, Owner	3 Coppermine Village, Flemington, NJ 08822 3 Coppermine Village, Flemington, NJ	04/23/2021
Woodworkers Corporation Renata Moro, President	105 Rome Street, Newark, NJ 07105 305 E. 10th Ave, Roselle, NJ 07203	07/05/2021
YP Construction Inc. Yun Ping Zheng, President	1582 Route 27, Edison, NJ 08817 1582 Route 27, Edison, NJ 08817	06/29/2020

SUSPENDED PENDING DEBARMENT:

CONTRACTORS AND SUBCONTRACTORS

ADDRESS

SUSPEND DATE

Jazzee Container Corp.

123 Bartlett Avenue, West Creek, NJ 08092

09/23/2016

Sandra Morizzo, Member

165 Oak Ave, West Creek, NJ 08092

Thomas Whelan, President

PO Box 155, Spring Lake, NJ 07762

Jon Whelan, Vice-President

48 8th Avenue, New York, NY 10014

Joseph Filoon Jr, Manager

195 Lakeshore Dr, Manahawkin, NJ 08050

Seminole Construction, L.L.C.

128 Bartlett Ave, West Creek, NJ 08092

09/23/2016

Sandra Morizzo, Managing Member

165 Oak Ave., West Creek, NJ 08092

Joseph Filoon Jr., Manager

195 Lakeshore Dr, Manahawkin, NJ

Timster Trucking Inc.

128 Bartlett Avenue, West Creek, NJ 08092

09/23/2016

Joseph Filoon Jr., President

165 Oak Avenue, West Creek, NJ 08092

Sandra Morizzo, Partner

165 Oak Ave, West Creek,

LIST OF DEBARRED OWNERS/OFFICERS

9/4/2018

Owners/ Officers**Address****Company Name**

Mohamed A. Abdou, Owner / Officer	1156 Livingston Avenue, N. Brunswick, NJ 08902	Weather Tight Foam Insulation, Inc.
Maria Abreu, President	2 Beach Haven Way, Waretown, NJ 08758	MNC General Contracting Inc.
Denise Ackerson, President	182 Van Dyke Road, Hopewell, NJ 08525	Ackerson Contracting Inc.
Tariq Adma, Owner / Officer	222 Sanford Street, New Brunswick, NJ 08901	Weather Tight Foam Insulation, Inc.
Sandra Agudelo, Owner	30 Madison Street, East Rutherford, NJ 07073	Mirror and Glass Depot LLC
Scott Ahart, Member	3579 Route 46, Apt 52 b, Parsippany, NJ 07054	SCA Technologies, LLC
Rizwan Ahmad, President	9157 97th St, Wood Haven, NY 11421	Rizzo New York Inc.
		Rizzo New York Inc.
Clifford Alphonso, Owner	84 Tecumseh Trail, Medford Lakes, NJ 08055	Clifford Pool Tile & Coping LLC
Elvin Alvarez, Owner	907 Madison Avenue, Elizabeth, NJ 07201	Alvarez Painting, LLC
Michelle Angerame, President	12 Pendleton Court, Medford, NJ 08055	Griffin Sign, Inc.
Donnie Antiveros, President	677 Old Highway 64, Etowah, NC 28729	Antiveros Construction, Inc.
Joseph Antonaccio, President	167 2nd St., Keyport, NJ 07735	Joe Antonaccio Electric
Jesus Aparicio-Santos, Owner	26 Sunset Street, South River, NJ 08882	Jesus Aparicio-Santos, LLC
Roy C. Apgar, President	109 Greentree Road, Brick, NJ 08724	New Jersey State Flooring, Inc.
Cheryl Apgar, Vice-President	109 Greentree Road, Brick, NJ 08724	New Jersey State Flooring, Inc.
Alexander Arcadia, Principal	136 Ocean Avenue, Monmouth Beach, NJ 07750-0775	Aracon Mechanical LLC
Daniel Arenberg, Vice-President	1711 Route 9 North, Swainton, NJ 08210	Harold Arenberg Inc.
Jeffrey Arenberg, President	741 Dias Creek Road, Cape May Court House, NJ 08210	Harold Arenberg Inc.
George Atkinson, President	6735 N. Meridian St., Indianapolis, IN 46260	Infinity Flooring
		Infinity Performance Inc.
Jonny Ayala, Owner	68 Westervelt Avenue, Plainfield, NJ 07060	K & J Drywall Contractor, Inc.
Timothy Babbitt, Owner	2305 Garry Rd. Suite A, Cinnaminson, NJ 08077	TJB Air Conditioning And Heating
Leo Baiocco, President	2383 Atco Avenue, Atco, NJ 08004	CBC Enterprises LLC
Lee Barnes, President	607 Jackson Road, Williamstown, NJ 08094	Lab Construction Inc.
		Lab Construction Inc.
John Bell, President	2455 State Route 21, Canandaigua, NY 14424	Patrick Concrete Constructors Inc.
Andrew Bello, President	2341 Achilles Street, Port Charlotte, FL 33980	Vision Construction Group, Inc.
		Vision Construction Group, Inc.
John J. Benedetti Jr., President	193 Natrona Avenue, Mercerville, NJ 08619	J&D Plumbing & Heating Inc.
Kris Brezinska, Owner	650 Ohio Ave., Trenton, NJ 08638	KS Exteriors, LLC
		KS Exteriors, LLC
Dusan Budinoski, President	118 B Donor Avenue, Elmwood Park, NJ 07407	KBD Construction LLC
		KBD Construction LLC
Kalinka Budinoski, Owner	118 B Donor Avenue, Elmwood Park, NJ 07407	KBD Construction LLC
		KBD Construction LLC
Hussain Burhanpurwala, Member	553 Marc Drive, North Brunswick, NJ 08902	Jamali Developers, LLC
Marianne Cammarata, Manager	349 W. Prospect Ave., Keyport, NJ 07735	Perfection Erectors, LLC
		Perfection Erectors, LLC
Vincent Frank Cammarata, Owner	349 W. Prospect Avenue, Keyport, NJ 07735	Perfection Erectors, LLC
		CAM Contractors Inc.
Joseph Caravella, Manager	179-15 Route 46, Rockaway, NJ 07866	Heritage Hills Estates
Frank Carpine, Owner	100 Liberty Dr, Millville, NJ 08332	G.F.I. Siteworks, Inc.
Salvatore A Casella III, President	362 Friendship Road, Clarksboro, NJ 08020	G.F.I. Siteworks, Inc.
		DCI Signs & Awnings Inc.
Danny Castillo, President	645 Bancroft Road, Brick, NJ 08724	J G Roofing, LLC
Manuel Chaguan, Owner	85 Prospect Ave., Irvington, NJ 07111	Vision Construction Group, Inc.
Gerard Chiusolo, Member	674 Edgewood Place, North Brunswick, NJ 08902	Vision Construction Group, Inc.
		Cleworth & Son, Inc.
Dorothy Cleworth, President	3150 Highway 27, Kendall Park, NJ 08824	Cleworth & Son, Inc.
Ernest Cleworth, Vice-President	5 Burnham Court, Kendall Park, NJ 08824	
Andrew Confortini, Vice-President	491 West County Drive, Somerville, NJ 08876	Confortini Plumbing & Heating, LLC
Anthony Confortini, Owner	41 Bunnvale Road, Clifton, NJ 07830	Confortini Plumbing & Heating, LLC

Owners/ Officers**Address****Company Name**

Olga Conteras, Vice-President	677 Old Highway 64, Etowah, NC 28729	Antiveros Construction, Inc.
William Allan Crayne, Partner	178 Espanong Road, Lake Hopatcong, NJ 07849	JB Contracting, Inc.
Jeanne Crispino, Vice-President	15 Lewis Street, Eatontown, NJ 07724	Twin Industries
Manuel Cucco, Owner	1435 71st Street, Brooklyn, NY 11228	J.C. Maintenance & Repair
Jose Fernandes Da Silva, Owner	26 Washington St., Long Branch, NJ 07718	Cam Flooring Installations LLC
Michael Dawkins, Manager	1057 Haddon Avenue, Camden, NJ 08103	Dawkins Plumbing & Construction LLC.
Marcos De Oliveira, Managing Member	3 Christopher Street, Sayerville, NJ 08872	Tropical Landscaping LLC
Donna DeBenedetto, President	65 Crest Blvd., Easton, PA 18045	Spectrum of Floors, LLC
Dane DeForest, President	2406 Herbertsville Road, Point Pleasant, NJ 08742	Dane DeForest Demolition, Inc.
Edward Del Priore, Principal	7 Wilson Avenue West, East Hanover, NJ 07936	EDP Painting Company
George Demetriades, President	125 Heritage St., Robbinsville, NJ 08691	Paint-Pro, Inc.
Balwant DeVre, President	21 Patriot Crossing, Rockaway, NJ 07866	TQM Construction Corporation
Stephen DiFilippi, Owner	120 Springbrook Trail, Sparta, NJ 07871	Elite Demolition, LLC
James DiLorenzo, Vice-President	440 Mantua Avenue, Paulsboro, NJ 08066	G.F.I. Siteworks, Inc.
		G.F.I. Siteworks, Inc.
		S&J Floor Covering
Shawn Dougherty, Owner	10 Ealey Street, Glassboro, NJ 08028	All Jersey Fence Co.
Agostino Ducato, Vice-President	223 Spring Valley Road, Paramus, NJ 07652	Duke Electric LLC
Eileen Dutka, Member	17 Old Church Road, Monroe Township, NJ 08831-0883	Duke Electric LLC
		Duke Electric LLC
Craig Dutka, Member	17 Old Church Road, Monroe Township, NJ 08831-0883	Duke Electric LLC
		Somerset Electrical Services
Ralph Epright, Owner	48 Junction Rd., Flemington, NJ 08822	Arete Development Inc.
Justin Ettere, Vice-President	52 Brass Castle Road, Washington, NJ 07882	Arete Development Inc.
		Arete Development Inc.
John Ettere, Owner	1453 Tooz Place, South Plainfield, NJ 07080	Arete Development Inc.
		Arete Development Inc.
Matthew Ettere, Vice-President	8 Brookside Drive, Warren, NJ 07059	Arete Development Inc.
Nathan Ettere, President	7 Craig Road, Readington, NJ 08853	Arete Development Inc.
		Arete Development Inc.
Margaret Farina, Owner	30 Monsignor Deluca Plaza, Nutley, NJ 07110	Metropolitan Stone & Tile, LLC
Joseph Filoon Jr, Manager	195 Lakeshore Dr, Manahawkin, NJ 08050	Jerzee Container Corp.
		SUSPENDED PENDING DEBARMENT
Joseph Filoon Jr., President	165 Oak Avenue, West Creek, NJ 08092	Timster Trucking Inc.
		SUSPENDED PENDING DEBARMENT
Joseph Filoon Jr., Manager	195 Lakeshore Dr, Manahawkin, NJ	Seminole Construction, L.L.C.
		SUSPENDED PENDING DEBARMENT
Theodore Fiore Jr, Owner	9 Silver Spring Court, East Hanover, NJ 07936-2529	All American Demolition & Dismantling, LLC
		All American Demolition & Dismantling LLC
Thomas Fittin, Owner / Officer	2243 Edgar Rd, Point Pleasant Beach, NJ 08742	Fittin Construction, LLC
Donald Fleming, President	340 Reservoir Road, Boonton, NJ 07005	C & E Contracting, Inc.
Robert Foss, Vice-President	1344 Meadow Lane, Perkasio, PA 18944	Robert Foss Electric, LLC
Caroline Foss, Owner	1344 Meadow Lane, Perkasio, PA 18944	Robert Foss Electric, LLC
Theresa Frajdenberg, President	110 South Harding Highway, Landisville, NJ 08326	CRC Concrete Raising of South Jersey, Inc.
Segundo Gallegos, Owner	528 Linden Ave, Suite 2, Elizabeth, NJ 07202	Discovery Floor Covering LLC
Dean Gallo, Owner	245 Emanuel Street, Trenton, NJ 08610	DG Construction & Renovations LLC
Harry Gallo, Secretary	245 Emanuel Street, Trenton, NJ 08610	DG Construction & Renovations LLC
Michelle Gamache-Caravella, President	179-15 Route 46, Suite 135, Rockaway, NJ 07866	CAM Contractors Inc.
Juan Garro, Owner	3606 Academy Road, Philadelphia, PA 19154	Unique Contractors
		Unique Contractors
Joseph F. Gleason Jr., President	51 Pine Dr. S, Brick, NJ 08724	Southern State Contracting Services LLC
Herico Goncalves, Owner	305 E. 10th Ave, Roselle, NJ 07203	M.A.C. Installation LLC
Ruben Gonzalez, Owner	107 Jefferson Street, Passaic, NJ 07055	Jersey Heavy Drywall
Jeffrey Grize, Owner	3477 S. Blackhorse Pike, Williamstown, NJ 08094	Turfscapes LLC
Curillo Guaman, Owner	197 Broad Street, Newark, NJ 07104	CJC Builders Corp.
Maurice Guariglia, Owner / Officer	494 North Barbor Road, Colchester, VT 05446	Advantage Sport USA, Inc.

<u>Owners/ Officers</u>	<u>Address</u>	<u>Company Name</u>
Kevin Hanrahan, President	17 Oakwood Drive, Ringwood, NJ 07456-0745	K Hanrahan Enterprises, Inc.
William Hattrich, Owner	1 Zinnia Dr., Glenwood, NJ 07462	K Hanrahan Enterprises, Inc.
Helen Henriquez, Owner	101 South Orchard Road, Vineland, NJ 08360	Team Revolution LLC dba Superior Landscaping
Oscar Hernandez, President	421 N. warrick Road, Magnolia, NJ 08049	E & S Enterprises, LLC
Kenneth Hicks, Owner	2 New Castle Lane, Willingboro, NJ 08046	Hernandez Drywall Construction, Inc.
Mark W. Holmes Sr., President	50 Drift Avenue, Lawrence, NJ 08648	Matrix Management Const. LLC
John Hunsecker, Vice-President	72 Charlotte Drive, Churchville, PA 18966	Pin Tribal Construction, LLC
John Jackson, CEO	1771 Norris St., Camden, NJ 08101	Bravo General Contractors Inc
Joshua Jackson, President	4 Lynn Dr., Andover, NJ 07821	John Jackson Masonry & Construction
Dan Jarrell, Owner / Officer	336 McClelland Ave, Glassboro, NJ 08028	Remcon Enterprises LLC
Jessica Johnson, Member	5352 Lake Road, Newfield, NJ 08344	Dan's Tile and Marble LLC
Nathan Johnson, Owner	5352 Lake Road, Newfield, NJ 08344	Dan's Tile and Marble LLC
Mark Kahn, Owner	910 Cedar Street, Millville, NJ 08332	Johnson Tree Transplanting LLC
Stanley Kapusta, President	12 Commodore Drive, Lake Hopatcong, NJ 07849	Johnson Tree Transplanting LLC
Steven P. Keares, CEO	211 Downing Road, Downingtown, PA 19335	CertaPro Painters of South Jersey LLC
Jaimie-Lyn Knight, President	395 Millstone Road, Clarksburg, NJ 08510	JB Contracting, Inc.
William Koch, Vice-President	225 Applewood Dr., Easton, PA 18045	Steven Keares, Inc.
Paul Kochiss, Managing Member	41 Little Punkup Rd, Oxford, CT 06478	Keares Electrical Contractor, Inc.
Lawrence Koos, Owner	1391 White Oak Bottom Rd, Tom River, NJ 08755	Gen II Contracting Co. Inc.
Laurence Koos, Owner	1391 White Oak Bottom Rd., Toms River, NJ 08755	Spectrum of Floors, LLC
Edward Kosakowski, Owner	27 Center Avenue, Morristown, NJ 07960	Paul Kochiss, LLC
Gail Maiello, President	1515 10th Street, Fort Lee, NJ 07024	Anchor Marine of Toms River
John Makris, Jr., President	270 Crescent Place, Yonkers, NY 10704	Install It All. LLC
Louis Malfitano, Owner	560 Mountain Ave, North Caldwell, NJ 07006	Kosakowski Plumbing & Heating Inc.
Kevin F. Mandel, Owner	186 Sunshine Drive, Piscataway, NJ 08854	DiClemente Contractors, Inc.
Vincent Manganiello, Managing Member	2 Perona Road, Andover, NJ 07821	DiClemente Contractors, Inc.
Fabian Martinez, President	28 Bowlby Street, Dover, NJ 07801	EDM Contracting, Inc
Nimali Matos, Owner	77 Williamson Court, Bridgewater, NJ 08807	Empire Construction
Wagner Matos, Owner	77 Williamson Court, Bridgewater, NJ 08807	Cougar Power and Electric, LLC
Louis R. McArthur Jr., Owner / Officer	13 Luzerne Place, Hadley, NY 12835	DAS Industrial, LLC
David McGarrigle, Owner	1500 Carlene St., Langhorne, PA 19047	DAS Industrial Limited Liability Company
George McNulty, President	125 East Broadway, Suite 507, Long Beach, NY 11561	Steven Trucking Corp
Paige Moriarty, Member	1013 Grandview Avenue, Union, NJ 07083	Matos Construction, LLC
Sandra Morizzo, Partner	165 Oak Ave, West Creek,	Wagner Matos
Sandra Morizzo, Member	165 Oak Ave, West Creek, NJ 08092	Matos Construction, LLC
Sandra Morizzo, Managing Member	165 Oak Ave., West Creek, NJ 08092	Wagner Matos
Renata Moro, President	305 E. 10th Ave, Roselle, NJ 07203	McArthur Park, Inc./ dba Bleacherman
Steve Moyer, Owner	6271 W. Basalt Cove, West Jordan, UT 84081	McGarrigle's Carpet, LLC
John Mullen, Jr., Owner	45 Fairfield Place, West Caldwell, NJ 07006	Low Bid, Inc.
John Mullen, Sr, President	45 Fairfield Place, West Caldwell, NJ 07006	Ultimate Roofing, LLC
Sammie Nelson, Member	529 Forest Ct., Williamstown, NJ 08094	Timster Trucking Inc.
Joseph Niceta, Owner	2119 Merritt Drive, Northfield, NJ 08225	SUSPENDED PENDING DEBARMENT
James T. O'Connor, Managing Member	707 Main Street, Avon-by-the-Sea, NJ 07717	Jerzee Container Corp.
Stacey Overgaard, President	410 Hammer Road, Albert Lea, MN 56007	SUSPENDED PENDING DEBARMENT
		Seminole Construction, L.L.C.
		SUSPENDED PENDING DEBARMENT
		Woodworkers Corporation
		S. Moyer Enterprises
		Mullen & Sons Contractors, Inc.
		Mullen & Sons Contractors, Inc.
		L & N General Contractors LLC
		Niceta Electric
		OTS-NJ, LLC
		OTS of New Jersey, LLC
		Rink Systems, Inc.

Owners/ Officers**Address****Company Name**

Steve Overgaard, Vice-President	3033 Bridge Avenue, Albert Lea, MN 56007	Rink Systems, Inc.
Marlene Overgaard, Owner	1713 Hale Drive, Albert Lea, MN 56007	Rink Systems, Inc.
Louis Pacelli, Manager	16 Darlington Drive, Wayne, NJ 07470	Build Rite LLC
Is Palaguachi, Owner	73 Chestnut Street, West Orange, NJ 07052	PL&J Construction Corp.
Troy Palazzo, Owner	96 Taylor Dr, Levittown, PA 19054	Palazzo Fence Co
Brian Parker, Owner	115 Ardmore Avenue, Haddonfield, NJ 08033	Brian Parker, LLC
David Peckham, Owner	15 Elm Street, Old Saybrook, CT 06475	Resco, LLC
Nicola Pengue, President	4 Camelot Avenue, Monroe Township, NJ 08831	Hallmark Electric, LLC
Adelino Perin, President	12 Valley Place, Chester, NJ 07930	NT&P Construction Inc.
James Perrone, Owner	74 Glenroy Road East, Fairfield, NJ 07004	A P Roofing & Siding, LLC
Christopher Picinic, Owner	164 President Blvd, Washington Township, NJ 07676	A. Perin Roofing & Siding, LLC
Armando Piedade, President	265 Wilson Avenue, Kearny, NJ 07032	Perrone Trucking LLC
Richard Pluese, Vice-President	66 E Cedar Avenue, Marlton, NJ 08053	Elite Terrazzo Flooring, Inc.
Rafael Ramos, President	120 Cantello Street, Union City, NJ 07087	Conex Construction Corp.
Arianna Rengito Miranda, Owner	658 Pennsylvania Ave, Apt 4, Elizabeth, NJ 07201	Apex Tower Services, Inc.
Mark Rodrigues, President	523 Hamilton Avenue, Kingston, PA 18704	Everest Masonry Construction, Inc.
Mikey Rojas, Operating Agent	161 East 16th St., Paterson, NJ 07524	Discovery Floor Covering LLC
Paul F Roscitt, President	262 Harmon Avenue, Fort Lee, NJ 07024	Everest Masonry Constructors, Inc.
Dan Seeman, Owner	1363 North Winchester Dr., Greenfield, IN 46140	PSM Rojas Construction, LLC
Rian Seeman, Owner	12433 Pineneedle Drive, Indianapolis, IN 46236	Paul F. Roscitt Electric, Inc.
Blanca Segarra, President	799 Kearny Ave., Apt 1, Kearny, NJ 07032	Dan Seeman
Sheree Severini-Fittin, Member	2243 Edgar Rd., Point Pleasant Beach, NJ 08742	Rian Seeman
Ihor Shcherbii, Owner	3-C Brynwood gardens, Apt 18, Old Bridge, NJ 08857	Ma Na Lu Transportation Corporation
Maurie M. Smith, Vice-President	16320 SE 162nd Ct., Weirsdale, FL 32195	Fittin Construction, LLC
Gerry G. Smith, President	16320 SE 162nd Ct., Weirsdale, FL 32195	Barbos HVAC, LLC
Richard Squillace, President	771 Amsterdam Avenue, Roselle Park, NJ 07203	Quality Plus Builders, Inc.
Rachel Squillace, Manager	771 Amsterdam Ave., Roselle Park, NJ 07203	Quality Plus Builders, Inc.
Enrique Trabal, Managing Member	1792 Margarets Walk Road, Fleming Island, FL 32003	Quality Plus Builders, Inc.
Stephen Tripodi, Owner	12 Clifford Rd, Wanaque, NJ 07465	Quality Plus Builders, Inc.
Raymond Van Peenen, President	3 Gates Place, Wayne, NJ 07470	Squillace Steel Fabricators, LLC
James Van Wyckhouse, Owner	46 Tam O Shanter Rd, Mahwah, NJ 07430	Squillace Steel Fabricators, LLC
Malachi Velez, Member	6 Hampton Court, Jersey City, NJ 07302	Squillace Steel Fabricators, LLC
Felipe Villagomez, Owner	160 Lincoln Street, Bridgeton, NJ 08302	Squillace Steel Fabricators, LLC
Charles Viola, President	266 Columbus Avenue, Hasbrouck Heights, NJ 07604	Ricky Plumbing LLC
Constantine Vivian, President	86 Christopher Street, Montclair, NJ 07042	Ricky Plumbing LLC
Jon Warbeck, Vice-President	680 Pine Brook Road, Lincoln Park, NJ 07035	SDT Transport LLC
Jon J Warbeck, President	680 West Pine Brook Road, Lincoln Park, NJ 07035	Van Peenen Landscape Contractors, Inc.
Richard Weling, Managing Member	110 Stevens Avenue, Cedar Grove, NJ 07009	Van Peenen Landscape Contractors, Inc.
Richard Werley, Owner	601 Poplar St., Catasauqua, PA 18032	Top Notch Tree & Landscape, LLC
Thomas Whelan, President	PO Box 155, Spring Lake, NJ 07762	Efficient Electric LLC
on Whelan, Vice-President	48 8th Avenue, New York, NY 10014	Efficient Electric LLC
Roland J. Whittendale, Vice-President	309 Fairview Avenue, Moorestown, NJ 08057	Felipe Villagomez owner
Ashley Whittendale, Partner	737 Haverford Avenue, Maple Shade, NJ 08052	All Jersey Fence Co.

Owners/ Officers**Address****Company Name**

Timothy Whittendale, Vice-President	201 Cambridge Drive, Cinnaminson, NJ 08077
Diane Whittendale, President	1490 Glen Ave., Moorestown, NJ 08057
Matthew Whittendale, Partner	112 Homestead Court, Moorestown, NJ 08057
Joseph Woerner, Owner	3 Coppermine Village, Flemington, NJ
Anthony Yaniero, Vice-President	848 Bogert Road, River Edge, NJ 07661
Susan Yaniero, Owner	848 Bogert Road, River Edge, NJ 07661
Joseph Zawada, Manager	211 Brewers Bridge Road, Jackson, NJ 08527
Yun Ping Zheng, President	1582 Route 27, Edison, NJ 08817
Suzanne Zimmermann, Member	2303 Owen Court, Toms River, NJ 08755
Christopher Zimmermann, Manager	2303 Owen Court, Toms River, NJ 08755

Whittendale Excavating Corp.
Whittendale Excavating Corp.
Whittendale Excavating Corp.
Whittendale Excavating Corp.
Whittendale Excavating Corp.
Whittendale Excavating Corp.
Woerner Plumbing & Heating
Bogert Millwork Company, Inc.
Bogert Millwork Company, Inc.
Warren Contractors LLC
YP Construction Inc.
Ultra Construction LLC
Ultra Construction Limited Liability Company
Ultra Construction LLC
Ultra Construction Limited Liability Company

EXHIBIT NO. 3

**DAVIS BACON ACT – LABOR STANDARDS PROVISIONS FOR
FEDERALLY ASSISTED CONSTRUCTION CONTRACTS
(EPA FORM 5720-4)**

AND

**USEPA ATTACHMENT 6 – REQUIREMENTS FOR
SUBRECIPIENTS THAT ARE GOVERNMENT ENTITIES**

Content Last Revised: Current as of 5/26/2015

CFR Code of Federal Regulations Pertaining to ESA

Title 29—Labor Chapter I

Part 5 - Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction

Subpart A - Davis-Bacon and Related Acts Provisions and Procedures

Section Number: 5.5 Contract provisions and related matters.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) Minimum wages. (i) All laborers and *mechanics* employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe *benefits* under section 1 (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the

classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with this wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- 1 The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- 2 The classification is utilized in the area by the construction industry; and
- 3 The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing

work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of Obligations under the plan or program.

(2) *Withholding.* The Passaic Valley Sewerage Commission shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) *Payrolls and basic records.* (i) Payrolls and basic records restating there to shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or

program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional form WH-347 is available for this purpose from the Wage and Hour Division Web site at

<http://www.dot.gov/esa/whdforms/wh347inslr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under this contract and shall certify the following:

(7) That the payroll for this payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees—(i) *Apprentices*. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this registered program shall be paid not less than the applicable wage rate on this wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the

applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for this applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees.* Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity.* The utilization of apprentices, trainees and journeymen under this part shall be in conformity with this equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

[5] *Compliance with Copeland Act requirements.* The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier

subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) *Contract termination. Debarment.* A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) *Compliance with Davis-Bacon and Related Act requirements.* All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) *Disputes concerning labor standards.* Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and

the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) *Certification of eligibility.* i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) *Contract Work Hours and Safety Standards Act.* The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by §5.5(a) or §4.6 of part 4 of this title. As used in this paragraph, the terms *laborers* and *mechanics* include watchmen and guards.

(J) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; *liability for unpaid wages, liquidated damages*. In the event of any violation of the clause set forth in paragraph (b)(J) of this section the *contractor* and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages*. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted *contract* subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontractors. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these *clauses* in any lower tier subcontracts, The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 9s.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(The information collection, recordkeeping, and reporting requirements contained in the following paragraphs of this section were approved by the Office of Management and Budget:

Paragraph	OMB Control Number
(a)(1)(ii)(B)	1215-0140
(a)(1)(ii)(C)	1215-0140
(a)(1)(iv)	1215-0140
(a)(3)(i)	1215-0140,
	1215-0017
(a)(3)(i)(A)	1215-0149
fJ	1215-0140,
	1215-0017

[48 FR 19540, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 55 FR 50150, Dec. 4, 1990; 57 FR 28776, June 26, 1992; 58 FR 58955, Nov. 5, 1993; 61 FR 40716, Aug. 5, 1996; 65 FR 69693, Nov. 20, 2000; 73 FR 77511, Dec. 19, 2008]

EFFECTIVE DATE NOTE: At 58 FR 58955, Nov. 5, 1993, §5.5 was amended by suspending paragraph (a)(1)(ii) indefinitely.

Attachment 2

Wage Rate Requirements Under The Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113-6)

Preamble

With respect to the Clean Water and Safe Drinking Water State Revolving Funds, EPA provides capitalization grants to each State which in turn provides subgrants or loans to eligible entities within the State. Typically, the subrecipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman Numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section 1-5.

Occasionally, the subrecipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 11-3(ii)(A), below and for compliance as described in Section 11-5.

II. Requirements Under The Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113- 6) For Subrecipients That Are Not Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its DB responsibilities when DB applies to EPA awards of financial assistance under the FY2013 Continuing Resolution with respect to subrecipients that are not governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a State recipient needs guidance, the recipient may contact Julie Milazzo at Milazzo.julie@epa.gov or at 415-972-3687, EPA Grants Management Office for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's web site at <http://www.dol.gov/whd/>

Under these terms and conditions, the subrecipient must submit its proposed DB wage determinations to the State recipient for approval prior to Including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2013 Continuing Resolution, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients must obtain proposed wage determinations for specific localities at www.wdol.gov. After the Subrecipient obtains its proposed wage determination, it must submit the wage determination to INSERT STATE CONTACT NAME, EMAIL, and TELEPHONE NUMBER for approval prior to inserting the wage determination into a solicitation, contract or issuing task orders, work assignments or similar instruments to existing contractors (ordering instruments unless subsequently directed otherwise by the State recipient Award Official).

(b) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the subrecipient shall monitor www.wdol.gov on a weekly basis to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

(ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(c) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the

subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2013 Continuing Resolution, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov ..

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics,

including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

{1} The work to be performed by the classification requested is not performed by a classification in the wage determination; and

{2} The classification is utilized in the area by the construction industry; and

{3} The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

{B} If the contractor and the laborers and mechanics to be employed in the classification {if known}, or their representatives, and the subrecipient{s} agree on the classification and wage rate {including the amount designated for fringe benefits where appropriate}, documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient{s} to the State award official. The State award official will transmit the report, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

{C} In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the and the subrecipient{s} do not agree on the proposed classification and wage rate {including the amount designated for fringe benefits, where appropriate}, the award official shall refer the request, and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

{D} The wage rate {including fringe benefits where appropriate} determined pursuant to paragraphs {a}{1}{ii}{B} or {C} of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

{iii} Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

{iv} If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary

of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The subrecipient(s) shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR S.S(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR S.S(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required

weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees—

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is

not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

{6} Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a){1} through {10} and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a){1}.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a){1}.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a){1}, {2}, {3}, and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient shall upon the request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three

years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a). The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence."

(c). The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

(d). The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item S(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/whd/america2.htm>.

EXHIBIT NO. 4

CONTRACT MODIFICATION PROPOSAL AND ACCEPTANCE FORM

CONTRACT MODIFICATION PROPOSAL AND ACCEPTANCE

1.	ISSUING OFFICE
2.	PROJECT NO.
3.	CONTRACT NO.
4.	MODIFICATION NO.
5.	TO (CONTRACTOR)
6.	PROJECT LOCATION AND DESCRIPTION
7. A proposal is required for making the hereinafter described change in accordance with specification and drawing revisions cited herein or listed in attachment hereto. Submit your proposal in space indicated on Page 2, attach detailed breakdown of prime and sub-contract costs (See the clause of this contract entitled, "Changes". DO NOT start work under this proposed change until you receive a copy signed by the Contracting Officer or a directive to proceed).	
Date _____	Type Name and Title _____ Signature _____
8. DESCRIPTION OF CHANGE: Pursuant to the clause of this contract covering changes, the contractor shall furnish all labor and material, and all work necessary to accomplish the following described work:	
As a result of the above, the contract price is revised as follows:	
ITEM NO.	ITEM DESCRIPTION
UNIT PRICE	ESTIMATED QUANTITY
TOTAL COST	
TOTAL COST OF THIS MODIFICATION \$ _____	
The contract time is hereby: increase [] decrease [] or remains the same [] by _____ calendar days as a result of this modification.	
The foregoing modification is hereby accepted:	
CONTRACTOR	OWNER (NJPE SEAL) ENGINEER
BY: DATE:	BY: DATE:
APPROVAL:	
STATE OF NEW JERSEY	DATE

CONTRACT MODIFICATION PROPOSAL AND ACCEPTANCE

9. ISSUING OFFICE	10. PROJECT NO.	11. CONTRACT NO.	12. MODIFICATION NO.
13. CONTRACTOR'S PROPOSAL - CHANGE IN CONTRACT PRICE (Detailed breakdown, attach additional sheets as necessary)			
(Proposed)			
NET INCREASE \$ _____	NET DECREASE \$ _____		CALENDAR DAYS INCREASE _____ DAYS
DATE:	TYPE NAME AND TITLE:		SIGNATURE:

CONTRACT MODIFICATION PROPOSAL AND ACCEPTANCE

4. ISSUING OFFICE & PROJECT NO.		15. CONTRACT NO.	16. MODIFICATION NO.
17. ORIGINAL CONTRACT BID PRICE..... \$ _____ TOTAL OF PREVIOUS CHANGE ORDERS..... \$ _____ TOTAL CONTRACT COST INCLUDING CHANGE ORDERS..... \$ _____			
18. NECESSITY FOR CHANGE AND REASON FOR OMISSION FROM PLANS AND SPECIFICATIONS:			
19. OTHER IMPACTS RESULTANT OF THIS CHANGE:			
20. RESUME OF NEGOTIATIONS OR RECOMMENDATIONS (Loanee's Representative):			
DATE:	TYPE NAME AND TITLE OF LOANEE'S REPRESENTATIVE:		SIGNATURE:

EXHIBIT NO. 5

**NJAC 7:22-9 AND
NJAC 7:22-10.11,12**

NJAC 7:22-9

This is a courtesy copy of the law. It is each Bidder's / Contractor's responsibility to ensure they are aware of, and in compliance with, the most current version of the laws.

The rule below includes the amendments adopted to this subchapter on January 3, 2006.

Subchapter 9. Awarding Contracts for State Assisted Projects to Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals

7:22-9.1 Scope and purpose

(a) This subchapter establishes procedures for providing opportunities for socially and economically disadvantaged ("SED") contractors and vendors to supply materials and services under State financed construction contracts for environmental infrastructure facilities. To implement the policies established in N.J.S.A. 58:11B-26, 40:11A-41 et seq., and 52:32-17 et seq., this subchapter applies to environmental infrastructure projects receiving financial assistance from the Department and the Trust pursuant to N.J.A.C. 7:22-3, 4 and 6 and 7:22A-6 and 7. Under the provisions of N.J.A.C. 7:22-3, 4 and 6 and 7:22A-6 and 7, the Department and the Trust require recipients of Trust and Fund loans and other assistance to establish such programs for socially and economically disadvantaged small business concerns, to designate a project compliance officer, and to submit to the Department and Trust procurement plans for implementing the SED program. In addition, N.J.A.C. 7:22-3.17(a)24, 4.17(a)24, 6.17(a)24 and 7:22A-2.4(a) provide that a goal of not less than 10 percent be established for the award of contracts to small business concerns owned and controlled by one or more socially and economically disadvantaged individuals. The goal of 10 percent applies to the total amount of all contracts for building, materials and equipment, or services (including planning, design and building related activities) for a construction project. Where a local government unit has a SED participation goal which exceeds 10 percent of the total amount of all contracts, the local government unit must comply with both the Department's rules and the local minority and women-owned business ordinances.

(b) This subchapter also establishes the standards and procedures that will apply to the contracting agencies of grant or loan recipients in the awarding and making of contracts under their SED programs.

7:22-9.2 Definitions

The following words and terms, as used in this subchapter, will have the following meanings unless the content clearly indicates otherwise.

"Building" means the acquisition, erection, alteration, remodeling, improvement or extension of an environmental infrastructure facility.

"Construction" includes, but is not limited to:

1. The preliminary planning to determine the economic and engineering feasibility of environmental infrastructure facilities, the engineering, architectural, legal, fiscal, and economic investigations and studies, surveys, design, plans, working drawings, specifications, procedures, and other action necessary for the construction of environmental infrastructure facilities;
2. The building of, or purchase of land for, environmental infrastructure facilities; and
3. The inspection and supervision of the building of environmental infrastructure facilities.

"Contract" means any written agreement with a professional service or construction contractor related to the construction of an environmental infrastructure project.

"Contracting agency" means:

1. The governing body of a local government unit or any department, branch, board, commission, committee, authority, agency or officer of such local government unit possessing the authority to award and make contracts; or

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2. The owner(s) or authorized representative(s) of a private entity.

"Contractor" means any party entering into a contract to provide or offering to provide building, materials and equipment, or services to a project sponsor for the construction of environmental infrastructure facilities. This includes, but is not limited to, planning and design, as well as building related services such as engineering, inspection and accounting.

"Contractor's plan" means the SED utilization plan submitted by the contractor to the project sponsor and to the Department establishing subcontracting opportunities that will fulfill the requirements of this subchapter.

"Department" means the New Jersey Department of Environmental Protection and its successors and assigns.

"Environmental infrastructure facilities" means wastewater treatment facilities, stormwater management facilities or water supply facilities.

"Financial agreement" means the legal instrument, including a grant agreement or loan agreement, executed between either the State of New Jersey or the Trust and the project sponsor for the construction of environmental infrastructure facilities.

"Local government unit" means a county, municipality, municipal or county sewerage or utility authority, municipal sewerage district, joint meeting, improvement authority or other political subdivision of the State authorized to construct, operate and maintain wastewater treatment or stormwater management facilities, or a State authority, district water supply commission, county, municipality, municipal or county utilities authority, municipal water district, joint meeting or any other political subdivision of the State authorized pursuant to law to operate or maintain a public water supply system or to construct, rehabilitate, operate or maintain water supply facilities or otherwise provide water for human consumption.

"New Jersey environmental infrastructure financing program" means the program for providing financing to project sponsors pursuant to N.J.A.C. 7:22-3, 4 and 6, and 7:22A-6 and 7.

"Office" means the Office of Equal Opportunity and Public Contract Assistance or other program of the Department of Environmental Protection with the responsibility for administration of this subchapter.

"Private entity" means the owner(s) of a nongovernmental community water system or a nonprofit noncommunity water system.

"Project" means the defined services for the construction of specified operable environmental infrastructure facilities as approved by the Department or the Trust in the project sponsor's financial agreement.

"Project compliance officer" means an officer or employee of the project sponsor who is designated by the project sponsor to monitor and enforce compliance with the affirmative action and SED requirements of the applicable program rules and this subchapter.

"Project plan" means the proposal submitted at the time of application by the project sponsor to the Department establishing the SED utilization plan and its requirements.

"Project sponsor" means any local government unit or private entity that seeks a loan or grant pursuant to N.J.A.C. 7:22-3, 4 and 6 and 7:22A-6 and 7.

"SED utilization plan" means a written document outlining the entire project work, the estimated length of time it will take to complete the project, each significant segment of the project on which SEDs will or may participate, and a description of how SEDs will be contacted.

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"Socially and economically disadvantaged small business concern" or "SED" means any small business concern:

1. Which is at least 51 percent owned by one or more socially and economically disadvantaged individuals; or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals; or, in the case of a joint venture, at least 51 percent of the beneficial ownership interests are legitimately held by a SED; and

2. Whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals; and

3. Which is a full participation subcontractor in that the SED is responsible for the execution of a distinct element of work and carries out the work responsibility by actually performing, managing and supervising the task involved. Any deviation from this definition will automatically classify the SED as a broker, middleman or passive conduit. These three functions are contrary to the spirit of the Trust Act and will not qualify a SED enterprise for State of New Jersey certification; and

4. Which has been certified pursuant to the New Jersey Uniform Certification Act (N.J.S.A. 52:27H-1 et seq.) or pursuant to the provisions of 49 CFR Part 23 by the New Jersey Commerce and Economic Growth Commission, the New Jersey Department of Transportation, the Port Authority of New York and New Jersey, the New Jersey Transit or other agencies deemed appropriate by the Office, as an eligible minority business or female business.

i. "Socially disadvantaged individuals" means those individuals who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.

ii. "Economically disadvantaged individuals" means those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged.

iii. "Socially and economically disadvantaged individuals" shall include women, Black Americans, Hispanic Americans, Native Americans, Asian Americans, and members of other groups, or other individuals, found to be socially and economically disadvantaged by the Small Business Administration under Section 8(a) of the Small Business Act, as amended (15 USC 637(a)). Black Americans, Hispanic Americans, Native Americans and Asian Americans shall be defined as follows:

(1) "Black American" means a person having origins in any of the black racial groups in Africa;

(2) "Hispanic American" means a person of Spanish or Portuguese culture, with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;

(3) "Asian American" means a person having origins in any of the original peoples of the Far East, Southeast Asia, Indian Subcontinent, Hawaii, or the Pacific Islands;

(4) "Native American" means a person having origins in any of the original peoples of North America.

"Small business concern" means a business which is independently owned and operated and which is not dominant in its field of operation. A business is independently owned and operated if the management which controls the business is responsible for both its daily and long term operations.

"Subcontract" means an agreement to perform a portion of a contract.

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"Subcontractor" means a third party that is engaged by the contractor to perform part of the work under a subcontract.

"10 percent SED utilization," "10 percent goal" and "10 percent" means SED business concern participation, which includes 7 percent for minority-owned SED business concerns and 3 percent for women-owned SED business concerns.

"Trust" means the New Jersey Environmental Infrastructure Trust established pursuant to the Trust Act.

"Trust Act" means the New Jersey Environmental Infrastructure Trust Act (N.J.S.A. 58:11B-1 et seq.), as amended and/or supplemented.

7:22-9.3 SED utilization requirements for projects

(a) A goal of not less than 10 percent (or a higher percentage as may be required by Federal law) of the total amount of all contracts for building, materials and equipment, or services for a project funded by a New Jersey environmental infrastructure facilities financing program must be awarded to SEDs.

(b) The 10 percent SED utilization requirement shall be accomplished by the following:

1. Bids shall be solicited on an unrestricted basis. The bid documents, however, shall include a statement to the effect that the successful bidder must fulfill the SED utilization requirements by subcontracting portions or the work to SEDs; or

2. Contractors also have the option of establishing unrestricted bidding procedures to fulfill the 10 percent SED utilization requirement for the project.

7:22-9.4 Requirement to develop SED Utilization Plan

(a) Each project sponsor shall develop, in consultation with the Office, a plan for achieving its SED utilization requirements (the "project plan"). Development of a plan shall be completed before the Department and, when relevant, the Trust may approve an application pursuant to the applicable program rules

(b) The project plan shall identify those contracts proposed to be bid on an unrestricted basis. For each unrestricted contract, the project plan shall also identify the SED utilization requirements that the successful bidder shall meet.

(c) All contractors, including SED contractors, shall submit their own SED utilization plan ("contractor's plan"), for the aspects of the project covered by the contract, to the project sponsor and to the Office within 30 days of the awarding of a contract. The Contractor's Plan shall contain provisions to meet the specific SED utilization requirements imposed upon the contractor by the project sponsor as well as to meet the general SED utilization requirements for the project pursuant to this subchapter.

(d) If the contractor does not comply with the requirements of the contractor's plan and the project sponsor does not take steps to otherwise comply with N.J.A.C. 7:22-9.3(a), the Department and, in the case of a Trust loan, the Trust, may take any of the actions or combinations thereof specified in N.J.A.C. 7:22-3.40 through 3.44, 7:22-4.40 through 4.44, 7:22-6.40 through 6.44 and 7:22A-1.8 through 1.13.

7:22-9.5 (Reserved)

7:22-9.6 Notice of SED utilization opportunities

(a) All project sponsors, at least 30 days prior to public advertisement for bids, shall notify the agencies specified in N.J.A.C. 7:22-9.13(a)8, of the availability of opportunities for SEDs to provide

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services, to bid on unrestricted contracts or subcontracts, or to provide any other necessary purchase or procurement. The notice shall include a description of the type and scope of the services involved.

(b) All notices shall include a statement to the effect that the project or contract is funded in part by New Jersey wastewater treatment financing programs and the successful bidder must comply with all the provisions of N.J.A.C. 7:22-9.1 et seq. for the participation of small business enterprises owned and controlled by socially and economically disadvantaged individuals.

7:22-9.7 Advertisements for SED utilization

(a) All advertisements for bids shall include a statement to the effect that the project or contract is funded in part by New Jersey environmental infrastructure financing programs and the successful bidder must comply with the provisions of N.J.A.C. 7:22-9 for the participation of small business enterprises owned and controlled by socially and economically disadvantaged individuals.

(b) The advertisement for bids shall indicate that:

1. Awards will be made only to socially and economically disadvantaged business concerns that are certified by the New Jersey Commerce, Economic Growth and Tourism Commission, the New Jersey Department of Transportation, the Port Authority of New York and New Jersey, New Jersey Transit or other agencies deemed appropriate by the Office as eligible minority businesses or female businesses; or

2. The invitation to bid is on an unrestricted basis whereby the successful bidder must fulfill the SED utilization requirements. The agencies specified in N.J.A.C. 7:22-9.13(a)8 will have a list of eligible SED firms and shall, upon request, provide them to the project sponsor. The project sponsor shall, during the advertisement phase, provide copies of the list to all contractors on unrestricted contracts.

(c) The advertisement for bids shall be in such newspaper or newspapers and other periodicals identified by the agencies specified in N.J.A.C. 7:22-9.13 as will best give notice thereof to appropriate bidders and shall be sufficiently in advance of the purchase or contract to promote competitive bidding. In no case shall the advertisement for bids be published less than 30 days prior to the date fixed for receiving bids on the purchase or contract.

(d) In the case of a set aside contract, the newspaper or newspapers in which the advertisement for bids appears shall be selected by the contracting agency in consultation with the Office.

(e) If there are no responses to the bid solicitation from SEDs or if the successful bidder's proposal does not meet the SED utilization requirements, the successful bidder shall advertise and continue the search for SED participants for a minimum of 30 days after the contract is awarded. The contract shall include a provision to this effect.

7:22-9.8 (Reserved)

7:22-9.9 (Reserved)

7:22-9.10 Lowest bid resulting in payment of unreasonable price

(a) If the contracting agency determines that the acceptance of the lowest responsible bid will result either in the payment of an unreasonable price or in a contract otherwise unacceptable pursuant to the statutes and rules governing public contracts, the contracting agency shall reject all bids.

(b) Bidders and the office shall be notified of the rejection of all bids, the reasons for the rejection, and the contracting agency's intent to solicit bids for a second time.

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(c) If the contracting agency determines a second time that the acceptance of the lowest responsible bid will result either in the payment of an unreasonable price or in a contract otherwise unacceptable pursuant to the statutes and rules governing public contracts, the contracting agency shall reject all bids and notify the Office and, after receipt of the Office's approval, shall amend the project plan accordingly.

(d) Bidders shall be notified of the cancellation, the reasons for the cancellation and the contracting agency's intent to resolicit bids on an unrestricted basis. SEDs may participate in the bidding on an unrestricted basis.

7:22-9.11 Project compliance officer

(a) Each project sponsor shall designate an officer or employee to serve as its project compliance officer.

(b) The project compliance officer shall be responsible for coordinating SED utilization efforts on the project and for monitoring and enforcing compliance with the affirmative action and SED requirements of the applicable program rules.

(c) SED utilization requirements shall be an agenda item at all contract award meetings and, wherever applicable, at preconstruction conference meetings regardless of whether a loan or grant agreement has been executed or not. Each project sponsor shall be responsible for notifying the Office of the time and place of such meetings.

(d) The project compliance officer shall attend all monthly construction progress meetings.

7:22-9.12 Reports

(a) The contracting agency shall submit its planning and design SED utilization report to the Office at the time of filing of its grant/loan application.

(b) Each project compliance officer shall submit the contracting agency's monthly progress reports to the Office. Once all SED contractors have been obtained, submittal of this report will no longer be required.

(c) Each project compliance officer shall submit a periodic report on behalf of the project sponsor to the Office according to a schedule announced by the Office. At a minimum, this construction report shall be submitted quarterly; that is, January, April, July and October. Where appropriate, the Office may approve a variation in the frequency of reporting requirements specified in (b) through (d) of this section. This report shall include the following information:

1. The value of each contract and subcontract awarded to SEDs and the total dollar value and number of contracts and subcontracts awarded to SEDs;

2. The percentage of SED utilization in comparison to the cost of each contract, as well as the total percentage of SED utilization (including set aside contracts) in comparison to overall project costs;

3. The types and sizes of the participating SEDs and the nature of goods and services being provided; and

4. The efforts made to publicize and promote the project sponsor's SED utilization plan.

(d) Contractors shall submit a quarterly construction report to the project sponsor and to the Office. The project compliance officer may be contacted for assistance if needed.

(e) The report forms required by (a) through (d) above shall be obtained from the Office.

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(f) The project compliance officer shall submit reports or information in addition to what is required by (a) through (c) above when requested to do so by the Office.

(g) Failure to comply with the reporting requirements of (a) through (d) and (f) above may subject the project sponsor to the remedies for noncompliance with State and Trust loan or grant conditions specified in the applicable program rules.

7:22-9.13 Assessment of compliance

(a) Where the Office determines that a project sponsor has failed or is failing to meet the 10 percent SED utilization requirement, the project sponsor shall, upon the written request of the Office, submit the following:

1. Advertisements;
2. Signed contracts and subcontracts;
3. Documentation of solicitations of bids from SEDs;
4. Copies of Requests for Proposals;
5. Records of telephone quotations;
6. (Reserved);
7. Adequate and timely notice for encouraging SED participation; and
8. Proof that the assistance of State Agencies was solicited, including:

Office of Equal Opportunity and Public Contract Assistance
New Jersey Department of Environmental Protection
PO Box 402
Trenton, New Jersey 08625-0402

Division for the Development of Small Businesses and Women Businesses and Minority
Businesses
New Jersey Commerce and Economic Growth Commission
PO Box 835
1 West State Street
Trenton, New Jersey 08625-0835

(b) Where the project sponsor determines that a contractor has failed or is failing to meet the 10 percent SED utilization requirement, the contractor shall, upon the written request of the project sponsor, submit the documents specified in (a) above.

(c) The Office shall summarize in writing its evaluation of the reason given for noncompliance and the efforts made by the project sponsor or contractor to comply with its plan for achieving the 10 percent SED utilization requirement. The Office shall take into consideration good faith efforts made by the project sponsor or contractor to meet the goal to achieve the ten percent SED utilization requirement. These findings shall be submitted to the Department and, in the case of a Trust loan, to the Trust who, in conjunction with the Office, shall determine the nature and extent of the project sponsor's or contractor's noncompliance.

7:22-9.14 Penalties

Whenever a project sponsor or a contractor has failed to comply with the requirements of this subchapter, including the 10 percent requirement for SED utilization, the Department, or the Department and the Trust, in the case of a Trust loan recipient, may withhold all of the loan or grant money, or a portion thereof, and may take any of the other actions or combinations thereof specified in N.J.A.C. 7:22-3.40 through 3.44, 7:22-4.40 through 4.44, 7:22-6.40 through 6.44 and 7:22A-1.8 through 1.13 which are remedies for noncompliance with any of the conditions of a loan or grant.

7:22-9.15 Administrative hearings

(a) The Department and, in the case of a Trust loan, the Trust, shall make a determination regarding all disputes arising under this subchapter. The project sponsor shall specifically detail in writing the basis for its dispute. The Department and/or the Trust shall produce a decision in writing and mail or otherwise furnish a copy thereof to the project sponsor.

(b) A project sponsor may request an administrative hearing within 20 days of receipt of a decision by the Department and/or the Trust. The request for a hearing shall be sent to the Office of Legal Affairs, ATTENTION: Adjudicatory Hearing Requests, Department of Environmental Protection, PO Box 402, Trenton, New Jersey 08625-0402. The request for an administrative hearing shall specify in detail the basis for the appeal. Administrative hearings shall be conducted in accordance with the requirements of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

(c) Following receipt of a request for a hearing pursuant to (b) above, the Department and/or the Trust may attempt to settle the dispute by conducting such proceedings, meetings and conferences as deemed appropriate.

7:22-9.16 Severability

If any of the provisions of this subchapter are found to be invalid, the remainder of the provisions of this subchapter shall not be affected thereby.

NJAC 7:22 – 10.11
Design Requirements

NJ 7:22 – 10.12
Construction Phase Requirements

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7:22-10.11 Design requirements

(a) The project sponsor shall prepare design plans and specifications which conform to the project alternative selected and approved in planning pursuant to the provisions of N.J.A.C. 7:22-10.4, 10.5 or 10.6 and which include mitigating measures developed during planning and incorporated in the approved planning documentation. In addition, the design plans and specifications shall conform to the minimum standards for each area of concern which is applicable to the proposed project as set forth below. All activities which are a part of the comprehensive environmental infrastructure project(s) for the planning area must conform to the requirements of this section, regardless of the eligibility of individual components of the project.

1. Any design revisions of the project which differ from the project as approved during planning shall be specifically identified.

2. Where any on-going environmental protection measures will be the responsibility of the project sponsor, the project sponsor shall submit a letter prior to loan award specifying that it will adhere to the scope of work approved by the Department.

(b) The contract documents shall be prepared to clearly identify environmental and cultural resources protection measures and shall conform to the following:

1. The format of the contract documents shall consolidate environmental and cultural resource protection/restoration measures in a single section of the design specifications as well as on appropriate sheets of the design plans. The specifications which spell out the environmental and cultural resource protection/restoration measures shall be identified in the specifications as having precedence over other potentially contradictory language contained elsewhere in the design contract documents. The specifications shall clearly state that, in instances where the provisions of a Department-issued permit contradict a provision of the specifications (including those identified in this subchapter), the environmental resources protection and/or restoration and cultural resource mitigation measures identified in the Department-issued permit shall govern.

2. Environmental resources protection and/or restoration measures, and cultural resource mitigation measures should generally include the following subject areas:

- i. General;
- ii. Clearing;
- iii. Erosion and sedimentation control;
- iv. Protection of environmentally critical areas;
- v. Stockpiling and waste disposal;
- vi. Prohibited construction procedures;

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- vii. Dust control;
- viii. Noise control;
- ix. Cultural resources;
- x. Dewatering;
- xi. Restoration;
- xii. Environmental maintenance bond; and
- xiii. Inspection.

3. The method of payment for environmental and cultural resource protection/restoration measures shall be specified in the applicable section of the contract documents. Where restoration and maintenance of environmental quality are necessary outside of the designated construction area or when measures for maintenance of environmental quality are required after the date of completion and acceptance of the environmental infrastructure facilities, the project sponsor shall clearly state the contractor's responsibilities in the specifications. The Department may require the project sponsor to include separate unit bid items for environmental and cultural resource restoration and/or mitigation.

4. Where construction will occur within or adjacent to environmentally critical areas, as approved by the Department, those areas shall be identified on design plans.

(c) Every effort shall be made to prevent and correct problems associated with erosion and sedimentation which could occur during and after project construction. At a minimum, design specifications shall incorporate the following erosion and sedimentation control measures:

1. All erosion and sedimentation control measures shall be in place prior to any grading operations or construction of proposed facilities and shall be maintained until construction is complete and the construction area is stabilized. After restoration is complete, temporary control measures shall be removed and disposed of properly.

2. All erosion and sedimentation control measures shall be constructed and maintained in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey," prepared by the New Jersey State Soil Conservation Committee, 1999, incorporated herein by reference, as amended and supplemented. Copies of the "Standards for Soil Erosion and Sedimentation Control in New Jersey" are available for a fee from the New Jersey Department of Agriculture, Soil Conservation Committee, or from the office of any of the 16 local conservation districts.

3. Disturbed areas that will be exposed in excess of 10 days shall be temporarily seeded and/or mulched, until proper weather conditions exist for establishment of permanent vegetative cover.

(d) Site and access clearing must be confined to approved construction areas. Protection of existing vegetation must be practiced wherever possible. At a minimum, the project sponsor shall include provisions in the contract documents which conform to the following:

1. Temporary and permanent easement widths must be reduced to the minimum feasible for the proposed construction. Unless specifically approved by the Department, permanent access roads must not be more than eight feet wide and there shall be no permanent access roads in environmentally critical areas. Access roads may be paved only where absolutely necessary, as determined by the Department.

2. Only those portions of the site which are absolutely necessary and essential for construction shall be cleared. Whenever possible, excavation shall include the removal and storage of topsoil from the site for future use. The length of time of ground disturbance shall be reduced to the minimum practicable, especially in environmentally critical areas. Ground disturbance shall be avoided until immediately preceding construction to minimize exposure of soils.

3. Trees and shrubs within construction easements, which are not required to be removed to permit construction, shall be protected to the drip line with appropriate protection measures such as snow fencing or batter boards. Trees and shrubs whose removal is necessary to facilitate construction shall either be replanted at the same location or replaced with nursery stock of the same kind. Trees of greater than 12 inches in diameter should be preserved whenever possible by implementing slight shifts in alignment or tunneling under tree roots. Specimen trees, as identified in "New Jersey's Big Trees" (1998) published by the Department's Division of Parks and Forestry listing specimen trees in the State, shall be preserved.

4. Except in heavily wooded areas, the plans shall designate trees and shrubs which are to be protected as well as trees and shrubs which are to be removed. In addition, plans shall provide details which depict methods of protection to the drip line.

5. In heavily wooded areas, every effort shall be made to avoid the destruction of common native trees and shrubs so as not to unduly disturb the ecological balance or environmental quality of the area. Trees of 12 inch

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diameter or greater should be preserved whenever possible and protected to the drip line. Where practical, common native trees and shrubs, of one through three inch caliper, which must be cleared from the construction area shall be stockpiled for use in restoration. Straggling roots shall be pruned. Trees which must be pruned to facilitate construction shall be cut cleanly and painted with tree paint. If a tree not intended to be removed is damaged, the wood shall be repaired according to common nursery practice and painted with tree paint.

(e) Restoration measures to be identified and designated on the environmental plans and specifications include the following: ground preparation, topsoiling, fertilizing, liming, reseeding, and replanting/replacement of trees and shrubs with native species. The aim of restoration is to restore the disturbed area to a condition as nearly equal to pre-disturbance condition as possible. The environmental specifications shall set forth the procedure for accomplishing these restoration measures. The plans shall include the location of various types of restoration and shall include details depicting typical methods to accomplish restoration. The provisions shall include the following, when applicable:

1. Final restoration shall be undertaken as soon as an area is no longer needed for construction, stockpiling or access. Excavated material unsuitable for backfill as set forth at N.J.A.C. 7:14-2.13 and considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by the Department. Excess excavated material which is not considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be graded or removed in accordance with (1)3 below. When access roads are no longer needed, road fill shall be removed and the access area shall be restored to pre-disturbance conditions. Care should be taken to avoid damage to adjacent vegetation and to prevent the formation of depressions that would serve as mosquito pools.

2. Topsoil shall be replaced with adequate amounts of topsoil material to restore the disturbed area to its original, pre-disturbance grade and depth of topsoil.

3. Rates and types of fertilization, liming, and seeding shall be as recommended by the local Soil Conservation District based on soil tests and local conditions. Seed mixtures shall be selected that are best suited for the particular site conditions. Seed selection shall provide for a quickly germinating initial growth, to prevent erosion, and for a secondary growth that will survive without continuing maintenance. Mulching shall occur immediately after seeding, and in no case shall more than five days elapse between seeding and mulching.

4. In wooded areas, for a 50-foot wide construction easement, generally 10 trees should be planted for every 100 feet of length of the easement. More trees would be required in wider easements or densely wooded areas. Plans shall include a restoration schedule specifying the quantity, common and botanic names, sizes, and spacing of trees to be planted and the type of seed mixtures to be used from station to station. Trees to be replaced should be trees native to New Jersey suitable for the particular site and generally should conform to the list of trees found in the "Standards for Soil Erosion and Sediment Control in New Jersey," prepared by the New Jersey State Soil Conservation Committee, 1999, incorporated herein by reference, as amended and supplemented.

5. In landscaped areas, environmental features shall be replaced or restored to pre-disturbance condition or better. This includes sodding, replacement of trees and shrubs, fences, drives, and other landscape features in kind.

(f) A listing of prohibited construction procedures shall be incorporated into the specifications. These procedures include, but are not limited to, the following:

1. Dumping of spoil material into any stream corridor, any wetlands, any vernal habitats, any surface waters, any sites listed or eligible for listing on the New Jersey or National Registers of Historic Places, or at unspecified locations;

2. Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, wetlands, vernal habitats, or surface waters;

3. Pumping of silt-laden water from trenches or other excavations into any surface waters, stream corridors, wetlands or vernal habitats;

4. Damaging vegetation adjacent to or outside of the access road or the right-of-way;

5. Disposal of trees, brush and other debris in any stream corridors, wetlands, vernal habitats, surface waters or at unspecified locations;

6. Permanent or unspecified alteration of the flow line of any stream;

7. Open burning of project debris;

8. Use of calcium chloride, petroleum products, or other chemicals for dust control;

9. Use of asphaltic mulch binder; and

10. Any unpermitted discharge of sewage.

(g) Construction in wetlands shall conform to the requirements of the New Jersey Freshwater Wetlands

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Protection Act, N.J.S.A. 13:9B-1 et seq., and N.J.A.C. 7:7A.

(h) Stream crossings shall conform to the requirements of the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq., and N.J.A.C. 7:13.

(i) Slopes exceeding 15 percent require special treatment. Specifications shall call for measures such as water diversion berms, sodding, or the use of jute or excelsior blankets. Hay bales shall be placed at the base of the slope prior to ground disturbance. Steep slopes that have been disturbed, if not sodded, shall be seeded and mulched immediately after construction is complete. Slope boards or other measures necessary to prevent slumping of the disturbed slope shall be incorporated, where appropriate.

(j) If there is the possibility of encountering acid-producing deposits in the course of construction, as identified during the planning process, special requirements and conditions will apply and shall be incorporated in the specifications as follows:

1. In vegetated areas, the top two feet of soil shall be stripped and stockpiled separately from the material to be excavated. A soils specialist, to be provided by the project sponsor, shall monitor the stripping operation. If any acid-producing deposits are identified, this material and any contaminated soil shall be disposed of on the same day. The presence of acid-producing deposits is detected by the use of the following tests:

i. Determining the pH of the soil when suspended in 0.5 Molar calcium chloride solution (of neutral pH). A pH value below 3.0 indicates presence of ferrous sulfate and presence of acid-producing deposits is strongly suspected.

ii. Test for sulfate by adding a drop of 10 percent barium chloride solution to a water extract of the material. If voluminous flocks of barium sulfate form immediately the presence of acid-producing deposits is strongly suspected.

2. The disposal site shall be approved by the Department. Any soil of this type disposed of shall be covered with a minimum of two feet of cover to prevent rapid oxidation and subsequent acid formation.

3. In both vegetated and paved areas, when acid-producing deposits are encountered, as determined by the soil specialist, excavated trench material shall be returned to the trench as follows:

i. Lower material first, followed by upper material.

ii. The top one to two inches of soil on which the deeper soil was stockpiled shall be scraped and placed below a depth of two feet.

iii. For pipeline construction, the quantity of material to be displaced by bedding and pipe, as well as soil scraped from the stockpile area, shall be subtracted from the deeper, excavated material and this quantity of deeper material removed to an approved disposal site and covered as described in (e)3 above.

iv. After backfilling the deeper soil, one ton of limestone per 2,000 square feet shall be spread over the deeper soil in the trench. This liming requirement is applicable in areas of well drained, nonsaturated soils, as determined by the soil specialist.

v. In vegetated areas, the top two feet of soil, stockpiled for this purpose, shall then be replaced. If the top two feet of soil was also contaminated, clean backfill material similar to the native topsoil shall be used in place of the contaminated material.

4. The excavated acid-producing deposits shall not be exposed for a period longer than eight hours. When acid-producing deposits are encountered, the trench opened in any construction day shall be backfilled and the areas cleaned up by the close of the day. Where this is impracticable, such as in the construction of pumping stations and treatment plants, exposed acid-producing deposits shall be covered with limestone screenings at a rate of 100 tons per acre and then covered with six inches of compacted soil within one week of exposure or before the exposed soil drops to pH 3, whichever occurs first. The pH shall be monitored daily under this procedure.

5. Temporary restoration of vegetated areas shall consist of mulching and shall be put in place at the end of each day's construction. Permanent restoration of the area shall begin as soon as construction is complete and after the results of incubation tests, where necessary, are available.

6. Prior to restoring vegetated areas, the soil specialist shall perform pH tests on the in-situ soil after the construction is completed. If the pH is below 4, intensive liming shall be required in order to make the soil suitable for plant survival.

7. Lime requirement tests shall be performed by the soil specialist to determine the lime application rates. This will require an incubation test in which the sample is oxidized for a period of six weeks, as follows:

i. The sample shall be air dried and ground so that the whole sample passes a 0.5 millimeter sieve.

ii. The lime requirement to reach pH 6.5 shall be determined initially, and again at two week intervals for six weeks, using standard soil testing techniques.

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iii. The total lime requirement determined by this method can be extrapolated to the area under consideration.

8. A minimum of 30 tons of limestone per acre or the amount of lime required according to the incubation test result shall be applied prior to seeding and planting where the pH is less than 4. Where the pH is greater than 4, liming and fertilizing requirements set out in the planting and environmental specifications shall apply.

9. The spreading and mixing of the subsoil and any topsoil contaminated with acid-producing deposits around the site and beyond the site is prohibited. Areas used for stockpiling acid-producing deposits shall be minimized. Equipment used for excavation and backfilling shall be cleaned, to the extent practicable, at the end of each day's operation and the soil removed shall be placed in the trench below a depth of two feet. No construction shall take place during significant rainstorms or while the area is saturated to avoid smearing or spreading of the acid-producing deposits over the area.

(k) When dewatering will occur and a dewatering permit is not required, the contractor shall monitor for adverse effects to structures or wells due to dewatering and shall be responsible to remedy same to the satisfaction of the Department. Discharges from dewatering activities which contain silt are subject to the following controls:

1. All discharges from dewatering activities to surface waters, wetlands, vernal habitats, 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.

2. Sewer inlets within construction areas shall be provided with perimeter hay bales or other appropriate siltation control measures.

(l) Contract requirements with regard to the location and control of stockpile, storage and disposal areas whether provided by the project sponsor or the contractor, must conform to the following:

1. Only environmentally suitable stockpile sites may be used for the purposes of staging or storing materials, equipment and suitable trench backfill material. Environmentally suitable sites must be level, and devoid of mature stands of natural vegetation. Drainage facilities and features, wetlands, vernal habitats, and stream corridors are not environmentally suitable sites.

2. The boundary of the stockpile area shall be clearly marked by hay bales, silt fencing or another appropriate method. Where fill is to be stored in excess of 10 days, a suitable means of protecting excavated material from wind and water erosion shall be employed. Erosion control methods may include one or more of the following: mulching, sprinkling, silt fencing, haybaling and stone covering.

3. Excess excavated material which is not considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be graded on-site only to the extent needed to achieve preconstruction grade, unless otherwise specifically approved by the Department. The project sponsor shall ensure that the contractor removes the remainder from the site and disposes of it at a site approved by the project sponsor in accordance with the following:

i. Disposal sites selected by the contractor shall be evaluated and approved by the project sponsor prior to their use. Disposal sites may also be selected by the project sponsor. The project sponsor shall conduct periodic inspection of disposal sites to ensure compliance with the requirements of this subsection during the off-site disposal operation.

ii. The disposal of excess excavated material in wetlands, vernal habitats, stream corridors and floodplains is strictly prohibited, even if the permission of the property owner is obtained. The contractor shall be responsible to remove any fill improperly placed by the contractor at the contractor's expense and restore the area impacted.

iii. If excess excavated material is placed on private property, a hold harmless release in favor of the project sponsor and the Department shall be obtained from the property owner; and

iv. Prior to approval of a site for excess excavated material disposal, where the site exceeds 5,000 square feet, the project sponsor shall obtain, or shall ensure that the contractor or property owner has obtained, the appropriate certification of the soil erosion and sediment control plan in accordance with the State's standards for soil conservation (N.J.S.A. 4:24-1 et seq., also referred to as Chapter 251). Where the site is less than 5,000 square feet, the project sponsor shall advise the property owner of the need for erosion and sediment control and obtain a statement that the property owner accepts complete responsibility for implementation of appropriate methods to prevent erosion and sedimentation.

(m) In order to control dust, as often as required during each working day, and particularly prior to the conclusion of each working day, areas under immediate construction (including access roads and other areas

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affected thereby) shall be swept and wet down with water sufficiently to lay dust. In addition, these areas shall be wet down during nonworking hours (including weekends) as often as required to keep the dust under control. The use of calcium chloride or petroleum products or other chemicals for dust control is prohibited.

(n) In order to limit noise impacts in the vicinity of sensitive receptors, construction operations and activities shall be limited as follows: Monday through Friday between the hours of 7:00 A.M. and 6:00 P.M. unless variances to these times are granted in times of emergency. No driving, pulling, or other operations entailing the use of vibratory hammers or compactors shall be permitted, other than between the hours of 8:00 A.M. and 5:00 P.M. The number of machines in operation at a given time shall be limited to the minimum practicable. All engine generators or pumps must have mufflers and be enclosed within a temporary structure.

(o) Provisions regarding the contractor's responsibility for cultural resource protection shall be included in contract documents that provide for the following:

1. If a cultural resource is encountered during the course of construction, the contractor is directed to halt all construction activities in that area. The contractor shall immediately contact the project sponsor who shall contact the Department. The Department will determine and require initiation of the appropriate actions in conformance with N.J.A.C. 7:22-10.8. .

2. The contractor shall not dispose of excess excavated material at, stockpile construction materials at, or obtain borrow material from, properties which are listed or eligible for listing on the New Jersey or National Registers of Historic Places.

(p) The project sponsor shall require that the contractor supply an environmental maintenance bond in the amount of \$25,000 or 50 percent of the price bid for the materials needed to fulfill the environmental specifications, whichever is greater. The environmental maintenance bond shall provide that the contractor shall remedy, without cost, any defects which result from faulty workmanship or from failure to comply with the specifications and which develop during the period of one year from the expiration of the performance bond required pursuant to N.J.S.A. 40A:11-22.

(q) The project sponsor shall obtain photographs of existing conditions prior to the start of site and access clearing and construction. At a minimum, one eight inch by 10 inch color glossy print photograph shall be obtained for each 100 feet of the construction area. Special attention shall be given to environmentally critical areas and areas outside of the public right-of-way. Photographs shall be labeled by station so that upon completion of the construction, or during construction if necessary, subsequent photographs can be taken from the same control points. The project sponsor shall file copies of the above photographs with the Department. As a supplement to the required photographs, video documentation may be submitted to the Department, and is encouraged as a way of documenting site conditions.

7:22-10.12 Construction phase requirements

(a) The project sponsor must employ one, or more if warranted by the scope of the project, environmental inspector(s) to ensure that the requirements of the specifications relating to environmental and cultural resource protection and restoration are effectively carried out. Individuals designated as environmental inspectors by the project sponsor must possess, at a minimum, the education/experience qualifications of an Environmental Specialist employed with the Department. The Department will also conduct environmental inspections to oversee the conduct of the protection/restoration measures. Responsibilities of the project sponsor's environmental inspector(s) include the following:

1. Daily inspections of active work areas and periodic inspection of maintenance or restoration areas sufficient to ensure performance of protection measures in accordance with contract documents.

2. The maintenance of a daily job diary in which they shall record the progress of the work and of any problems encountered. The environmental inspectors shall notify the contractor in writing immediately upon noticing that environmental specifications are not being met.

3. At frequent intervals during construction, the recipient, the resident engineer, the environmental inspectors and the Department inspectors shall meet to review progress and to resolve difficulties that might result in unnecessary delays in the work. The Department shall notify the recipient if deficiencies are not immediately corrected. The recipient shall then direct compliance with environmental requirements.

(b) After award of a contract and before construction commences, a pre-construction conference shall be held. The recipient, the resident engineer, the environmental inspectors, the Department inspectors and the contractor should reach general agreement upon procedures to be followed to comply with the plans and

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specifications intended to provide environmental and cultural resource protection and restoration that have been approved by the Department.

(c) A final inspection shall be required following completion of all construction and restoration work encompassed by each contract. The final inspection shall be conducted as follows:

1. Upon completion of all construction and restoration work of each contract of a project, the recipient shall submit a letter to the Department stating that the project (or contract) is ready for final inspection. No final inspection can be scheduled until formal notification is received.

2. The final inspection shall be a joint inspection with the recipient and/or the resident engineer, the environmental inspector, the contractor and representatives from the Department in attendance.

(d) The Department shall make periodic determinations and, following the final inspection, make a final determination regarding the adequacy of the contractor's performance of the specifications relative to environmental and cultural resource protection and restoration. If the performance is not acceptable, this finding and the procedures and schedules needed to effect acceptable performance will be conveyed in writing to the project sponsor. Failure of the project sponsor to comply with the Department's requirements may subject the project sponsor to the noncompliance provisions of N.J.A.C. 7:22-3.40, 4.40 and 6.40 and N.J.A.C. 7:22A-1.8.

EXHIBIT NO. 6

**SED PARTICIPATION BUILDING PHASE QUARTERLY REPORT
(FORM OEO-002)**

**OFFICE OF EQUAL OPPORTUNITY
AND
PUBLIC CONTRACT ASSISTANCE**

**MUNICIPAL FINANCE
AND
CONSTRUCTION ELEMENT**

SED PARTICIPATION

BUILDING PHASE

QUARTERLY REPORTING FORM

FOR

CONTRACTING AGENCIES & CONTRACTORS

(OEO-002)

New Jersey Department of Environmental Protection

REPORTING REQUIREMENTS ON SOCIALLY AND ECONOMICALLY DISADVANTAGED (SED) BUSINESS UTILIZATION

These instructions apply to reporting on the utilization of Socially and Economically Disadvantaged Businesses (MBEs/WBEs/SEDs) under the New Jersey Department of Environmental Protection and the New Jersey Environmental Infrastructure Financing Programs. They are intended to provide guidance to Project Sponsors and Contractors in filling out the Building Phase (SED) Utilization Form. The reporting requirements apply to all Contracting Agencies and Contractors pursuing New Jersey Financing Assistance through programs administered by the New Jersey Department of Environmental Protection and the New Jersey Environmental Infrastructure Trust pursuant to N.J.A.C. 7:22-3.; N.J.A.C. 7:22-4.; N.J.A.C. 7:22-6; N.J.A.C. 7:22A-6; N.J.A.C. 7:22-7.

Each Project Sponsor and Contractor must submit this building SED Report (Form OEO-002) quarterly on MBE/WBE utilization for each contract for which a Project Sponsor or its Contractor(s) awards a subagreement. The form must be submitted to the New Jersey Department of Environmental Protection (NJDEP), Office of Equal Opportunity, Public Contract Assistance within 15 days following the close of each fiscal year quarter (i.e., January 15, April 15, July 15, and October 15).

INSTRUCTIONS FOR FILLING OUT SED UTILIZATION REPORT

1. Read instructions carefully before completing form, and refer to N.J.A.C. 7:22-9.1 et seq. for further guidance.
- 2a. The name and address of Project Sponsor participating in the grant/loan programs for environmental infrastructure facilities.
- 2b. Name of the Project Compliance Officer responsible for submitting periodic reports.
3. Name and address of party contracting directly with the Project Sponsor.
4. Self-explanatory.
- 5a. The grant/loan project number for the agreement between the State of New Jersey and the Project Sponsor.
- 5b. The grant/loan project number for the contract between the Project Sponsor and its contractor(s).
6. Include brief description of project.
7. Self-explanatory.
- 8a. The county in which the Project Sponsor is located.
- 8b. The municipality in which the Project Sponsor is located.
9. The date of the agreement between the State of New Jersey and the Project Sponsor.
- 10a. The date of agreement between the Project Sponsor and the contractor.
- 10b. Self-explanatory.
11. Indicate MBE and WBE goals based upon project plan for SED utilization developed in consultation with the Office. These goals may vary depending upon local law. Where a Project Sponsor has a SED participation goal which exceeds ten percent, the Project Sponsors goal shall take precedence.
12. Enter the name, address and telephone number of each SED participating in the building phase as a subcontractor under agreement with the construction management firm or the Project Sponsor. Check applicable MBE or WBE status of each listed SED. Explain type of service rendered and list the total dollar amount of the subcontract. Each entry must be accompanied by a copy of the signed subcontract.

Restricted - Bids may be solicited on a restricted basis by setting aside a contract for building, materials and equipment, or services which is designated as a contract for which bids are invited and accepted only from SEDs.

Unrestricted - Bids may be solicited on an unrestricted basis and not designated for a set-aside contract, but the contract document shall include a statement to the effect that the successful bidder must fulfill the SED utilization requirements.

13. See instructions for Item 12. This section is designated for SEDs participating in the building phase of a project as a subcontractor under agreement with building contractor(s).
14. Person signing must be the designated Project Compliance Officer of the Project Sponsor. The contractor(s) or the authorized representative of the contractor(s).
15. Additional comments or explanations. Refer to the specific item number on the form, if applicable.

OEO-002

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
NEW JERSEY MUNICIPAL FINANCE & CONSTRUCTION ELEMENT
OFFICE OF EQUAL OPPORTUNITY & PUBLIC CONTRACT ASSISTANCE

CONSTRUCTION REPORT

SOCIALLY AND ECONOMICALLY DISADVANTAGED (SED) BUSINESS UTILIZATION

1. ***Read Instructions Before Completing Form.***

2a. Project Sponsor

Name _____

Address _____

2b. Project Compliance Officer _____

3. Contractor

Name _____

Address _____

4. Financing Program (check applicable program(s))

____ a. Wastewater Treatment Fund ____ b. Wastewater Treatment Trust ____ c. Pinelands Infrastructure Trust
____ d. Stormwater Management ____ e. Water Supply

5a. Project Number _____

5b. Contract Number _____

6. Project Name _____

7. Contract Amount \$ _____

8a. County _____

8b. Municipality _____

9. Date of Grant/Loan Agreement _____

10a. Date of Contract Award _____ 10b. Duration of Contract: Mo. _____ Days _____

11. STATE GOAL OR OTHER STANDARDS (IF ANY)

Contracting Agency's Requirement

	<u>DOLLAR AMOUNT</u>	<u>PERCENTAGE OF CONTRACT AMOUNT</u>
MBE	\$ _____	_____ %
WBE	\$ _____	_____ %
TOTALSED	\$ _____	_____ %

13. Other Subcontract Awards Made Under the Building Phase

Name, Address and Telephone No. WBE	MBE/	Type of Service Rendered	Amount	Number	Dollar	Subcontract (R/U)	Subcontract	Date of Subcontract	Type of Award*
1. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									
2. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									
3. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									
4. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									
5. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									
6. _____ _____ _____ _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Number of Full-time Employees									

* Restricted/Unrestricted

14.

(Signature of Project Compliance Officer)

(Title)

(Date)

(Signature of Contractor)

(Title)

(Date)

15. Space Provided for Additional Comments or Explanations

EXHIBIT NO. 7

**SED PARTICIPATION MONTHLY PROGRESS REPORT
(FORM OEO-003)**

**OFFICE OF EQUAL OPPORTUNITY
AND
PUBLIC CONTRACT ASSISTANCE**

**MUNICIPAL FINANCE
AND
CONSTRUCTION ELEMENT**

SED PARTICIPATION

MONTHLY PROGRESS REPORT
(OEO-003)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION SED UTILIZATION IN ENVIRONMENTAL INFRASTRUCTURE FINANCING PROGRAM

MONTHLY PROGRESS REPORT

Contractor _____

Project Number _____

Project Name _____

Contract Amount _____

Report Month/Year _____

The following information is required in order to assist the Project Compliance Officer and the New Jersey Department of Environmental Protection in monitoring the SED (small business enterprises owned and controlled by socially and economically disadvantaged individuals) Utilization progress and activity in the Environmental Infrastructure Financing Program. Each contractor shall respond to each of the listed items. Whenever evidence of completion of each item is available, copies of itemized documents are to be submitted to the Project Compliance Officer.

☐ Over the past month has any action on any item taken place? Please explain each.

- | | | | |
|----|---|-----------|----------|
| 1. | Copies of Solicitation to SEDs | _____ Yes | _____ No |
| 2. | Advertisement of bidding or procurement opportunities | _____ Yes | _____ No |
| 3. | Evidence of negotiation with SEDs | _____ Yes | _____ No |
| 4. | Copies of telephone quotes/negotiations | _____ Yes | _____ No |
| 5. | Copies of signed subagreements | _____ Yes | _____ No |
| 6. | Have any subcontracts been awarded in the past month | _____ Yes | _____ No |

Please provide an explanation for Questions 1 through 6.

Signature of Contractor

Signature of Project Compliance Officer

Date

Date

EXHIBIT NO. 8

PVSC SED UTILIZATION PLAN

Passaic Valley Sewerage Commission (PVSC)

Socially and Economically Disadvantaged Utilization Plan

Introduction

It is the policy of the PVSC to promote award of contracts to Socially and Economically Disadvantaged (SED) small business enterprises by stipulating specific requirements for involving such businesses in contracting. The failure of the Contractor to demonstrate a good faith effort to achieve the goals set forth herein by utilizing best efforts to implement the SED utilization plan will constitute an event of default of the Agreement. PVSC shall designate a compliance officer who shall be responsible for coordinating SED utilization efforts for the Agreement and for monitoring compliance with the plan. PVSC reserves the right to audit the Contractor's SED records to insure compliance with this provision. Socially and economically disadvantaged businesses definitions and associated terms are defined in the NJAC 7:22-9.2.

SED's Scope and Purpose

The goal is established at 10% SED (combined MBE/WBE) participation. Fulfillment of the goal can be achieved through lower tier agreements with SEDs for services, supplies or construction necessary to complete the project. The Contractor must endeavor to meet the goal specified in the previous paragraph by taking and documenting the following affirmative steps to ensure that the SED businesses are used as sources of services, supplies or construction whenever possible by:

1. Placing SEDs on solicitation lists.
2. Assuring SED solicitation whenever they are potential sources.
3. Encouraging SED participation through the division of total requirements, when economically feasible, into smaller tasks or quantities.
4. Encouraging SED participation through the establishment of delivery schedules, where the work requirement permits.
5. Using the services and assistance of the Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and the N.J. Department of Commerce and Economic Development, Division of Development for Businesses and Women and Minority Businesses.

When soliciting services from subcontractors, the Contractor must include the 10% goal in its Proposals. Contract work cannot commence until the PVSC has approved the Contractor's SED Utilization Plan.

Definitions

Definitions are incorporated herein by reference and can be found at N.J.A.C 7:22-9.2.

In-House Procedures

The Project Compliance Officer, or his designee, shall be responsible for coordinating SED utilization efforts on the project, for monitoring and enforcing compliance with the affirmative action and the SED requirement.

SED utilization requirements shall be an agenda item at all contract award meetings and, wherever applicable, at preconstruction conference meetings regardless of whether a loan or grant agreement has been executed or not. Each project sponsor shall be responsible for notifying the Office of the time and place of such meetings.

The project compliance officer, or his designee, shall attend all monthly construction progress meetings.

State of New Jersey SED Certification Requirement

Any SED firm proposed by the Contractor must be certified by a certifying agency in the State of New Jersey or be certifiable and pending certification, as verified by PVSC, in order to qualify toward the firm's fair share goals. Other certifications may be deemed acceptable, as approved by PVSC on a case by case basis.

For information purposes only, the State of New Jersey Department of Commerce and Economic Development Division of Development and Small Business and Women Minority Businesses Set Aside and Certification office maintains a state wide Certification Directory containing a list of SEDs who are accepted as such by the State of New Jersey and who might be interested in becoming suppliers or subcontractors for this contract.

SED Utilization Plan Requirements

Thirty (30) days after Notice of Award, the contractor must submit an approvable SED Utilization Plan to the PVSC. To be approvable, the SED Utilization Plan for subcontractors, suppliers and construction, must detail the steps taken or be taken by the Contractor to provide for SED utilization for the total fair share percentage established by the Agreement. It must further provide documentation to evidence the Contractor's efforts to date and planned efforts toward achieving the goal.

SED Utilization Plan Revisions

If a SED supply, service, or subcontract in the approved plan will not be procured, the Contractor must amend the plan. The Contractor must demonstrate a good faith effort to comply with the fair share percentage established in the Agreement by submitting documentation outlining the SED affirmative steps taken and the reasons for not engaging the SED. The Contractor must further revise the SED plan to detail the additional steps to be taken to reach the SED participation goal set forth herein as part of the required SED Utilization Plan Revision.

EXHIBIT NO. 9

NJAC 7:14-2

THIS IS A COURTESY COPY OF THIS RULE. ALL OF THE DEPARTMENT'S RULES ARE COMPILED IN TITLE 7 OF THE NEW JERSEY ADMINISTRATIVE CODE. BIDDERS SHOULD CONFIRM THE CURRENTNESS OF ANY RULE OR REGULATION PRIOR TO RELYING ON SAME.

N.J.A.C. 7:14

WATER POLLUTION CONTROL ACT

Statutory authority: N.J.S.A. 13:1B-3 et seq., 13:1D-1 et seq., 13:1E-1 et seq., 58:10-23.11 et seq., 58:10A-1 et seq., 58:11-49 et seq., 58:11A-1 et seq. and 58:12A-1 et seq.

Date last amended: October 5, 2010

For regulatory history and effective dates, see the New Jersey Administrative Code

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SUBCHAPTER 1. (RESERVED)

SUBCHAPTER 2. CONSTRUCTION OF WASTEWATER TREATMENT FACILITIES

7:14-2.1 Construction procedures

The Department shall require and adhere to the procedures identified in this subchapter. Actions or procedures by owners, permittees, consultants, contractors, or other persons affected by this subchapter which are not in accordance with this subchapter shall not be acceptable to the Department. Where applicable, the Department may grant a waiver from any requirement of this subchapter upon presentation of written justification by the owner, permittee, consultant or contractor.

7:14-2.2 Record drawings; collector sewers, interceptor sewers and force mains

(a) The owner shall be responsible for the preparation of all record drawings required for sewer lines. This responsibility may be delegated to the owner's representative with adequate compensation for this service.

(b) This responsibility shall not be delegated or transferred to the contractor. The contractor shall assist the owner/engineer, by providing record information, when requested, during the progress of the work.

7:14-2.3 Permits

(a) Federal, State, county and municipal permits required as a result of the construction activity within the delineated site shall be obtained by the owner and associated fees shall be paid by the owner. In addition, permits required for construction activities on railroad properties shall be obtained by the owner.

(b) Exceptions to this section shall be a permit to use explosives for rock excavation and such other permits which by law are required to be obtained by the contractor.

(c) The owner shall make every reasonable effort to identify permits and fees and costs required as a result of the construction activity in effect 60 days prior to the receipt of construction bids. This responsibility may be delegated to the owner's engineer with adequate compensation for this service. The engineer shall be held harmless from any pen-

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alty or action resulting from the failure to obtain a permit where every reasonable effort has been made by the engineer to obtain such permits. Conditions made a part of any permit shall be imposed upon the contractor as described in the contract or bid documents. Additional costs associated with a permit resulting from the construction activity which is beyond that stipulated in the contract shall be the responsibility of the contractor.

(d) Whenever necessary or appropriate the contractor shall assist the owner in the acquisition of permits.

(e) The Department may intercede and assist in the resolution of any problems resulting from the acquisition of any permits.

7:14-2.4 Easements/rights-of-way

An interruption of construction or an extension of contract time may be a basis for a claim by a contractor for additional cost when such interruption or extension is caused by the owner's inability to obtain an easement/right-of-way. Claims shall include any reasonable cost incurred by the contractor and shall be reviewed and approved by the owner prior to submission to the Department. The Department may approve all, any portion, or deny the cost for eligibility for projects funded under the Grant Program.

7:14-2.5 Field layout (baseline and monuments)

The owner shall be responsible to establish and confirm field controls prior to start of construction. The contractor shall not be liable to check the accuracy of field controls (baseline and monuments) for sewer pipe installation. However, the contractor's layout must be based on a minimum of two field control points. Whenever the contractor detects an error in the field controls during pipe installation, the contractor shall immediately notify the owner and the owner's engineer of such error with sufficient documentation. The contractor shall be held responsible for all corrective measures and associated costs for failure to notify the owner of such error.

7:14-2.6 Engineer design activities: plan scale and plan updating

(a) On occasion, projects do not go to construction within a reasonable time after the bid advertisement. During this period, utilities may be relocated or installed, as well as other changes which can take place that are unknown to the contractor. Because of this, problems can take place during construction and result in numerous change orders and increases in the cost of the project.

(b) The horizontal scale for construction plans for sewerage facilities shall not be less than one inch equals 100 feet. A larger horizontal scale shall be used where appropriate to show sufficient detail to construct the project. The vertical scale for construction plans for sewerage facilities shall be not less than one inch equals 10 feet. Based upon the best information available, the location of underground utilities and support structures for overhead utilities shall be shown on the plans.

(c) Construction plans for sewerage facilities shall be updated whenever the bid advertisement date exceeds one year after approval by the responsible State or Federal regulatory agency. The engineer shall receive adequate compensation for updating plans and specifications. All such revisions shall be noted and dated on the plans prior to bid.

7:14-2.7 Construction, overhead and profit factors for Extra Work compensation

(a) The contractor is entitled to all identifiable direct job costs associated with Extra Work excluding subcontractor's costs. For Extra Work not in excess of \$ 10,000 the contractors may add up to 10 percent overhead factor to their identifiable direct job costs, but excluding the cost of any subcontracting, plus up to a 10 percent profit factor to their identifiable direct costs plus overhead amount.

(b) As general policy, these overhead and profit factors may be accepted by owners as reasonable in lieu of requiring the submission of additional supporting data. However, the owner must reserve its right to review any cost or profit element on a case-by-case basis, where the submission for overhead and profit is in excess of the 10 percent overhead and 10 percent profit indicated above.

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(c) Cost increase in subcontracted work may be similarly handled and a prime contractor may add up to 10 percent to the total cost (including overhead and profit factors) incurred by the subcontractor. In such cases, the same reservations for rights shall apply.

(d) For Extra Work in the amount of \$ 10,000 to \$ 100,000, the above factors may be included initially for equitable adjustments but will be subject to negotiation, cost and pricing data, and owner review requirements. Federally funded projects will be governed by Federal regulations.

7:14-2.8 Payments to contractors

(a) At least 20 days before each monthly progress payment falls due for approval (but not more often than once per month), the contractor will submit to the engineer a partial payment estimate filled out and signed by the contractor covering the work performed during the period covered by the partial payment estimate and supported by such data as the engineer may reasonably require. Where any specific item(s) in the partial payment estimate is in dispute, the engineer may delete those costs from the estimate and approve the acceptable portion of the payment request. Payment requested for stored materials and/or equipment shall be subject to the following conditions being met or satisfied:

1. The materials and/or equipment shall be received in a condition satisfactory for incorporation in the work.
2. The materials and/or equipment shall be stored in such manner that they will not be damaged due to weather, construction operations or any other cause.
3. An invoice from the supplier shall be furnished for each item on which payment is requested.
4. The contractor shall furnish written proof from the supplier of 90 percent payment for the materials and/or equipment no later than 30 days after receipt of payment for same from the owner. The owner shall have the right to deduct from the next payment estimate an amount equal to the payment for said material and/or equipment if reasonable and adequate proof is not submitted.

(b) The contractor warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the project or not, will pass to the owner upon the receipt of such payment by the contractor free and clear of all lien, claims, security interests or encumbrances (except 10 percent retention which may be withheld from suppliers and subcontractors to guarantee completion and performance). The engineer will after receipt of each partial payment estimate either indicate in writing his approval of payment and present the partial payment estimate to the owner, or return the partial payment estimate to the contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the contractor may make the necessary corrections and resubmit the partial payment estimate. The owner shall review the partial payment estimate at its next regularly scheduled meeting and, if approved, payment shall be made available to the contractor within five days. The owner shall retain not more than two percent of the amount of each payment claimed. In accordance with EPA regulations, prime contractors are also required to make prompt payment to subcontractors and suppliers for eligible construction, material, and equipment costs. Generally, payments of all valid subcontractor and supplier requests for payment should be satisfied prior to the next succeeding request for progress payment by the prime contractor.

(c) When the work is substantially complete (Operational or Beneficial Occupancy), the withheld amount shall be further reduced below two percent but not less than twice the current market value of the work yet to be completed. On completion and acceptance of a part of the work on which the price is stated separately in the Contract Documents, payment shall be made in full including retained percentages, less authorized deductions. The contractor or owner may request assistance and guidance from the Department on disputes regarding retainage.

(d) "Substantial completion" as used in the context of this section shall mean satisfactory completion of major portions of the contract work, including inspection and testing, so that the facility may be turned over to the owner for its intended use or occupancy. The engineer shall certify the date of substantial completion and that date shall establish the beginning date of the warranty/guarantee period unless a prior date has been established.

7:14-2.9 Mobilization: unit price contracts for sewer construction

(a) Mobilization shall consist of the cost of initiating the contract. Payment for mobilization will be made at the lump sum price bid for this item in the proposal, which price shall include the cost of initiating the contract. The provisions for payment for the item mobilization supersede any provisions elsewhere in the specifications for including the costs of

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these initial services and facilities in the prices bid for the various items scheduled in the proposal. The lump sum price bid for mobilization shall be payable to the contractor whenever he shall have completed 10 percent of the work of the contract. For the purposes of this item, 10 percent of the work shall be considered completed when the total of payments earned, exclusive of the amount bid for this item, shown on the monthly certificates of the approximate quantities of work done, shall exceed 10 percent of the total price bid for the contract.

(b) The lump sum price bid for mobilization is limited to the following maximum amounts:

Original Contract Amount (including Mobilization)		Maximum Amount for Item of Mobilization
From More Than	To and Including	
\$ 0	\$ 100,000	\$ 3,000
100,000	500,000	15,000
500,000	1,000,000	30,000
1,000,000	2,000,000	60,000
2,000,000	3,000,000	90,000
3,000,000	4,000,000	120,000
4,000,000	5,000,000	125,000
5,000,000	6,000,000	150,000
6,000,000	7,000,000	175,000
7,000,000	10,000,000	200,000
10,000,000	--	2.5% of Amount Bid

7:14-2.10 Bid items for sewer pipe installation

(a) This section establishes bid items which shall be included in unit price contracts for sewer pipe installation where applicable.

Description	Unit of Measure
1. Test Pits	Cubic Yard
2. Stone Foundation (bedding)	Cubic Yard
3. Select Material (below and above pipe grade)	Cubic Yard
4. Rock Excavation (including removal and disposal of boulders)	Cubic Yard
5. Wood Sheeting (install and remove where shown on plans)	Square Feet or 1000 Board Feet
6. Wood Sheeting (left in place where shown on plans)	Square Feet or 1000 Board Feet
7. Steel Sheeting (install and remove where shown on plans)	Square Feet or Tons
8. Steel Sheeting (left in place where shown on plans)	Square Feet or Tons
9. Permanent Pavement Gravel	Square Yard
10. Pavement	
i. Municipal:	
(1) Temporary which shall be removed (where applicable)	Square Yard
(2) Base	Square Yard
(3) Top	Square Yard
ii. County:	
(1) Temporary which shall be removed (where applicable)	Square Yard
(2) Base	Square Yard
(3) Top	Square Yard
iii. State:	
(1) Temporary which shall be removed (where applicable)	Square Yard

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	(2)	Base	Square Yard
	(3)	Top	Square Yard
11.	Testing	Linear Feet	
12.	Concrete Cradle or Encasement (to be identified where applicable)	Cubic Yard	

7:14-2.11 Reasonable minimum unit prices

(a) This section establishes reasonable minimum unit prices for indeterminate items, where applicable, for sewer pipe installation. Indeterminate items are those items which may be anticipated and for which quantities cannot be determined.

(b) The reasonable minimum unit prices are to be established by the owner/engineer for the following items:

1. Stone Foundation;
2. Select Material;
3. Concrete Cradle or Encasement--Nonreinforced;
4. Concrete Cradle or Encasement--Reinforced;
5. Test Pits;
6. Rock Excavation;
7. Wood Sheeting (install and remove)--square feet or 1000 board feet;
8. Wood Sheeting (left in place)--square feet or 1000 board feet;
9. Steel Sheeting (install and remove)--square feet or tons;
10. Steel Sheeting (left in place)--square feet or tons.

7:14-2.12 Payment widths, trench backfill and roadway paving for Federally funded sewer projects

(a) This section establishes eligible payment widths for select fill used for trench backfill and roadway pavement for federally funded sewer projects.

(b) Select trench backfill payment width:

1. Select trench backfill will be eligible for grant funding when the excavated material is totally or partially unacceptable for reuse as trench backfill. When the unacceptable material must be replaced with approved select backfill in a trench with a depth of 10 feet or less from the top of the pipe, the eligible payment width shall be B_d as shown below. For trenches of a greater depth the maximum eligible payment width shall be B_d plus H for the depth of unsuitable material as measured at the time of excavation.

2. When trench width is less than B_d plus H , the actual width shall control the payment.



3. B_d equals Maximum trench width (measured at the top of the pipe) allowed by the engineer for the type and strength class of pipe being installed.

4. The owner/engineer must make every effort to minimize the use of select fill. Marginal backfill material (material which is not acceptable for use in the pipe envelope or as a subbase for roadways) will be limited to the midzone of the trench. The midzone is defined as that portion of the trench beginning two feet above the top of the pipe, after compaction of the pipe envelope, to a point two feet below the final road or easement elevation. The owner/engineer must make all final decisions concerning the above.

(c) Paving:

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1. Maximum eligible payment width shall be the disturbed width plus two feet. In no case shall the maximum eligible payment width be greater than B_d plus H ;



2. Maximum Eligible Pay Width equals B_d plus H ;

3. Special considerations:

i. Pavement replacement shall, in all instances, be "like kind" replacement except where the replacement of the original thickness of roadway material will not yield a structurally stable surface over the disturbed trench area, or where the requirements of the responsible governmental jurisdiction specify roadway materials other than the original disturbed pavement. In these instances, the engineer should specify the minimum thickness necessary to obtain a structurally sound surface or to comply with established local, county or State road opening permit requirements. Such requirements shall be contained in the contract documents.

ii. Roadways where the original total pavement thickness is less than two inches and the pavement cannot be boxed and maintained during construction, will be eligible for "like kind" replacement outside of the eligible trench pavement width.

iii. Any deviation from the above should be submitted during the design phase (Step II) for approval if possible. In all instances, approvals must be obtained prior to soliciting bids.

iv. Reducing the pavement thickness specified by the engineer and spreading it across a wider area of the street will not be approved unless extenuating circumstances justify the need to pave a wider area. These situations will be considered on a case by case basis and must be submitted as a Change Order and receive approval prior to implementing such a change.

(d) Application of this section is mandatory for all Federal Grants awarded to projects, pursuant to the provisions of the Federal Clean Water Act (33 U.S.C. §§ 1251 et seq.) as amended, before October 1, 1998. For all Federal Grants awarded after October 1, 1998, the allowable costs shall be determined in accordance with the applicable provisions of the Financial Assistance Programs for Environmental Infrastructure Facilities rules at N.J.A.C. 7:22-5, Determination of Allowable Costs: Fund and Trust.

7:14-2.13 Excavation material unacceptable or conditionally acceptable for reuse as trench backfill

(a) The following trench excavation materials are unacceptable as trench backfill:

1. Any excavation materials that will cause damage to the piping systems;
2. Any excavation material that cannot be compacted or consolidated to yield the desired density as specified in the contract specifications;
3. Trees, stumps and foreign material.

(b) The following excavation materials are conditionally acceptable as trench backfill only if provided for in the contract specifications and the trench is located in a right-of-way, an easement, a roadway or an unimproved area:

1. Clay, organics and silt determined to be suitable in accordance with soil tests required by the owner/engineer.
2. Hard materials, such as blacktop, concrete, stone and rock.

i. The hard materials shall only be placed in the midzone of the trench beginning two feet above the top of the pipe, after compaction of the pipe envelope, to a point two feet below the final road or ground surface.

ii. Placement of the hard materials shall not create a potential hazard to the pipe or create voids that will cause adverse settlement.

iii. The maximum overall size of any piece of hard material shall be 12 inches.

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(c) The Department may require that all trench backfill material not conforming to this subsection and contract specifications be removed and spoiled to a spoil site approved by the Department in accordance with the requirements of N.J.A.C. 7:26-1, for solid or hazardous wastes.

7:14-2.14 Construction equipment costs compensation for extra work

(a) The contractor is entitled to all identifiable direct job equipment costs associated with extra work. The compensable cost for construction equipment shall be based upon the most current costs established in "Rental Rates for Construction Equipment" and "Rental Rates for Older Construction Equipment" (Blue Book), Dataquest Incorporated, A.C. Nielsen Company, San Jose, CA, 1983.

(b) Overhead and profits factors allowed in N.J.A.C. 7:14-2.7, shall only be applied to the rates charged for rental equipment used by the contractor for extra work.

7:14-2.15 Substantial and final completion of pipe projects; contractor's guarantees

(a) The contractor shall notify the owner/engineer in writing when the contract work is substantially complete as defined by N.J.A.C. 7:14-2.8(d). Within a reasonable time, the owner/engineer shall inspect the work.

(b) If the owner/engineer considers the work to be substantially complete, and before the Certificate of Substantial Completion is issued, the contractor shall:

1. Submit a construction schedule for the remaining work to be completed, and
2. Warrant and guarantee, for a period of one year or for a period as otherwise specified, from the date of Substantial Completion, that the completed work is free from defects due to faulty materials, equipment or workmanship. The Performance Bond shall remain in effect through the guarantee period.

(c) If the owner/engineer does not consider the work to be substantially complete, the engineer shall notify the contractor in writing, listing the items to be completed or corrected.

1. The contractor shall correct or complete items identified in writing within a reasonable time as specified in the contract documents, including repairs of any damage resulting from such defects to other work completed under the contract.

2. If the contractor fails to make such corrections within a reasonable time as specified in the contract documents, the owner may do so and charge the costs incurred, including direct and indirect costs, to the contractor.

(e) Before the Contractor has received notification of substantial completion, the owner/engineer may submit a request to the contractor to use a functional portion of the work if:

1. Such use does not significantly interfere with construction on any portion of remaining work to be completed, and
2. The conditions of such use shall be identified in the Certificate of Substantial Completion when issued by the owner/engineer.

(f) Final completion shall be that point at which the contract is completed, defective work corrected and clean up work accomplished. Unless a Certificate of Substantial Completion has been issued, the guarantee period shall begin upon certification of final completion by the engineer.

Subchapters 3 through 7. (RESERVED)

EXHIBIT NO. 10

NJSA 2A:44-143, 144

(UPDATED THROUGH P.L. 2010, ch. 18, and JR 16 of P.L. 2009)

TITLE 2A ADMINISTRATION OF CIVIL AND CRIMINAL JUSTICE

2A:44-143. Additional bond for payment of claims for labor, material, etc.; waiver, surety's obligation

2A:44-143. Additional bond for payment of claims for labor, material, etc.; waiver, surety's obligation

2A:44-143. a. (1) When public buildings or other public works or improvements are about to be constructed, erected, altered or repaired under contract, at the expense of the State or any contracting unit, as defined in section 2 of P.L.1971, c.198 (C.40A:11-2), or school district, the board, officer or agent contracting on behalf of the State, contracting unit or school district, shall require delivery of the payment and performance bond issued in accordance with N.J.S.2A:44-147 and otherwise, as provided for by law, with an obligation for the performance of the contract and for the payment by the contractor for all labor performed or materials, provisions, provender or other supplies, teams, fuels, oils, implements or machinery used or consumed in, upon, for or about the construction, erection, alteration or repair of such buildings, works or improvements provided by subcontractors or material suppliers in contract with the contractor, or subcontractors or material suppliers in contract with a subcontractor to the contractor, which class of persons shall be the beneficiaries of the payment and performance bond. The board, officer or agent shall also require that all payment and performance bonds be issued by a surety which meets the following standards:

(a) The surety shall have the minimum surplus and capital stock or net cash assets required by R.S.17:17-6 or R.S.17:17-7, whichever is appropriate, at the time the invitation to bid is issued; and

(b) With respect to all payment and performance bonds in the amount of \$850,000 or more, (i) if the amount of the bond is at least \$850,000 but not more than \$3.5 million, the surety shall hold a current certificate of authority, issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. 9305, that is valid in the State of New Jersey as listed annually in the United States Treasury Circular 570, except that if the surety has been operational for a period in excess of five years, the surety shall be deemed to meet the requirements of this subsubparagraph if it is rated in one of the three highest categories by an independent, nationally recognized United States rating company that determines the financial stability of insurance companies, which rating company or companies shall be determined pursuant to standards promulgated by the Commissioner of Insurance by regulation adopted pursuant to the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.), and (ii) if the amount of the bond is more than \$3.5 million, then the surety shall hold a current certificate of authority, issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. 9305, that is valid in the State of New Jersey as listed annually in the United States Treasury Circular 570 and, if the surety has been operational for a period in excess of five years, shall be rated in one of the three highest categories by an independent, nationally recognized United States rating company that determines the financial stability of insurance companies, which rating company or companies shall be determined pursuant to standards promulgated by the Commissioner of Insurance by regulation adopted pursuant to the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.). A surety subject to the provisions of subsubparagraph (ii) of this subparagraph which does not hold a certificate of authority issued by the United States Secretary of the Treasury shall be exempt from the requirement to hold such a certificate if the surety meets an equivalent set of standards developed by the Commissioner of Insurance through regulation which at least equal, and may exceed, the general criteria required for issuance of a certificate of authority by the United States Secretary of the Treasury pursuant to 31 U.S.C. 9305. A surety company seeking such an exemption shall, not later than the 180th day following the effective date of P.L.1995, c.384, certify to the appropriate contracting unit that it meets that equivalent set of standards set forth by the commissioner as promulgated.

(2) When such contract is to be performed at the expense of the State and is entered into by the Director of the Division of Building and Construction or State departments designated by the Director of the Division of Building and Construction, the director or the State departments may: (a) establish for that contract the amount of the bond at any percentage, not exceeding 100%, of the amount bid, based upon the director's or department's assessment of the risk presented to the State by the type of contract, and other relevant factors, and (b) waive the bond requirement of this section entirely if the contract is for a sum not exceeding \$200,000.

(3) When such a contract is to be performed at the expense of a contracting unit or school district, the board, officer or agent contracting on behalf of the contracting unit or school district may: (a) establish for that contract the amount of the bond at any percentage, not exceeding 100%, of the amount bid, based upon the board's, officer's or agent's assessment of the risk presented to the contracting unit or school district by the type of contract and other relevant factors, and (b) waive the bond requirement of this section entirely if the contract is for a sum not exceeding \$100,000.

b. A surety's obligation shall not extend to any claim for damages based upon alleged negligence that resulted in personal injury, wrongful death, or damage to real or personal property, and no bond shall in any way be construed as a liability insurance policy. Nothing herein shall relieve the surety's obligation to guarantee the contractor's performance of all conditions of the contract, including the maintenance of liability insurance if and as required by the contract. Only the obligee named on the bond, and any subcontractor performing labor or any subcontractor or materialman providing materials for the construction, erection, alteration or repair of the public building, work or improvement for which the bond is required pursuant to this section, shall have any claim against the surety under the bond.

c. A board, officer or agent contracting on behalf of the State, contracting unit or school district shall not accept more than one payment and performance bond to cover a single construction contract. The board, officer or agent may accept a single bond executed by more than one surety to cover a single construction contract only if the combined underwriting limitations of all the named sureties, as set forth in the most current annual revision of United States Treasury Circular 570, or as determined by the Commissioner of Insurance pursuant to R.S.17:18-9, meet or exceed the amount of the contract to be performed.

d. A board, officer or agent contracting on behalf of the State, contracting unit or school district shall not accept a payment or performance bond unless there is attached thereto a Surety Disclosure Statement and Certification to which each surety executing the bond shall have subscribed. This statement and certification shall be complete in all respects and duly acknowledged according to law, and shall have substantially the following form:

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

....., surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of R.S.17:17-6 or R.S.17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public

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accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):

.....

.....

.....

(3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

.....

.....

.....

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S.17:18-9 as of (date on which such limitation was so established) is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

.....

.....

.....

(4) The amount of the bond to which this statement and certification is attached is \$

(5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3)(a) or (3)(b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:.....

.....

.....

.....; and

(b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5)(a) satisfies the credit for reinsurance requirement established under P.L.1993, c.243

PASSAIC VALLEY SEWERAGE COMMISSION
600 WILSON AVENUE
NEWARK, NEW JERSEY 07105

STANDBY POWER PLANT SITE PREPARATION CONTRACT

CONTRACT NO. B128

Index of Drawings

<u>Sheet No.</u>	<u>No.</u>	<u>Total</u>	<u>Title</u>
	1	20	Cover Sheet
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C-1	3	20	SITE PLAN
C-2	4	20	CURRENT BASE MAP SOIL BORING AND TEST PIT LOCATIONS
C-3	5	20	EXCAVATION AND DEMOLITION PLAN
C-4	6	20	DEMOLITION PROFILES 1 OF 2
C-5	7	20	DEMOLITION PROFILES 2 OF 2
C-6	8	20	FINAL GRADING PLAN
C-7	9	20	PERMANENT RETAINING WALL PLAN & PROFILE
C-8	10	20	EROSION AND SEDIMENT CONTROL PLAN AND NOTES
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S-1	13	20	PERMANENT RETAINING WALL SECTIONS
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R-1	17	20	EXISTING SEDIMENTATION BASIN DRAWINGS – 1915 OUTFALL SEWERAGE WORKS PLAN & PROFILE
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R-4	20	20	HISTORICAL AERIAL PHOTO (1979)

EXHIBIT NO. 12

PROMPT PAYMENT CERTIFICATION

Prompt Payment Certification

I make this certification on behalf of myself as a representative of the contractor named below ("Contractor") and on behalf of the Contractor. I certify that for each application for payment submitted in connection with this project: (1) the work covered by that application for payment has been completed in accordance with the contract documents; (2) the payment requested is due; and (3) all amounts have been paid by the Contractor for work for which previous payments were issued, No application for payment will be submitted without Contractor having paid all subcontractors and suppliers their share of any funds received by Contractor pursuant to any previous application(s) for payment. I understand and acknowledge, that this entire certification will be considered incorporated into every request for payment. I understand and acknowledge that if Contractor submits an application for payment without (1) having completed work in accordance with the contract documents, (2) payment requested being due, and/or (3) having paid all subcontractors and suppliers their share of any funds received by Contractor pursuant to any previous application(s) for payment, then Contractor has submitted a false claim and false certification, subjecting Contractor to liability, damages and penalties under the New Jersey False Claims Act, N.J.S.A. 2A:32C-1 et seq.

If there is some legitimate reason Contractor cannot timely pay a subcontractor or supplier, in accordance with the Prompt Payment Act, N.J.S.A. 2A:30A-1 et seq., then Contractor must submit a signed certification or affidavit to the owner/government entity fully explaining the situation, when the situation arose, and when it will be resolved. A failure to submit such an explanatory certification waives any defenses Contractor may later seek to assert in connection with liability under the New Jersey False Claims Act, N.J.S.A. 2A:32C-1 et seq., or any other law, including N.J.A.C. 7:1D et seq.

I further understand and acknowledge that a false certification, whether express or implied, that (1) the work covered by an application for payment has been completed in accordance with the contract documents, (2) the payment requested is due, and/or (3) all amounts have been paid by the Contractor to subcontractors or suppliers for work for which previous payments were issued, is misleading with respect to the goods and services Contractor is providing.

I also understand and acknowledge that the requirements that (1) work has been completed in accordance with the contract documents, (2) the payment requested is due, and (3) all amounts have been paid by the Contractor for work for which previous payments were issued, are material to the State's decision to allocate State funding dollars for this contract, and also material to any local government entity's decision to retain and make payment to the contractor. I understand and acknowledge that if owner/government entity makes payment knowing of such v, that does not demonstrate that the requirements are not material, and does not constitute a waiver of liability under the New Jersey False Claims Act, N.J.S.A. 2A:32C-1 et seq.

To the contrary, Contractor recognizes that owner/government entity may decide to continue to pay Contractor due to contractual and/or logistical requirements or considerations.

Additionally, I understand and acknowledge that a false certification, whether express or implied, that (1) the work covered by an application for payment has been completed in accordance with the contract documents, (2) the payment requested is due, and/or (3) all amounts have been paid by the Contractor for work for which previous payments were issued, constitutes legitimate grounds for debarment pursuant to N.J.A.C. 7:1D et seq.

(Signature) (Date)

(Name and Title of Signer-Please *Type*

SECTION 01010

SUMMARY OF WORK

PART 1: GENERAL

1.01 LOCATION OF WORK

- A. The work of this Contract is located at Passaic Valley Sewerage Commission, in the City of Newark, Essex County, New Jersey.

1.02 SCOPE OF WORK

- A. Contractor shall furnish all labor, materials, equipment and incidentals required by the Contract Documents to remove underground obstacles, backfill the excavations, locate any existing piles or structures that will remain in place, provide installation of a retaining wall for protection of the existing bridge, and perform all other appurtenances and related work required to complete the Project. All work and systems shall be as shown on the Drawings and as specified herein.
- B. The Work includes, but is not necessarily limited to, the following work:
 - 1 Work in accordance with the General Conditions as set forth in the specifications Section 00700 of the Contract Documents.
 - 2 Remove and dispose of rubbles and remains of the existing underground conduits, slab, and sedimentation basin interfering with the proposed work. The existing sedimentation basin may be filled with concrete debris which shall be demolished and removed.
 - 3 Locate the existing timber piles and survey their location using a licensed professional surveyor.
 - 4 Install the retaining wall.
 - 5 Backfill the excavations with common fill in accordance with the Contract Specifications and site restoration
 - 6 Restore the site

1.03 WORK SEQUENCE

- A. Contractor shall accommodate Owner's occupancy during the construction period and ensure completion of the Work in the Contract Time. Completion dates of the various stages shall be in accordance with the approved construction schedule submitted by the Contractor.

1.04 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit the use of the premises for his/her Work and for storage to allow for Owner occupancy and use.
- B. Coordinate use of premises with Owner or Engineer.
- C. Contractor shall assume full responsibility for security of all his/her and his/her subcontractors' materials and equipment stored on the site. Equipment storage areas and staging area are shown on the Drawings.
- D. If directed by the Owner or Engineer, move any stored items, which interfere with operations of Owner or other contractors.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

1.05 OWNER OCCUPANCY

- A. Owner will occupy premises during performance of the work to conduct his/her normal operations. Coordinate all construction operations with Owner or Engineer to minimize conflict and to facilitate Owner usage.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. The Work shall include furnishing all labor, materials, equipment and incidentals required to complete the work specified herein and shown on the Contract Drawings and all addenda. The Bid Proposal for this Contract is a combination of lump sum costs, unit prices and allowance items.

1.02 SITE PREPARATION (Bid Item No. 1)

1. Measurement for construction of the Site Preparation will be on a lump sum basis.
2. Payment for the construction will be made at the lump sum price bid under Item No. 1 of the Bid Form and shall provide full compensation for furnishing all labor, materials, equipment, and incidentals required to perform site preparation. The work includes, but is not limited to, excavation and removal of rubble, demolition of remaining structures, backfilling of material excavated and stockpiled, backfilling of material imported to the site, location of piles, environmental and cultural resource protection/ restoration measures as shown on the Drawings and as specified in the Contract Documents. Payment shall also provide full compensation for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.

1.03 FURNISHING CLEAN BACKFILL (Bid Item 2)

1. Measurement for Furnishing Clean Backfill will be made on a per ton basis as determined by tickets furnished.
2. Payment for Furnishing Clean Backfill will be at the unit price bid in the Bid Form for Bid Item 2 and shall be full compensation for all labor, equipment and incidentals, to furnish and import backfill necessary to restore the site to the grades as indicated on the drawings. The clean backfill materials shall be common fill conforming to the requirements of the NJDEP Clean Fill Criteria N.J.A.C. 7:26E-1.8. Materials must meet the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and Impact to Groundwater (IGW) Criteria. The placement and compaction of the furnished backfill material shall be paid for under Bid Item 1.

1.04 TRANSPORTATION AND DISPOSAL OF UNSUITABLE BACKFILL MATERIALS (Bid Item No. 3)

1. Measurement for Transportation and Disposal of Unsuitable Backfill Materials will be made on a per ton basis.

2. Payment for Transportation and Disposal of Unsuitable Backfill Materials will be at the unit price bid in the Bid Form for Bid Item 3 and shall be full compensation for all labor, equipment and incidentals, to segregate, stockpiling loading transportation and disposal of excavated materials that, the Engineer determines is not suitable for backfilling following demolition of subsurface structures. The unsuitable backfill materials are expected to be ID-13C solid waste type in accordance with N.J.A.C. 7:26-2.13(g) or equivalent. In-situ sampling of the concrete sedimentation pad located to the north of the existing electrical substation was performed in June 2016 and the testing results are included in Appendix C. The cost for excavating the materials is included in bid Item 1. The cost for furnishing any clean fill necessary for backfilling as a result of the transportation and disposal of the unsuitable backfill materials is included in Bid Item 2.

1.05 ALLOWANCE FOR PVSC SECURITY TO PROVIDE TRAFFIC CONTROL (Bid Item No. 4)

1. Measurement for the Allowance for PVSC Security to provide traffic control shall be on an as needed basis.
2. Payment for the work shall be made at the actual costs incurred by the Contractor to provide PVSC Security for the provisions of traffic control. The Contractor shall be reimbursed for the actual costs incurred and shall not be allowed to markup the costs.

1.06 ALLOWANCE FOR DEMOLITION AND DISPOSAL OF CONCRETE STRUCTURES (Bid Item No. 5)

Bid Item No. 5 is for the demolition and disposal of concrete structures that are not shown on the Drawings to be demolished but are encountered during the Site Preparation work and are determined by the Owner and Engineer to be required to be removed for the execution the work.

Measurement and Payment for the Allowance for Demolition and Disposal of Concrete Structures will be made accordance with the Conditions of the Contract. Written authorization by the Owner for utilization of this allowance shall be required.

1.07 ALLOWANCE FOR RELOCATION OF UTILITIES (Bid Item No. 6)

Bid Item No. 6 is for the relocation of utilities that are not shown on the Drawings but are in the way of the Site Preparation work and are determined by the Owner and Engineer to be required to be relocated for the execution the work.

Measurement and Payment for Allowance for Relocation of Utilities will be made in accordance with the Conditions of the Contract. Written authorization by the Owner for utilization of this allowance shall be required.

1.08 ALLOWANCE FOR CIVIL SITE WORK (Bid Item No. 7)

Bid Item No. 7 is for any civil site work that is not shown on the Drawings but is necessary for the Site Preparation work and is determined by the Owner and Engineer to be required.

Measurement and Payment for Allowance for Civil Site will be made in accordance the Conditions of the Contract. Written authorization by the Owner for utilization of this allowance shall be required.

1.09 EXTRA WORK

- A. Extra work, if any, will be performed in accordance with Articles 10, 11 and 12 of the General Conditions of the Contract and will be paid for in accordance with the provisions of those Articles and Article.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 01050
PROJECT CONTROLS (SURVEYING)

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Provide and pay for field engineering services required for project; including but not limited to:
 - 1. Survey work required for project controls and layout.
 - 2. Certified as-built surveys specified herein.
 - 3. Locating the existing timber piles. Existing piles are anticipated to be located approximately 3 feet on center.
- B. Retain the services of a registered land surveyor licensed in the State of the New Jersey to:
 - 1. Identify existing control points and property line corners indicated on the Drawings.
 - 2. Verify and record all existing structure locations in the project area and the locations of all proposed structures.
 - 3. Maintain an accurate record of locations of all existing buried piping and other buried existing facilities (piping, conduits, and structures) encountered and/or relocated during construction of the new Work.
 - 4. Locate and record the location of the existing timber piles.
 - 5. The survey results shall be provided in accordance with State Plane Coordination System.

1.02 RELATED WORK

- A. Contract closeout is included in Section 01700.

1.03 SUBMITTALS

- A. Submit, to the Engineer, the name, address and state registration and license number of proposed registered land surveyor.
- B. On request of the Engineer, submit documentation to verify accuracy of field engineering work.
- C. Prior to backfilling timber pile locations and no later than weekly during timber pile locating, submit certified drawing(s) (with the Surveyor's title block) of the items listed below. All surveys shall be tied to the applicable Grid System and shall indicate all pre-existing and new project benchmarks. Vertical Control shall conform to the project elevation datum designated on the plans.
 - 1. Certified site survey at 1-in = 50-ft scale or larger, but not greater than 1-in = 20-ft scale, on 24-in by 36-in sheet(s), indicating the building corners, sidewalks, paved areas and location of all above ground structures within the project site or limits of construction.

2. Certified survey showing the locations, lines and grades in plan and profile views of all below-grade lines (piping and concrete-encased electrical ducts) and other buried facilities (e.g., valves, tanks, etc), as well as the existing timber piles.

1.04 QUALIFICATIONS OF SURVEYOR

- A. Registered land surveyor, licensed in the state of the project location.

1.05 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the project are those designated on Drawings.
- B. Locate and protect control points prior to starting site work and preserve all permanent reference points during construction.
 1. Make no changes or relocations without prior written notice to and approval by the Engineer.
 2. Report to the Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 3. Require the surveyor to correctly replace project control points which may be lost or destroyed. Establish replacements based on original survey control.

1.06 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two permanent bench marks on site, referenced to data established by survey control points.
 1. Record locations, with horizontal and vertical data, on the as-built Survey.
 2. Permanent benchmarks shall be installed and spaced for convenient reference and used at locations on the plant site.
 3. Benchmarks shall be installed to National Geodetic Survey standards and shall include horizontal and vertical data, as well as the installation date.
- B. Establish lines and levels; locate and lay out:
 1. Site improvements.
 - a. Stakes for grading, fill and topsoil placement.
- C. If lines, levels or layouts are lost or destroyed, or if required by the Owner or Engineer, verify layouts by same methods.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. Maintain an accurate record of existing piping, conduit and timber piles.
- C. At the end of the project, submit the following:
 - 1. Four (4) signed and sealed prints of all required as-built survey information
 - 2. Four (4) electronic copies of all required as-built survey information on a CD or USB storage device.

END OF SECTION

SECTION 01110

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment and perform all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes; or violate any applicable environmental regulation.
- B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise and solid waste, as well as other pollutants.
- C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work. Provide erosion control measures such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching or other special surface treatments as are required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area.
- D. This Specification is intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.
- E. All phases of sedimentation and erosion control shall conform to the requirements outlined in the Standards for Soil Erosion and Sediment Control in New Jersey, latest edition including Addenda.

1.02 APPLICABLE REGULATIONS

- A. Comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.
- B. Comply with all Federal, State, and Local regulations, rules, guidance, and requirements concerning the handling, transportation and disposal of wastes, including, **but not limited to:**
 - 1. Resource Conservation and Recovery Act (RCRA)- Non-Hazardous Wastes: 40 CFR 240-259
 - 2. RCRA-Hazardous Wastes: RCRA: 40 CFR 260-273,
 - 3. RCRA Universal Wastes: 40 CFR 273
 - 4. RCRA- Used Oil and Underground Storage Tanks: 40 CFR 273- 282

5. United States Department of Transportation (USDOT) Hazardous Material Regulations: 49 CFR 105-180
6. New Jersey Administrative Code (NJAC) 7:26 Solids Waste Rule
7. NJAC 7:26A Recycling
8. NJAC 7:26G Hazardous Waste;
9. NJAC 7:26H Solid Waste Utility Regulations
10. Soil Erosion and Sediment Control Certification issued by the Hudson Essex Passaic Soil Conservation District in accordance with N.J.S.A. 4:24-1 et. seq.

1.03 NOTIFICATIONS

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions, or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. The Contractor shall, after receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.
- B. The Contractor shall provide written notification prior to bringing onsite any equipment that meets the requirements described in Specification Section 01750 Maintenance of Plant Operations During Construction, including but not limited to the following. Notification requirements are described in the aforementioned Section 01750:
 1. Emergency power generating equipment
 2. Power generating equipment
 3. Stationary equipment containing Reciprocating Internal Combustion Engines (RICE)
 4. Chemical or Fuel storage tanks and equipment meeting the definition of Contractor Hazardous Material Storage Tank (CHMST) described in Section 01750 Maintenance of Plant Operations During Construction.

1.04 IMPLEMENTATION

- A. Prior to commencement of the work, meet with the Engineer to develop mutual understandings relative to compliance with this provision and administration of the environmental pollution control program.
- B. Remove temporary environmental control features, when approved by the Engineer, and incorporate permanent control features into the project at the earliest practicable time.

PART 2: PRODUCTS - (NONE THIS SECTION)

PART 3: EXECUTION

3.01 ENVIRONMENTAL AND CULTURAL RESOURCE PROTECTION/RESTORATION

- A. These specifications which spell out the environmental and cultural resource protection/restoration shall have precedence over other potentially contradictory language contained elsewhere in the design Contract Documents. In instances where the provisions of a New Jersey Department of Environmental Protection-issued permit contradict a provision of the specifications (including those identified in Environmental Assessment Requirements for State Assisted Environmental Infrastructure Facilities, N.J.A.C. 7:22-10), the environmental resources protection and/or restoration and cultural resource mitigation measures identified in the Department-issued permit shall govern.
- B. All activities which are part of the comprehensive environmental infrastructure project(s) for the planning area must conform to the requirements of this section regardless of the eligibility of individual components of the project.

3.02 EROSION AND SEDIMENT CONTROL

- A. Every effort shall be made to prevent and correct problems associated with erosion and sedimentation which could occur during and after project construction. At a minimum, erosion and sediment control measures shall conform to the following:
 - 1. All erosion and sedimentation control measures shall be in place prior to any grading operations or construction of proposed facilities and shall be maintained until construction is complete and the construction area is stabilized. After restoration is complete, temporary control measures shall be removed and disposed of properly.
 - 2. All erosion and sedimentation control measures shall be constructed and maintained in accordance with the current "Standards for Soil Erosion and Sediment Control in New Jersey." prepared by the New Jersey State Soil Conservation Committee.
 - 3. Disturbed areas that will be exposed in excess of 14 days shall be temporarily seeded and/or mulched until proper weather conditions exist for establishment of a permanent vegetative cover.

3.03 SITE AND ACCESS CLEARING

- A. Site and access clearing must be confined to approved construction areas. Protection of existing vegetation must be practiced wherever possible. At a minimum, site access and clearing measures shall conform to the following:
 - 1. Temporary and permanent easement widths must be reduced to the minimum feasible for the proposed construction. Unless specifically approved by the Owner and the New Jersey Department of Environmental Protection, permanent access roads must not be more than eight feet wide, and there shall be no permanent access roads in environmentally critical areas. Access roads may be paved only where absolutely necessary, as determined by the Owner and the New Jersey Department of Environmental Protection.

2. Only those portions of the site which are absolutely necessary and essential for construction shall be cleared. Whenever possible, excavation shall include the removal and storage of topsoil from the site for future use. The length of time of ground disturbance shall be reduced to the minimum practicable, especially in environmentally critical areas. Ground disturbance shall be avoided until immediately preceding construction to minimize exposure of soils.
 3. Trees and shrubs within construction easements, which are not required to be removed to permit construction, shall be protected to the drip line with appropriate protection measures such as snow fencing or batter boards. Trees and shrubs whose removal is necessary to facilitate construction shall either be replanted at the same location or replaced with nursery stock of the same kind. Trees of greater than 12 inches in diameter should be preserved whenever possible by implementing slight shifts in alignment or tunneling under tree roots. Specimen trees, as identified in "New Jersey's Big Trees" (1998) published by the Department's Division of Parks and Forestry listing specimen trees in the State, shall be preserved.
 4. In heavily wooded areas, every effort shall be made to avoid the destruction of common native trees and shrubs so as not to unduly disturb the ecological balance or environmental quality of the area. Trees of 12 inch diameter or greater should be preserved whenever possible and protected to the drip line. Where practical, common native trees and shrubs, of one through three-inch caliper, which must be cleared from the construction area, shall be stockpiled for use in restoration. Straggling roots shall be pruned. Trees which must be pruned to facilitate construction shall be cut cleanly and painted with tree paint. If a tree not intended to be removed is damaged, the wood shall be repaired according to common nursery practice and painted with tree paint.
- B. Only those portions of the site which are absolutely necessary and essential for construction shall be cleared. Whenever possible, excavation shall include the removal and storage of topsoil from the site for future use. The length of time of ground disturbance shall be reduced to the minimum practicable, especially in environmentally critical areas. Ground disturbance shall be avoided until immediately preceding construction to minimize exposure of soils.

3.04 RESTORATION MEASURES

- A. The aim of restoration is to restore the disturbed area to a condition as nearly equal to pre-disturbance condition as possible. At a minimum, restoration measures shall conform to the following:
1. Final restoration shall be undertaken as soon as an area is no longer needed for construction, stockpiling or access. Excavated material unsuitable for backfill as set forth at N.J.A.C. 7:14-2.13 and considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by the New Jersey Department of Environmental Protection.
 2. Unsuitable excavated material which is not considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be removed in accordance with N.J.A.C. 7:22-10.11(i)3. When access roads are no longer needed, road fill shall be removed and the access area shall be restored to pre-disturbance conditions.
 3. Care should be taken to avoid damage to adjacent vegetation and to prevent the formation of depressions that would serve as mosquito pools.

4. Topsoil shall be replaced with adequate amounts of topsoil material to restore the disturbed area to its original, pre-disturbance grade and depth of topsoil.
5. Rates and types of fertilization, liming, and seeding shall be as recommended by the local Soil Conservation District based on soil tests and local conditions. Seed mixtures shall be selected that are best suited for the particular site conditions. Seed selection shall provide for a quickly germinating initial growth, to prevent erosion, and for a secondary growth that will survive without continuing maintenance. Mulching shall occur immediately after seeding and in no case shall more than five days elapse between seeding and mulching.
6. In wooded areas, for a 50-foot wide construction easement, generally 10 trees should be planted for every 100 feet of length of the easement. More trees would be required in wider easements or densely wooded areas. Plans shall include a restoration schedule specifying the quantity, common and botanic names, sizes, and spacing of trees to be planted and the type of seed mixtures to be used from station to station. Trees to be replaced should be trees native to New Jersey suitable for the particular site and generally should conform to the list of trees found in the current "Standards for Soil Erosion and Sediment Control in New Jersey," prepared by the New Jersey State Soil Conservation Committee, incorporated herein by reference, as amended and supplemented.
7. In landscaped areas, environmental features shall be replaced or restored to pre-disturbance condition or better. This includes sodding, replacement of trees and shrubs, fences, drives, and other landscape features in kind.

3.05 PROHIBITED CONSTRUCTION PROCEDURES

A. Prohibited construction procedures include, but are not limited to, the following:

1. Dumping of spoil material into any stream corridor, any wetlands, any vernal habitats, any surface waters, any sites listed or eligible for listing on the New Jersey or National Registers of Historic Places, or at unspecified locations;
2. Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, wetlands, or surface waters;
3. Pumping of silt-laden water from trenches or other excavations into any surface waters, stream corridors, wetlands, or vernal habitats;
4. Damaging vegetation adjacent to or outside of the access road or the right-of-way;
5. Disposal of trees, brush and other debris in any stream corridors, wetlands, vernal habitats, surface waters, or at unspecified locations;
6. Permanent or unspecified alteration of the flow line of any stream.
7. Open burning of project debris.
8. Use of calcium chloride, petroleum products or other chemicals for dust control; and
9. Use of asphaltic mulch binders; and
10. Any unpermitted discharge of sewage.

3.06 WETLANDS

A. Construction in wetlands shall conform to requirements of the New Jersey Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et. seq., and N.J.A.C. 7:7A; requirements imposed through applicable permits and, at a minimum, the following:

1. Before excavation is initiated in the wetlands, a line of hay bales or other siltation control barriers shall be staked in place along the edges of the construction area and shall remain in place until restoration is complete. In addition, marsh mats shall be used for heavy construction equipment.
2. Topsoil shall be stripped and soil layers replaced in the excavated area in the same order that they were removed. Final grade shall match the elevation prior to disturbance.
3. The cleared easement shall be re-vegetated with a mix and density of species 'similar to that which was removed. Material for vegetation can be preserved from the areas cleared and replanted or provided from nursery stock.
4. Anti-seep collars shall be installed as needed in the trench to avoid draining the wetland.
5. Coastal wetland areas disturbed during the construction shall be restored to pre-disturbance conditions by an environmentally oriented concern with documented successful experience in the restoration of wetland areas.

3.07 STREAM CROSSINGS

A. Stream crossings shall conform to the requirements of the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et. seq., and N.J.A.C. 7:13.

B. Where stream crossings are necessary, adverse impacts shall be minimized by including appropriate mitigating measures and restoration techniques. At a minimum, mitigating measures and techniques shall include the following requirements:

1. Avoid clearing until immediately preceding construction.
2. Prior to clearing, place staked hay bales across the sloped approach to the crossing and maintain, except during actual crossing, until restoration is complete.
3. Avoid stockpiling material in the floodplain of the stream.
4. Set up in-stream sediment controls prior to commencing construction.
5. Complete crossing expeditiously. Consider weather and anticipated stoppages for weekends and holidays and plan to cross at such a time that the work can be continued until complete.
6. Maintain effectiveness of sediment control features throughout the crossing process.
7. Construction through stream corridors, wetlands and other surface waters shall be scheduled to minimize damage to fish populations wherever possible. Recommended periods during which construction is to take place shall be in accordance with N.J.A.C. 7:13-5.6(g) and N.J.A.C. 7:7E.
8. Restoration shall be initiated immediately following the crossing and be completed as soon as possible. Restoration shall conform to the following:

- a. Re-establishing channel contours.
- b. Replacing bottom with native material, or in very silty bottoms, with crushed stone (one through three-inch diameter).
- c. Stabilizing banks with rip-rap. The size and nature of the rip-rap shall conform to the current "Standards for Soil Erosion and Sediment Control in New Jersey", prepared by the New Jersey State Soil -Conservation Committee. Jute mesh may be used to stabilize intermittent or extremely low flow streams with shallowly sloping banks in sand/silt bottomed streams.
- d. Re-vegetating banks with appropriate native materials such as grasses, ground covers, trees and shrubs.

3.08 STEEP SLOPES

- A. Slopes exceeding 15 percent require special treatment. Measures such as water diversion berms, sodding, or the use of jute or excelsior blankets should be used as appropriate. Hay bales shall be placed at the base of the slope prior to ground disturbance. Steep slopes that have been disturbed, if not sodded, shall be seeded and mulched immediately after construction is complete. Slope boards or other measures necessary to prevent slumping of the disturbed slope shall be incorporated, where appropriate.

3.09 ACID PRODUCING SOILS

- A. If there is a possibility of encountering acid-producing deposits in the course of construction, as identified during the planning process, the following special requirements and conditions will apply:
 - 1. In vegetated areas, the top two feet of soil shall be stripped and stockpiled separately from the material to be excavated. A soil specialist, to be provided by the Owner, shall monitor the stripping operation. If any acid-producing deposits are identified, this material and any contaminated soil shall be disposed of on the same day. The presence of acid-producing deposits is detected by the use of the following tests:
 - a. Determining the pH of the soil when suspended in 0.5 Molar calcium chloride solution (of neutral pH). A pH value below 3.0 indicates presence-of ferrous sulfate and presence of acid-producing deposits is strongly suspected.
 - b. Test for sulfate by adding a drop of 10 percent barium chloride solution to a water extract of the material. If voluminous flocks of barium sulfate form immediately the presence of acid-producing deposits is strongly suspected.
 - 2. The disposal site shall be approved by the Owner and the New Jersey Department of Environmental Protection. Any soil of this type disposed of shall be covered with a minimum of two feet of cover to prevent rapid oxidation and subsequent acid formation.
 - 3. In both vegetated and paved areas, when acid-producing deposits are encountered, as determined by the soil specialist, excavated trench material shall be returned to the trench as follows:
 - a. Lower material first, followed by upper material.

- b. The top one to two inches of soil on which the deeper soil was stockpiled shall be scraped and placed below a depth of two feet.
 - c. For pipeline construction, the quantity of material to be displaced by bedding and pipe, as well as soil scraped from the stockpile area, shall be subtracted from the deeper, excavated material and this quantity of deeper material removed to an approved disposal site and covered as described in the "Restoration Measures."
 - d. After backfilling the deeper soil, one ton of limestone per 2,000 square feet shall be spread over the deeper soil in the trench. This liming requirement is applicable in areas of well drained, nonsaturated soils, as determined by the soil specialist.
 - e. In vegetated areas, the top two feet of soil, stockpiled for this purpose, shall then be replaced. If the top two feet of soil was also contaminated, clean backfill material similar to the native topsoil shall be used in place of the contaminated material.
4. The excavated acid-producing deposits shall not be exposed for a period longer than eight hours. When acid-producing deposits are encountered, the trench opened in any construction day shall be backfilled and the areas cleaned up by the close of the day. Where this is impracticable, such as in the construction of pumping stations and treatment plants, exposed acid-producing deposits shall be covered with limestone screenings at a rate of 100 tons per acre and then covered with six inches of compacted soil within one week of exposure or before the exposed soil drops to pH 3, whichever occurs first. The pH shall be monitored daily under this procedure.
5. Temporary restoration of vegetated areas shall consist of mulching and shall be put in place at the end of each day's construction. Permanent restoration of the area shall begin as soon as construction is complete and after the results of incubation tests, where necessary, are available.
6. Prior to restoring vegetated areas, the soil specialist shall perform pH tests on the in-situ soil after the construction is completed. If the pH is below 4, intensive liming shall be required in order to make the soil suitable for plant survival.
7. Lime requirement tests shall be performed by the soil specialist to determine the lime application rates. This will require an incubation test in which the sample is oxidized for a period of six weeks, as follows.
- a. The sample shall be air dried and ground so that the whole sample passes a 0.5-millimeter sieve.
 - b. The lime requirement to reach pH 6.5 shall be determined initially and again at two-week intervals for six weeks, using standard soil testing techniques.
 - c. The total lime requirement determined by this method can be extrapolated to the area under consideration.
8. At a minimum of 30 tons of limestone per acre or the amount of lime required according to the incubation test result shall be applied prior to seeding and planting where the pH is less than 4. Where the pH is greater than 4, liming and fertilizing requirements set out in the planting and environmental specifications shall apply.

9. The spreading and mixing of the subsoil and any topsoil contaminated with acid-producing deposits around the site and beyond the site is prohibited. Areas used for stockpiling acid-producing deposits shall be minimized. Equipment used for excavation and backfilling shall be cleaned, to the extent practicable, at the end of each day's operation and the soil removed shall be placed in the trench below a depth of two feet. No construction shall take place during significant rainstorms or while the area is saturated to avoid smearing or spreading of the acid-producing deposits over the area.

3.10 DEWATERING

- A. The Contractor is responsible for obtaining all applicable dewatering permits.
- B. When dewatering will occur and a dewatering permit is not required, the Contractor shall monitor for adverse effects to structures or wells due to dewatering and shall be responsible to remedy same to the satisfaction of the Owner and the New Jersey Department of Environmental Protection. Discharges from dewatering activities which contain silt are subject to the following controls:
 1. All discharges from dewatering activities to surface waters, wetlands, vernal habitats, 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.
 2. Sewer inlets within construction areas shall be provided with perimeter hay bales or other appropriate siltation control measures.
 3. PVSC will accept discharge of dewatering, but silt must be removed. No obstructions to traffic are allowed on all roadways on the site or to the trucked in liquid waste facility.

3.11 STOCKPILING, STORAGE, AND DISPOSAL

- A. Requirements with regards to the location and control of stockpile, storage and disposal areas, whether provided by the Owner or the Contractor, must conform to the following:
 1. Only environmentally suitable stockpile sites may be used for the purposes of staging or storing materials, equipment and suitable trench backfill material. Environmentally suitable sites must be level, and devoid of mature stands of natural vegetation. Drainage facilities and features, wetlands, vernal habitats and stream corridors are not environmentally suitable sites.
 2. The boundary of all stockpile areas shall be clearly marked by hay bales, silt fencing or another appropriate method. Where fill is to be stored in excess of 10 days, a suitable means of protecting excavated material from wind and water erosion shall be employed. Erosion control methods may include one or more of the following: mulching, sprinkling, silt fencing, haybaling and stone covering.
 3. Unsuitable excavated material which is not considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be removed from the site and disposed of at a site approved by the Owner in accordance with the following:

- a. Disposal sites selected by the Contractor shall be evaluated and approved by the Owner prior to their use. Disposal sites may also be selected by the Owner. The Owner may conduct periodic inspection of disposal sites to ensure compliance with the requirement of this subsection during the off-site disposal operation.
- b. The disposal of unsuitable excavated material in wetlands, vernal habitats, stream corridors and floodplains is strictly prohibited, even if the permission of the property owner is obtained.
- c. The Contractor shall be responsible to remove any fill improperly placed by the Contractor at the Contractor's expense and restore the area impacted.
- d. If unsuitable excavated material is placed on private property, a hold harmless release in favor of the Owner and New Jersey Department of Environmental Protection shall be obtained from the property owner.
- e. Prior to approval of a site for unsuitable excavated material disposal, where the site exceeds 5,000 square feet, the Contractor shall obtain the appropriate certification of the soil erosion and sediment control plan in accordance with the State's standards for soil conservation (N.J.S.A. 4:24-1 et. seq. also referred to as Chapter 251) and submit same to Owner. Where the site is less than 5,000 square feet, the Contractor shall on behalf of and with a copy to Owner advise the property owner of the need for erosion and sediment control and obtain a statement that the property owner accepts complete responsibility for implementation of appropriate methods to prevent erosion and sedimentation.

3.12 DUST

- A. In order to control dust, as often as required during each working day, and particularly prior to the conclusion of each working day, areas under immediate construction (including access roads and other areas affected thereby) shall be swept and wet down with water sufficiently to lay dust. In addition, these areas shall be wet down during non-working hours (including weekends) as often as required to keep the dust under control. The use of calcium chloride or petroleum products or other chemicals for dust control is prohibited.
- B. Maintain dust control throughout entire construction period including non-working hours (including weekends) by use of water sprinklers as approved by Engineer. Coatings on structures located on private property, resulting from failure to control dust, will be removed promptly at no additional expense.
- C. The Contractor will be required to maintain all excavations, embankment, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.
- D. Sprinkling must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

3.13 NOISE

- A. In order to limit noise impacts in the vicinity of sensitive receptors, construction operations and activities shall be limited as follows: Monday through Friday between the hours of 7:00 A.M. and 6:00 P.M. unless variances to these times are granted in times of emergency. No driving, pulling, or other operations entailing the use of vibratory hammers or compactors shall be permitted, other than between the hours of 8:00 A.M. and 5:00 P.M. The number of machines in operation at a given time shall be limited to the minimum practicable. All engine generators or pumps must have mufflers and be enclosed within a temporary structure.
- B. The Contractor shall make every effort to minimize noises caused by his operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with NJAC State and Federal regulations. Boilers shall be equipped with insulated enclosures for noise reduction.

3.14 CULTURAL RESOURCES

- A. PVSC's system, especially its Newark facility, has been identified by the New Jersey and U.S. governments to be properties of historic significance that are eligible for the protections afforded by the National Register of Historic Places. Several of the plant's older buildings and a number of its below-ground components (pipes, equipment, etc.) are considered to be historically sensitive. Be advised that aspects of the project that may affect the plant's historical resources will require the full-time presence of a separately contracted archaeologist. The archaeologist must be given advanced notice of at least five (5) working days regarding the construction schedule and any changes therein. No ground disturbance will be permitted without the archaeologist or a member of the archaeologist's team present. The archaeologist may at times request safe access to the excavation area and/or may request that the excavation work slowdown or stop altogether. PVSC's permit conditions, to which the contractor will adhere at all times, require that the construction crew accommodate these requests completely and immediately. Work stoppages are not anticipated for this project and should be considered unlikely, but the Contractor will need to plan for occasional short slow-downs and for schedule coordination with the archaeological consultant.
- B. The Cultural Resource Consultant ("Consultant") for the project is Matt Tomaso (PS&S). He can be reached at mtomaso@psands.com and/or 732-584-0635.
- C. The Consultant's role on this project is to assist the client and the Contractor in their compliance with permitting and sponsorship requirements of state and federal agencies for the protection and, as needed, investigation and documentation of significant historical resources that will be impacted over the course of the project.
- D. The Contractor must inform the Cultural Resource Consultant at least three days in advance of any ground-disturbing activities (i.e. any activities involving any amount of excavation). No excavation may occur without the presence of the Consultant and/or members of his staff. In most cases, the Consultant will need to document (through photographs, illustrations and verbal descriptions) subsurface existing conditions, particularly any demolished and/or intact buried structural features that represent PVSC's early 20th century facility. To that end, the Consultant may require the Contractor to proceed slowly and carefully should any such features be exposed and may enlist the assistance of the Contractor's excavator/operator if and when such features are identified. Once the Consultant has completed the photographic recordation and verbal description of any features encountered, the Consultant shall inform the Contractor that the Contractor may proceed at their customary pace.
- E. The Contractor should anticipate at most a few very brief (i.e. less than half an hour) stoppages and/or slow-downs over the course of the project's excavation processes for the purposes

outlined above.

- F. If a cultural resource is encountered during the course of construction, the Contractor is directed to halt all construction activities in that area. The Contractor shall immediately contact the Engineer and the Engineer who shall contact the New Jersey Department of Environmental Protection. The Department will determine and require initiation of the appropriate actions in conformance with N.J.A.C. 7:22-10.8.
- G. When the Owner is contacted by the Contractor in accordance with the above provisions, the Owner must immediately contact NJDEP-Municipal Finance and Construction-Technical Services at (609) 292-8961 or (609) 633-1170. The Bureau of Program Development & Technical Services will determine the appropriate actions, in accordance with NJAC 7:22-10, and federal Advisory Council on Historic Preservation procedures.
- H. The Contractor shall not dispose of unsuitable excavated material at, stockpile construction materials at, or obtain borrow material from, properties which are listed or eligible for listing on the New Jersey or National Registers of Historic Places.
- I. The Owner will employ one or more if warranted by the scope of the project, environmental inspectors to ensure that the requirements of the specifications relating to environmental and cultural resources protection and restoration are effectively carried out. Individuals designated as environmental inspectors by the Owner must possess, at a minimum, the education/experience qualifications of an Environmental Specialist employed by the NJDEP. The NJDEP will also conduct environmental inspections to oversee the conduct of the protection/restoration measures. Responsibilities of the Owner's environmental inspectors include the following:
 - 1. Daily inspections of active work areas and periodic inspection of maintenance or restoration areas sufficient to ensure performance of protection measures in accordance with the Contract Documents.
 - 2. The maintenance of a daily job diary in which they will record the progress of the work and of any problems encountered. The environmental inspectors will notify the Contractor in writing immediately upon noticing that environmental specifications are not being met.
 - 3. At frequent intervals during construction, the Owner, the Engineer, the environmental inspectors and the NJDEP inspectors will meet to review progress and to resolve difficulties that might result in unnecessary delays in the work. The NJDEP will notify the Owner if deficiencies are not immediately corrected. The Owner will then direct compliance with the environmental requirements.

3.15 ENVIRONMENTAL MAINTENANCE BOND

- A. The Contractor shall supply an environmental maintenance bond in the amount of \$25,000 or 50 percent of the price bid for the materials needed to fulfill the environmental specifications, whichever is greater. The environmental maintenance bond shall provide that the Contractor shall remedy, without cost, any defects which result from faulty workmanship or from failure to comply with the specifications and which develop during the period of one year from the expiration of the performance bond, required pursuant to N.J.S.A 40A:11-22.

3.16 PHOTOGRAPHS

- A. The Contractor shall obtain and submit to the Engineer photographs of existing conditions prior to the start of site and access clearing and construction. At a minimum, one 8 inch by 10-inch color glossy print photograph shall be obtained for each 100 feet of the construction area. Special attention shall be given to environmentally critical areas and areas outside of the public right-of-way. Photographs shall be labeled by station so that upon completion of the construction, or during construction if necessary, subsequent photographs can be taken from the same control points. The Engineer shall file copies of the above photographs with the New Jersey Department of Environmental Protection. As a supplement to the required photographs, video documentation may be submitted by the Contractor to the Engineer, as is encouraged as a way of documenting site conditions.

3.17 PROTECTION OF STREAMS AND WATERBODIES

- A. The OWNER maintains a Stormwater Pollution Prevention Plan (SPPP) which requires the OWNER to enact Best Management Practices to reduce the quantity and improve the quality of the stormwater runoff from its site, in order to reduce non-point source pollution of streams and waterbodies.
- B. Care shall be taken to prevent, or reduce to a minimum, any damage to any stream from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in the stream, shall not be directly returned to the stream. Such waters will be diverted through a settling basin or filter before being directed into the streams.
- C. The Contractor shall not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any storm sewer. Water from dewatering operations shall be treated by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels.
- D. The Contractor shall also maintain good housekeeping practices on the project site and contractor storage/laydown areas to prevent debris, grit, eroded soil or dust, chemical or petroleum residues, and any other potential pollutants from washing into the stormwater runoff and becoming a source of non-point source pollution. Use of additional, or secondary containment systems may be required.
- E. The OWNER maintains a State approved Discharge Prevention Containment and Countermeasure Plan (DPCC) which is inclusive of the Federal Spill Prevention Control and Countermeasure (SPCC) regulations. All preventative measures shall be taken to avoid spillage of hazardous materials including petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken. Also, as a result of the OWNER'S DPCC Plan, additional written notification, visual inspection, and secondary containment requirements exist for chemical and fuel storage tanks and/or equipment which could be considered Contractor Hazardous Material Storage Tanks (CHMST). These additional requirements are described in Specification Section 01750 Maintenance of Plant Operations During Construction.

3.18 PROTECTION OF LAND RESOURCES

- A. Land resources within the project boundaries and outside the limits of permanent work shall be restored to a condition, after completion of construction, which will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.
- B. Outside of areas requiring earthwork for the construction of the new facilities, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.
- C. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly before beginning operations near them.
- D. Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of.
 - 1. All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-inch in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.
 - 2. Climbing ropes shall be used where necessary for safety. Trees that are to remain, both within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving, in the opinion of the Engineer, shall be immediately removed and replaced.
- E. The locations of the Contractor's storage, and other construction buildings, required temporarily in the performance of the work, shall be cleared portions of the job site or areas to be cleared as shown on the Drawings and shall require written approval of the Engineer and shall not be within wetlands or floodplains. The preservation of the landscape shall be an imperative consideration in the selection of all sites. Drawings showing storage facilities shall be submitted for approval of the Engineer.
- F. If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval at least ten days prior to scheduled start of such temporary work.
 - 1. A layout of all temporary roads, excavations and embankments to be constructed within the work area.
 - 2. Details of temporary road construction.
 - 3. Drawings and cross sections of proposed embankments and their foundations, including a description of proposed materials.

SECTION 01311

CONSTRUCTION SCHEDULING

PART 1 GENERAL

- A. The Contractor shall, within ten days after the effective date of Agreement, provide and submit to the Engineer for approval, the schedule the Contractor plans to maintain in order to successfully construct the work with the time allotted. This Schedule shall be a time scaled Bar Chart in order of early start and shall account for all the work of the Contractor. In addition to all reasonably important construction activities, the Schedule shall provide for the proper sequence of construction considering the various crafts, purchasing time, submittal approval, material delivery, equipment fabrication, and similar time consuming factors. Failure to supply the construction schedule on time will be cause for withholding progress payments.
- B. Following receipt by the Engineer of the Schedule a pre-construction conference will then be held between the Owner, Engineer and Contractor to review and, if necessary, revise the Schedule to afford ample time to perform the work in the proper sequence of plant and construction operations. The Engineer shall give approval to the schedule in accordance with paragraph 2.07 of the Conditions of the Contract.
- C. The Contractor bears full responsibility for scheduling all phases and stages of the work to insure its successful execution and completion with the time specified in accordance with all provisions of these Specifications.
- D. The Contractor shall update the Schedule monthly and shall submit it to the Engineer in duplicate. The monthly Schedule update shall include the following items:
 - 1. Activities that are completed or in process are to be identified.
 - 2. Restraints imposed by material deliveries, precedent activity durations or schedule
 - 3. Actual start and completion dates are to be shown.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 Description of Requirements:

- A. This section specifies the general methods and requirements of submissions applicable to the following work-related submittals: Shop Drawings, Product Data, Samples, Maintenance and Lubrication Schedule/Survey, Certified Shop Test Reports, Equipment Manufacturers Certification and Mock-Ups. Additional general submission requirements are contained in paragraphs 6.17 of the General Conditions. Detailed submittal requirements will be specified in the technical specification sections.
- B. All submittals shall be clearly identified by reference to Specification Section, Paragraph, Drawing No. or Detail as applicable. Submittals shall be clear and legible and of sufficient size for sufficient presentation of data.

1.02 Shop Drawings, Product Data, Samples:

A. Shop Drawings

- 1. Shop drawings, as defined in the General Conditions, and as specified in individual work sections include, but are not necessarily limited to, custom-prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the Work.
- 2. All shop drawings submitted by subcontractors for approval shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
- 3. The Contractor shall check all subcontractor's shop drawings regarding measurements, size of members, materials, and details to satisfy himself that they conform to the intent of the Drawings and Specifications. Shop drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission thereof.

4. All details on shop drawings submitted for approval shall show clearly the relation of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted for approval.

B. Product Data

1. Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing and printed product warranties, as applicable to the work.

C. Samples

1. Samples specified in individual Sections, include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols and units of work to be used by the Engineer or Owner for independent inspection and testing, as applicable to the work.

1.03 Contractor's Responsibilities

- A. The Contractor shall review shop drawings, product data and samples, including those by subcontractors, prior to submission to determine and verify the following:
 1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
 4. Conformance with the Specifications.

- B. All submittals, including shop drawings prepared by or under the direction of the Contractor, shall be thoroughly checked by the Contractor for accuracy and conformance to the intent of the Contract Documents before being submitted to the Engineer and shall bear the Contractor's certification with signature of approval certifying that they have been so checked. Submittals without the Contractor's certification with signature of approval, will not be reviewed by the Engineer and will be returned to the Contractor stamped "Rejected." Before submitting them to the Engineer, all submittals shall be bound, properly labeled and consecutively numbered and bear the stamp including the certification statement, included below, on the cover sheet for sheets 11" x 17" and smaller or in a clear space above the title block for drawings.

PASSAIC VALLEY SEWERAGE COMMISSION	
NAME OF PROJECT:	Standby Power Plant – Site Preparation Contract
Date:	
Contract No.:	B128
Name of Equipment:	
Contract Drawing No.:	
Specification Section:	
I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements and they are hereby approved. The information contained herein has been coordinated with all involved Contractor's.	
Contractor:	
Signed:	

Provide to the Resident Project Representative a copy of each submittal transmittal sheet for shop drawings, product data and samples at the time of submittal of said drawings, product data and samples to the Engineer.

- C. The Contractor shall utilize a 10-character submittal identification numbering system in

the following manner:

1. The first character shall be a D, S, P, M, or R, which represents Shop/Working Drawing and other Product Data (D), Sample (S), Preliminary Submittal (P), Operating/Maintenance Manual (M), or Request for Information (R).
2. The next five six digits shall be the applicable Specification Section Number.
3. The next three digits shall be the number 001-999 to sequentially number each initial separate item or drawing submitted under each specific Section number.
4. The last character shall be a letter, A-Z, indicating the submission, or resubmission of the same Drawing, i.e., "A=1st submission, B=2nd submission, C=3rd submission, etc. A typical submittal number would be as follows:

Contract No.- B128_D-003300-008-B

D	=	Shop Drawing
03300	=	Specification Section for Concrete
008	=	The eighth initial submittal under this specification section.
B	=	The second submission (first resubmission) of that particular shop drawing.

- D. Notify the Engineer in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.
- E. The review and approval of shop drawings, samples or product data by the Engineer shall not relieve the Contractor from his/her responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Engineer will have no responsibility therefor.
- F. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.
- G. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

1.04 Submission Requirements:

- A. The PVSC or its designated representative will be establishing a project specific folder structure for this project.
- B. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the work or in the work of any other contractor.
- C. Each submittal, appropriately coded, will be returned within **21 working days** following receipt of submittal by the Engineer.
- D. Number of final approved hard copy submittals required:
 - 1. Shop Drawings as defined in Paragraph 1.02 A: Three (3) hard copies.
 - 2. Product Data as defined in Paragraph 1.02 B: Three (3) hard copies.
 - 3. Samples: Submit the number stated in the respective Specifications Sections.
- E. Submittals shall conform:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The project title and number.
 - 3. Contractor identification.
 - 4. The name of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer
 - 5. Identification of the product, with the specification section number, page and paragraph(s).
 - 6. Field dimensions, clearly identified as such.
 - 7. Relation to adjacent or critical features of the work or materials.
 - 8. Applicable standards, such as ASTM or Federal Specification numbers.
 - 9. Distinct identification of any deviations from Contract Documents.

10. Identification of revisions or resubmittals.

11. An 8" x 3" blank space for Contractor and Engineer stamps.

F. All markings to identify model number, part number, dimension, capacity, etc., shall be reproducible. Highlight markings are unacceptable.

1.05 Review of Shop Drawings, Product Data, Working Drawings and Samples:

A. The review of shop drawings, data, and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed.

1. As permitting any departure from the contract requirements;
2. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials.
3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

B. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.

C. If the shop drawings, data or samples as submitted describe variations and show a departure from the contract requirements which the Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the revised drawings without noting an exception.

D. Submittals will be returned to the Contractor under one of the following codes:

Code 1 - "APPROVED" is assigned when there are no notations or comments on the submittal. When returned under this code the Contractor may release the equipment and/or material for manufacture.

Code 2 - "APPROVED AS NOTED" This code is assigned when a confirmation of the notations and comments IS NOT required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.

Code 3 - "APPROVED AS NOTED/CONFIRM" This combination of codes

is assigned when a confirmation of the notations and comments is required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This confirmation shall specifically address each omission and nonconforming item that was noted. Confirmation is to be received by the Engineer within 15 calendar days of the date of the Engineer's transmittal requiring the confirmation.

- Code 4 - "APPROVED AS NOTED/RESUBMIT" This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the package. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product. This resubmittal is to address all comments, omissions and non-conforming items that were noted. Resubmittal is to be received by the Engineer within fifteen (15) calendar days of the date of the Engineer's transmittal requiring the resubmittal.
- Code 5 - "NOT APPROVED" is assigned when the submittal does not meet the intent of the Contract Documents. The Contractor must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.
- Code 6 - "COMMENTS ATTACHED" is assigned where there are comments attached to the returned submittal which provide additional data to aid the Contractor.

Codes 1 through 5 designate the status of the reviewed submittal with Code 6 showing there has been an attachment of additional data.

- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Engineer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the Engineer.

F. Partial submittals may not be reviewed. The Engineer will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor, and will be considered "Not Approved" until resubmitted. The Engineer may at his/her option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.

G. Repetitive Review

1. Shop drawings and other submittals will be reviewed no more than twice at the Owner's expense. All subsequent reviews will be performed at times convenient to the Engineer and at the Contractor's expense, based on the Engineer's then prevailing rates. The Contractor shall reimburse the Owner for all such fees invoiced to the Owner by the Engineer. Submittals are required until approved.
2. Any need for more than one resubmission, or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the Contract Time.

H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Engineer at least seven working days prior to release for manufacture.

I. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

1.06 Distribution:

- A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall not exceed six.

1.07 Professional Engineer (P.E.) Certification Form:

- A. If specifically required in other Sections of these Specifications, the Contractor shall submit, (at Contractor's sole cost and expense), a P.E. Certification for each item required, in the form attached to this Section, completed filled in and stamped.

1.08 General Procedures for Submittals:

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in

advance of performing the related work or other applicable activities, or within the time specified in the individual work sections, of the Specifications, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the work.

1.09 American Iron and Steel Requirements and Procedures for Submittals:

The Contractor shall submit a certificate (on company letterhead), in the sample form attached to this section, for each of the covered iron and steel products noted herein, certifying that the equipment meets with the Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014.

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

A. Covered Iron and Steel Products - For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- a. Lined or unlined pipes or fittings;
- b. Manhole Covers;
- c. Municipal Castings (defined in more detail by the Act);
- d. Hydrants;
- e. Tanks;
- f. Flanges;
- g. Pipe clamps and restraints;
- h. Valves;
- i. Structural steel (defined in more detail below);
- j. Reinforced precast concrete; and
- k. Construction materials (defined in more detail by the Act).

P.E. CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the State of New Jersey and that he/she has been employed by (Name of Contractor) _____

_____ to design _____
_____ in accordance with Specification Section _____ for
Contract No. B128, Standby Power Generation Plant Site Preparation Contract.

The undersigned further certifies that he/she has performed the design of the _____, that said design is in conformance with all applicable local, state and federal codes, rules and regulations, and that his/her signature and P.E. stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the Passaic Valley Sewage Commissioners or their representative with seven days following written request therefore by the Owner.

P.E. Name

Signature

Address

Contractor's Name

Signature

Title

Address

AMERICAN IRON AND STEEL CERTIFICATION (SAMPLE NO. 01)

The following information is provided as a sample letter of step certification for AIS compliance.

Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (B128 – Standby Power Generation Plant Site Preparation Contract)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

AMERICAN IRON AND STEEL CERTIFICATION (SAMPLE NO. 02)

The following information is provided as a sample letter of certification for AIS compliance.
Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (B128 – Standby Power Generation
Plant Site Preparation Contract)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

*** END OF SECTION ***

SECTION 01312

PROGRESS MEETINGS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Progress meetings will be held throughout the Project. CONTRACTOR shall attend each progress meeting prepared to discuss in detail all items on the agenda.
2. ENGINEER will preside at progress meetings and will prepare and distribute minutes of progress meetings to all meeting participants and others as requested.

B. Date and Time:

1. Regular Meetings: Meetings will be scheduled on a monthly basis, on a day and time agreeable to OWNER, ENGINEER, and CONTRACTOR.
2. Other Meetings: As required.

C. Place: ENGINEER's field office or other location mutually agreed upon by OWNER, CONTRACTOR, and ENGINEER.

D. Handouts: CONTRACTOR shall bring to each progress meeting a minimum of six copies of each of the following:

1. List of Work accomplished since the previous progress meeting.
2. Up-to-date Progress Schedule.
3. Up-to-date Schedule of Submittals.
4. Detailed "look-ahead" schedule of Work planned through the next progress meeting, with specific starting and ending dates for each activity, including shutdowns, deliveries of important materials and equipment, Milestones (if any), and important activities affecting the OWNER, Project, and Site.
5. When applicable, list of upcoming, planned time off (with dates) for personnel with significant roles on the Project, and the designated contact person in their absence.
6. When applicable, copies of Weekly Visual Leak Detection logs and emergency power generating equipment run time (in hours) for the month. (See Section 01750 Maintenance of Plant Operations During Construction)

1.2 REQUIRED ATTENDANCE

A. Representatives present for each entity shall be authorized to act on that entity's behalf.

B. Required Attendees:

1. CONTRACTOR:

- a. Project manager.
- b. Site superintendent.
- c. Safety representative.
- d. When needed for the discussion of a particular agenda item, representatives of Subcontractors and Suppliers shall attend meetings.

2. ENGINEER:

- a. Project manager or designated representative

- b. Resident Project Representative (if any).
- c. Others as required by ENGINEER.
- 3. OWNER's representative(s), as required.
- 4. Testing and inspection agencies, as required.
- 5. Others, as appropriate.

1.3 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revised agenda, if any, will be furnished to CONTRACTOR prior to first progress meeting. Progress meeting agenda may be modified by ENGINEER during the Project as required.
 - 1. Review, comment, and amendment (if required) of minutes of previous progress meeting.
 - 2. Review of progress since the previous progress meeting.
 - 3. Planned progress through next progress meeting.
 - 4. Review of Progress Schedule
 - a. Contract Times, including Milestones (if any)
 - b. Critical path.
 - c. Schedules for fabrication and delivery of materials and equipment.
 - d. Corrective measures, if required.
 - 5. Submittals:
 - a. Review of status of critical submittals.
 - b. Review revisions to Schedule of Submittals.
 - 6. Contract Modifications
 - a. Requests for interpretation
 - b. Clarification notices
 - c. Field Orders
 - d. Proposal requests
 - e. Change Order proposals
 - f. Work Change Directives.
 - g. Change Orders.
 - h. Claims.
 - 7. Applications for progress payments.
 - 8. Problems, conflicts, and observations.
 - 9. Quality standards, testing, and inspections.
 - 10. Coordination between parties.
 - 11. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.
 - 12. Safety.
 - 13. Permits.
 - 14. Construction photographic documentation.
 - 15. Record documents status.
 - 16. Punch list status, as applicable.
 - 17. Other business.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01325

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.01 CONSTRUCTION PHOTOGRAPHS

- A. The Contractor shall engage the services of an experienced photographer, approved by the Engineer, to take job photographs. The photographer will be required to take preliminary photographs of the site prior to the commencement of work as directed by the Engineer. Subsequent photographs as determined by the Engineer shall be taken during the construction phase. The lump sum price bid shall be based on the following:

1. Take a minimum of twenty (20) 8-inch by 10-inch color glossy print photos of the site prior to commencement of work and a minimum of twenty (20) 8-inch by 10-inch color glossy print photos of the site at the completion of work. Take a minimum of twenty (20) 8-inch by 10-inch color glossy print photos every month. For the purpose of this section, a photograph shall be defined as one exposure. The Engineer shall reserve the right to reject any photograph that is not clear or definitive. Any photograph so rejected shall be subtracted from the total number of exposures before computations for payment or credit under this section. Contractor shall supply three (3) sets of prints for each exposure, each set contained in a hard backed three ring binder. The prints shall have indelibly printed on their reverse side the following:

- Project Name
- Photo Number
- View and description, indicating location of camera, general description of what photograph represents and whether this is a preliminary or construction photograph.

The Contractor shall also furnish the raw images on CD in .jpeg format, CDs shall be provided for each photo session submittal. No separate payment will be made for job photographs; payment shall be included in the lump sum bid.

2. Photographs shall be submitted with each progress payment. Payments may be held until photographs are submitted.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 USE OF PHOTOGRAPHS

- A. All photographs, prints and CDs/DVDs resulting from the Work under this Contract shall become the property of OWNER upon creation and may be used, in whole or in part and in

such manner or for such purpose as OWNER may desire, without any additional compensation to the Contractor or photographer. Neither the Contractor nor the photographer shall retain any rights pertaining to the photographs, prints and CDs/DVDs nor shall they reproduce or otherwise publish or disseminate any of the photographs, aerials, prints or CDs/DVDs taken under this Contract without the prior approval of OWNER. The photographs, prints and CDs/DVDs will be considered "work made for hire" under applicable provisions of the Copyright Act, and the Passaic Valley Sewerage Commission will be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might subsist. To the extent that such materials do not qualify as "work made for hire", the Contractor hereby irrevocably transfers, assigns and conveys exclusive copyright ownership in and to such materials to OWNER, free and clear of any liens, claims or other encumbrances. The agreements between the Contractor and the photographer shall contain a provision containing these requirements.

END OF SECTION

SECTION 01350

RECORD DOCUMENTS

PART 1 – GENERAL

1.01 General

- A. Contractor shall maintain and provide the Engineer with record documents as specified below, except where otherwise specified.
- B. Maintenance of Documents
 - 1. Maintain in Contractor's field office in clean, dry, legible condition complete sets of the following: Drawings, Specifications, Addenda, approved Shop Drawings, Photographs, Change Orders, other modifications of Contract Documents, Field Orders, and all other documents pertinent to Contractor's Work.
 - 2. 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.
 - 3. Make documents available at all times for inspection by Engineer and Owner.
 - 4. Record documents shall not be used for any other purpose and shall not be removed from the Contractor's office without Engineer's approval.
- C. Marking System: Provide colored pencils or felt tipped pens for marking changes, revisions, additions and deletions, to the record set of Drawings. Use following color code unless otherwise approved by the Engineer.
 - 1. Structural: Red
 - 2. Other Printed Notations: Green
- D. Recording
 - 1. Label each document "PROJECT RECORD" in 2-inch high printed letters.
 - 2. Keep record documents current.
 - 3. Do not permanently conceal any work until required information has been recorded.
 - 4. Drawings: Legibly mark to record actual construction including:
 - a. Field changes of dimensions and details

- b. Changes made by Change Order or Field Order.
 - c. Details not on original Drawings.
5. Specifications and Addenda: Legibly mark up each Section to record:
- a. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed or used.
 - b. Changes made by Change Order or Field Order.
 - c. Other matters not originally specified.

E. Submittal

1. Upon Substantial Completion of the work, deliver record documents to the Engineer. Final payment will not be made until satisfactory record documents are received and approved by the 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 authorized representative.

*** END OF SECTION ***

SECTION 01360
SCHEDULE OF VALUES

PART 1 – GENERAL

1.01 Schedule of Values

A. General

1. The Contractor shall, within two weeks of executing the Contract, submit a Schedule of Values accurately breaking down the contract price into logical categories of work. This Schedule of Values shall be submitted to the Engineer for approval. Any items not acceptable to the Engineer shall be substantiated to the satisfaction of the Engineer or amended to the satisfaction of the Engineer. Upon approval by the Engineer, the Schedule of Values shall serve as the basis for the Contractor's application for payment, which shall be made on **AIA Document G702 Application and Certification for Payment**.
2. Upon request, submit documentation to support the values assigned to the Goods and Special Services. Sum of all values shall equal the Total Contract Price less any Allowances.
3. The following is a list of the minimum categories to be contained in the Schedule of Values. The Contractor may propose additional categories to improve the utility of the Schedule.
4. Each of the following categories shall be broken into subcategories for labor and materials.

1.02 Minimum List of Categories

Title

General Conditions
Mobilization
Submittals
Project Schedule
Job Supervision

Record Documents
Project management requirements

Civil

Excavation and excavation Support
Removal and disposal of existing underground slabs and structures
Location of existing timber piles
Backfill and grading
Site Restoration

Concrete

Installation of retaining wall

*** END OF SECTION ***

SECTION 01500

TEMPORARY FACILITIES

PART 1 GENERAL

1.01 CONTRACTOR'S FIELD OFFICE

- A. Temporary offices shall be established on the job site where shown on the Drawings, adequately furnished and maintained in a clean, orderly condition by the Contractor. The Contractor or his authorized representative shall be present in the field office at all times while work is in progress. Instructions received there from the Engineer shall be considered as delivered to the Contractor.
- B. The field office shall be of adequate size to accommodate the Contractor's staff and provide suitable space for project meetings. The office shall be provided with adequate lighting, heating and air conditioning; telephone service; file cabinets and plan racks; conference table and chairs for project meetings; and sanitary facilities for his staff. The field office may be constructed on site or may be a portable or mobile unit designed for the use.
- C. Contractor shall be responsible for and shall pay for any local permits required for placement of Contractor's temporary offices and facilities and for use of all utilities for offices and construction purposes.

1.02 TEMPORARY LIGHT AND POWER

- A. Furnish temporary light and power, including 220 Volt service for welding, complete with wiring, lamps and similar equipment as required to adequately light all work areas and with sufficient power capacity to meet the reasonable needs of all subcontractors. Make all necessary arrangements with the local electric company for temporary electric service and shall pay all expenses in connection therewith for the duration of the project.
- B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords.
- C. Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. For connection of power tools and equipment, provide outlets equipped with ground-fault circuit interrupters, reset button and pilot light.
- D. Provide grounded extension cords. Use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if more than one length is required.
- E. Provide general service incandescent lamps as required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Power generator equipment, including, but not limited to back-up, emergency, and stationary generators, shall require the Contractor to provide advanced written notification to the OWNER

prior to being brought onsite, weekly inspections, and secondary containment as described in Section 01750 of these Specifications.

1.03 TEMPORARY HEATING, COOLING AND VENTILATING

- A. Provide temporary heating, cooling and ventilating as required to maintain adequate environmental conditions to facilitate progress of the work, to meet specified minimum conditions for the installation of materials and to protect materials and finishes from damage due to temperature or humidity.
- B. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity and to prevent hazardous accumulations of dust, fumes, vapors or gases.
- C. Portable heaters shall be standard approved units complete with controls.
- D. Provide all heat as may be necessary for thawing out and heating the ground, materials, form work for concrete cure and for proper execution, protection and drying out of the Work.

1.04 TEMPORARY WATER

- A. Arrange with the Owner to obtain water for construction purposes from the Owners existing water system. The size of the water line connection shall not exceed 2-in or as approved by the Owner.
- B. Install branch piping with taps located so that water is available throughout the construction by the use of hoses. Protect piping and fittings against freezing as applicable to the work site.
- C. Install at each and every connection to the Owner's water supply a backflow preventor meeting the requirements of ANSI A40.6, latest revision and the Owner's requirements. Contractor shall meter all water used, however, the Contractor will not be charged for water usage.

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. Service, clean and maintain facilities and enclosures.

1.06 WEATHER PROTECTION

- A. Furnish, install and maintain temporary heat and enclosures to provide adequate working areas for Contractor's and subcontractor's personnel during the months of November through March.
- B. Temporary heating units shall have been tested and labeled by UL, FM, or other recognized association related to the type of fuel being used.

1.07 TEMPORARY AIR AND STEAM

- A. Provide all air and steam, including temporary piping and appurtenances required for cleaning and testing pipelines and equipment necessary for Contractor's and subcontractor's work. Remove temporary piping and appurtenances upon approval of equipment being tested.

1.08 CONTRACTOR HAZARDOUS MATERIAL STORAGE TANKS (CHMST)

- A. Contractor hazardous material storage tanks (CHMST) are defined as any storage vessel capable of storing five (5) or more gallons of hazardous materials (including petroleum productions), as defined by N.J.A.C. 7:1E-Appendices A and B. Storage vessels may include chemical vats, drums, pails, tanks: which include tanks of non-self-propelled equipment such as stationary Reciprocating Internal Combustion Engines (RICE) containing equipment, pumps, compressors, generators; oil filled transformers, fuel tanker trucks, non-acetylene, fossil fuel fired welding equipment, etc.
- B. The Contractor shall comply with the OWNER'S Title V Air Permit and Discharge Prevention Containment and Countermeasure Plan (DPCC) requirements for Contractor hazardous material storage tank (CHMST) as described in Section 01750 MAINTENANCE OF PLANT OPERATIONS DURING CONSTRUCTION.

1.09 FIRE EXTINGUISHERS

- A. Provide portable UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide portable UL-rated Class ABC dry chemical extinguishers or a combination of NFPA recommended Classes for the exposure. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

1.10 PUBLICITY AND PROJECT SIGNS

- A. The Contractor shall erect two project signs at the project site which shall include Title of Project and Contract Number, Name of Owner, Names and titles of Officials, Name of Contractor and Names of Consulting Engineers. Names and titles of officials to be included will be furnished to the Contractor after award of Contract. The layout of the sign shall be submitted for approval by the Engineer and shall be similar to the sign attached to this section.
- B. The sign shall be 4 feet high by 8 feet long and supported on vertical posts. The sign panels shall be constructed of 3/4-inch minimum thickness marine grade plywood rabbeted into a 2" x 4" frame with vertical intermediate supports, 24-inches on center, maximum. Each plywood panel shall be resin impregnated on both sides. All fasteners used in the construction of the sign shall be of a rust proof nature. The colors for the Project Sign shall be as selected by the Engineer. All supports, trims and the back of the sign panels shall be painted with at least two coats of the same paint used for the sign face. All paint used shall be exterior grade paint, suitable for use on wood signs. The supports, framing and sign surfaces shall be able to withstand winds of 100 miles per hour.
- C. The signs shall be furnished, erected and maintained by the Contractor in a prominent location at each publicly visible project site and facility as designated by the Engineer.

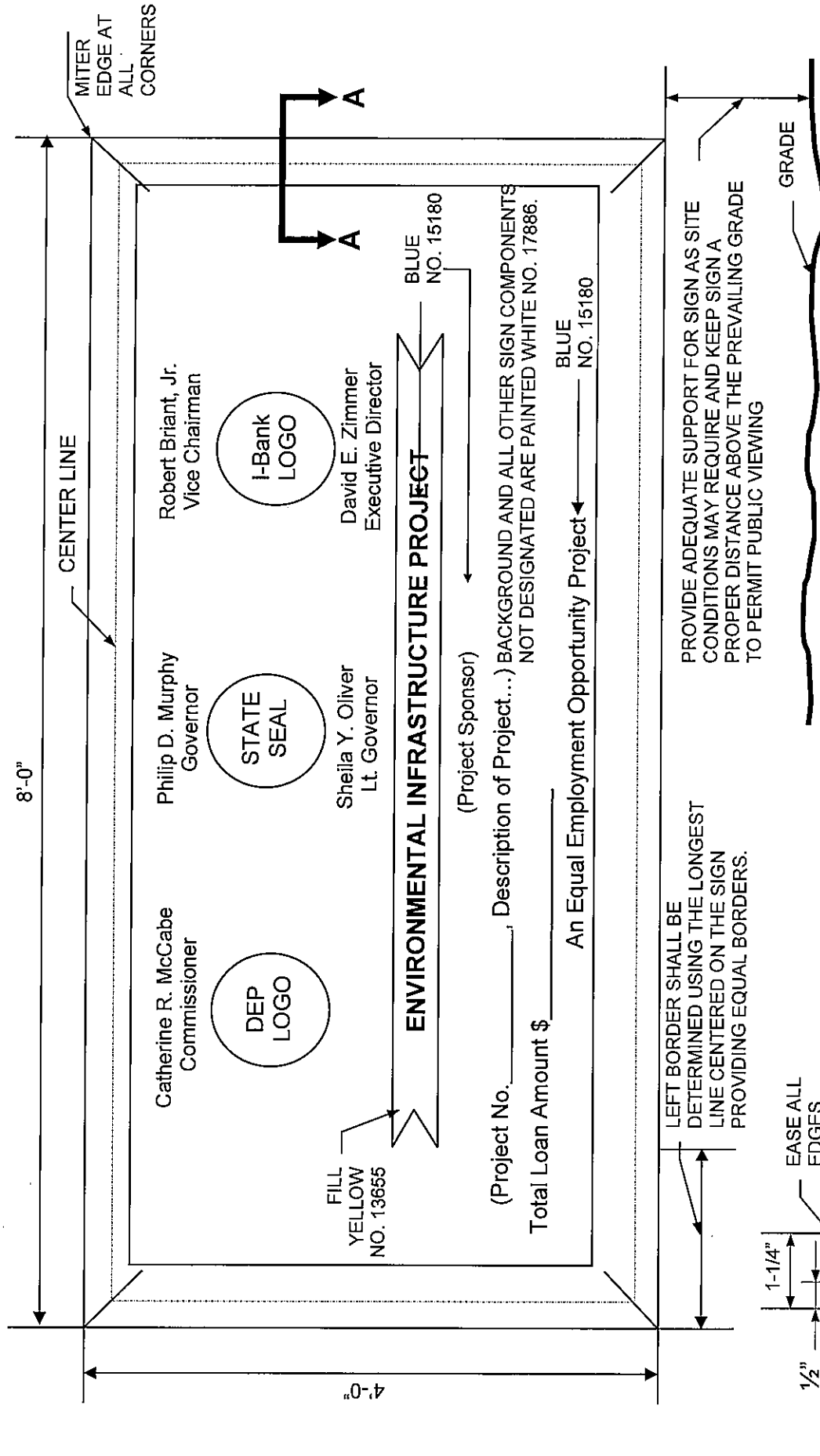
1.11 REMOVAL

- A. Completely remove all temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.

- C. Remove field offices, contents and services from the site. The Engineers field offices and temporary trailers shall become the property of the Contractor. Remove foundations and debris and grade area to required elevations.
- D. Restore permanent facilities used for temporary services to specified condition.

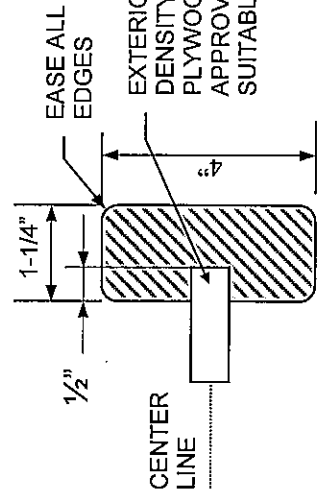
NEW JERSEY WATER BANK PROJECT SIGN DETAILS

ILLUSTRATION NO.: 1



NOTE:
 COLOR NUMBERS REFER TO FEDERAL COLOR STANDARD NO. 595C. LETTERING PAINTED BLACK NO. 17038 (UNLESS OTHERWISE SPECIFIED). DECALS FOR THE LOGOS AND SEAL SHALL BE AVAILABLE FROM NJDEP CONSTRUCTION CONTROL ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE. FIRST NUMBER INDICATES 1=GLOSS, 2=SEMIGLOSS, 3=MATT AND SECOND NUMBER INDICATES THE COLOR TYPE AND LAST THREE NUMBERS INDICATES INTENSITY. HIGHER NUMBER (LAST 3 DIGITS) MEANS MORE DARKNESS. LETTERING SHOULD BE SIZED ACCORDINGLY TO BE LEGIBLE FOR PUBLIC VIEWING.

LEFT BORDER SHALL BE DETERMINED USING THE LONGEST LINE CENTERED ON THE SIGN PROVIDING EQUAL BORDERS.



SECTION 01600

MATERIAL AND EQUIPMENT

PART 1: GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the Work:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer.
 - 3. Manufactured and Fabricated Products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specially approved in writing.
 - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 RELATED WORK

- A. Conditions of the Contract
- B. Summary of Work is included in Section 01010.
- C. Shop Drawings, Working Drawings, Product Data and Samples are included in Section 01300.

1.03 APPROVAL OF MATERIALS

- A. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the work without prior approval of the Engineer.
- B. Within 30 days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be insufficient detail to enable the Engineer to identify the particular product and to form an

opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.06 of this Section.

- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, either prior to beginning or during the progress of the work, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Owner will make arrangements for and pay for the tests.
- D. The Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
- E. The materials and equipment used on the work shall correspond to the approved samples or other data.

1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies to the Engineer.
 - 1. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further requirements.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products in accord with construction schedules coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver Products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that Products are properly protected and undamaged.

- B. Provide equipment and personnel to handle Products by methods to prevent soiling or damage to Products or packaging.

1.06 STORAGE AND PROTECTION

- A. Storage of equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, etc. Furnish a copy of the manufacturer's instructions for storage to the Engineer prior to storage of all equipment and materials. Corroded, damaged or deteriorated equipment and parts shall be replaced before acceptance of the project. Equipment and materials not properly stored will not be included in a payment estimate. The location for the storage of equipment shall be as directed by the Engineer and Owner.
- B. Store Products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.
- C. All materials to be incorporated in the work shall be handled and stored by the Contractor before, during, and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft or damage of any kind whatsoever to the material or equipment.
- E. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and the Contractor shall receive no compensation for the damaged material or its removal.
- F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored Products to assure that Products are maintained under specified conditions, and free from damage or deterioration.
- G. Protection After Installation:
 - 1. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.
- H. The Contractor shall be responsible for all material and supplies sold and delivered to the Owner under this Contract until final inspection of the work and acceptance thereof by the Owner. In the event any such material and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance, the Contractor shall replace same without additional cost to the Owner.
- I. Should the Contractor fail to take proper action on storage and handling of material supplied under this Contract within seven days after written notice to do so has been given, the Owner retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from the Contractor's Contract. These costs

may be comprised of expenditures of labor, equipment usage, administrative, clerical, engineering and any other costs associated with making the necessary conditions.

1.07 SPECIAL TOOLS

- A. Manufacturers of material shall furnish any special tools required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order prior to completion of the Contract.

1.08 STORAGE AND HANDLING OF EQUIPMENT ON SITE

- A. Because of the long period allowed for construction, special attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed.
 - 1. Equipment shall not be shipped until approved by the Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Engineer. Operation and Maintenance data as described in Section 01730 shall be submitted to the Engineer for review prior to shipment of equipment.
 - 2. All equipment having moving parts such as gears, electric motors, etc, and/or instruments shall be stored in a temperature and humidity controlled building approved by the Engineer, until such time as the equipment is to be installed.
 - 3. All equipment shall be stored fully lubricated with oil, grease, etc, unless otherwise instructed by the manufacturer.
 - 4. A copy of the manufacturer's storage instructions shall be given to the Engineer and shall be carefully studied by the Contractor and reviewed with the Engineer by him. These instructions shall be carefully followed and a written record of this kept by the Contractor.
 - 5. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 - 6. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Mechanical equipment to be used in the work, if stored for longer than ninety days, shall have the bearings cleaned, flushed and lubricated prior to testing and startup, at no extra cost to the Owner.
 - 7. Prior to acceptance of the equipment, have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification

is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

8. Any equipment that meets the criteria of a hazardous material storage tank (i.e. capable of storing five (5) gallons of more of a hazardous material, including petroleum products) shall be inspected weekly in the same manner and using the same requirements as a Contractor Hazardous Material Storage Tank (CHMST) described in Section 01750 of these specifications.
9. Any equipment capable of storing five (5) gallons of more of a hazardous material, including petroleum products shall be stored in secondary containment meeting the requirements of N.J.A.C. 7:1E.

PART 2:PRODUCTS (NOT USED)

PART 3:EXECUTION (NOT USED)

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Closeout procedures.
 - 2. Final cleaning.
 - 3. Adjusting.
 - 4. Project record documents.

1.02 RELATED WORK

- A. Operation and Maintenance Data are included in Section 01330.
- B. Additional closeout procedures are included in Sections 00700.

1.03 RECORD DOCUMENTS

- A. Record Documents shall be maintained in accordance with Section 01350.

1.04 CLOSEOUT PROCEDURES

- A. Submit in accordance with Article 14 of the Conditions of the Contract written certification that Contract Documents have been reviewed, work has been inspected and that work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit Application for Final Payment identifying total adjusted Contract Sum, previous payments and sum remaining due.

1.05 SUBSTANTIAL COMPLETION

- A. When the Contractor considers the Work to be Substantially Complete, he shall submit to the Engineer:
 - 1. A written notice that the Work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.

- B. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.
- C. Should the Engineer determine that the Work is not Substantially Complete:
 - 1. The Engineer will notify the Contractor in writing, giving the reasons therefore.
 - 2. Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer.
 - 3. The Engineer will reinspect the Work.

1.06 FINAL INSPECTION

- A. When Contractor considers the Work is complete, he shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been successfully tested in the presence of Owner's representatives and are operational.
 - 5. Work is completed and ready for final inspection.
- B. The Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should the Engineer consider that the Work is incomplete or defective:
 - 1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer that the Work is complete.
 - 3. The Engineer will reinspect the Work.
- D. When the Engineer finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittal.

1.07 REINSPECTION FEES

- A. Should the Engineer perform re-inspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:
 - 1. Owner will compensate the Engineer for such additional services.

2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.08 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Evidence of compliance with requirements of governing authorities.
- B. Project Record Documents.
- C. Operation and Maintenance Data, and Care and Cleaning Instruction: In accordance with requirements of Section 01730.
- D. Warranties and Bonds: In accordance with requirements of the General Conditions and Section 01740.
- E. Tools, Spare Parts and Maintenance Material: To requirements of Section 01170.
- F. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.
- G. Written records for training and inspections of chemical or fuel storage tanks, equipment and RICE containing equipment, including any required equipment "run time" or fuel consumption records.

1.09 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 1. Remove labels that are not permanent labels.
 2. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances
 3. Wipe surface of mechanical and electrical equipment. Remove excess lubrication and other substances.

1.10 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer.
- B. Statement shall reflect all adjustments to the Contract Sum:
 1. The original Contract Sum.
 2. Additions and deductions resulting from:
 - a. Previous Change Orders.
 - b. Allowances.

- c. Unit Prices.
- d. Deductions for uncorrected Work.
- e. Deductions for reinspection payments.
- f. Other adjustments.
- 3. Total Contract Sum, as adjusted.
- 4. Previous payments.
- 5. Sum remaining due.
- C. Engineer will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.11 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the General Conditions. Costs for re-inspections due to failure of the Work to comply with Contractor's representations of status of completion shall be deducted from amounts due and payable to Contractor.

END OF SECTION

SECTION 01750

MAINTENANCE OF PLANT OPERATIONS DURING CONSTRUCTION

PART 1: GENERAL

1.01 GENERAL REQUIREMENTS

- A. The existing PVSC Facilities [i.e. wastewater treatment plant (both process and non-process) and pumping stations] will be maintained in continuous operation by the Owner during the entire construction period. Work under the contract shall be so scheduled and conducted by the Contractor such that work will not impede any treatment process, create potential hazards to operation or equipment, reduce the quality of the effluent or cause odor, or other nuisance. In performing the work shown as specified, the Contractor shall plan and schedule the work to meet the operating requirements and additional constraints outlined in this Section.
- B. The Contractor has the option of providing additional temporary facilities that can eliminate a constraint, provided it is done without cost to the Owner, and provided that all requirements of these specifications are fulfilled. Work not specifically covered in the following paragraphs may, in general, be done at any time during the contract period, subject to the operating requirements outlined hereinafter. All references to days in this Section are to be construed as consecutive calendar days, and all references to "continuous" in this section are to be construed as uninterrupted until completed.
- C. The intent of this section is to have the Contractor perform the work in such a manner that continuous, uninterrupted treatment and all essential services and facilities are maintained operational throughout the construction period.
- D. The Contractor is hereby advised that he/she shall not shut off or disconnect any operating system of the existing PVSC Facilities. All equipment shutdowns shall be executed by the Owner.
- E. For brevity, the Contractor is advised that this Section of the Specifications contains several references to equipment, piping, material and appurtenances to be removed or reinstalled. The Contractor shall refer to other specification sections and the Contract Drawings for definition of the equipment, piping, material and appurtenances to be removed from the site by the Contractor.
- F. The descriptions of work herein are complementary and supplementary to the Contract Drawings and Specifications, and do not negate any work required by either, and do not purport to represent every element or detail of work to be performed or every operational or construction constraint which may be required.
- G. All work described herein shall be performed by the Contractor unless otherwise noted.
- H. Any Contractor's activities during the period of 4:15 P.M. to 7:45 A.M. must have prior approval of the Owner.
- I. The costs for all temporary facilities, maintenance of services, and all other work specified in these specifications shall be borne by the Contractor unless specifically stated otherwise. The costs for all the aforementioned work is deemed included in the lump sum bid price.

1.02 GENERAL CONSTRAINTS

In this Section, the recommended sequence and shutdown of units, which are to be taken out-of-service, are presented. The operational status of new or existing units other than the designated units shall not be interrupted by the General Contractor or Subcontractors during the specified time periods. New units may only be used after the specified testing and acceptance of the new units.

The following constraints shall be applied to all equipment, treatment units and appurtenant utility systems on the project site.

A. Access to Project Site

An unobstructed traffic route at the entrance must be maintained at all times. Vehicular access to all treatment units and buildings must be maintained at all times. Any work requiring the temporary closing of a road to traffic must be coordinated with the Owner.

B. Vehicular Access

Except as otherwise permitted, vehicular access to all portions of the buildings and utility tunnels must be maintained at all times.

C. Personnel Access

PVSC Personnel must have safe access to all areas remaining in operation throughout the construction period. Construction site and staging areas shall be maintained in a neat and workmanlike condition. This includes but is not limited to rubbish removal, cutting grass and removing weeds on a regular basis, grading to eliminate potholes, ponding, ruts, etc., as well as dust control and proper material and equipment storage.

The Contractor is informed that PVSC Personnel utilize the utility tunnels (located at the wastewater treatment plant) to transport equipment and materials between buildings and that this access should be maintained throughout the construction period.

D. Plant Utility Systems

1. The existing potable and non-potable water systems shall be kept in operation at all times. All connections to the plant potable and non-potable water systems shall be approved by the Owner prior to installation. All potable water system connections shall contain protective devices as required by the Health Department or applicable code.
2. Existing fire hydrants within the plant site shall be operational at all times.
3. Storm drainage on the site shall be operational at all times.
4. Electric power, lighting service and communication systems shall be maintained in uninterrupted operation mode in all areas remaining in operation. Temporary power shall be provided where required.

E. Plumbing Facilities

Except as otherwise permitted, all building plumbing systems such as roof and floor drains, sump pumps and other systems shall remain in operation.

F. Special Protection of Machinery and Equipment

The Contractor shall take all protective measures to the satisfaction of the Engineer necessary to insure that inclement weather, or dust and debris from demolition does not enter any of the mechanical or electrical equipment enclosures. Enclosures shall be provided where necessary to prevent contamination of the air. All protective measures shall be furnished, installed, lighted, ventilated, maintained and removed at the Contractor's own cost.

Interior dustproof covers shall be a heavy reinforced polyethylene film curtain, minimum thickness 6 mils, supported by wood framing. All seams and penetrations shall be sealed with duct tape on two sides. Junctions with existing walls, floors and ceilings shall be made with a double fold secured with a backing strip anchored to the existing wall, floor and ceiling.

Exterior weather tight enclosures shall be provided whenever a section of a roof or exterior wall on an existing building is removed or equipment is installed in a new building.

The Contractor shall be responsible for all damage to existing structures, equipment, and facilities caused by his/her construction operation and must repair all such damage when and as ordered at no additional cost to the Owner.

G. Service Interruptions

1. When a construction task requires a suspension of normal operations of an individual treatment unit or an individual equipment system for a period less than twenty-four (24) continuous hours, the suspension shall be considered a service interruption. For each service interruption, the Contractor shall compile an inventory of the labor and materials required to perform the work, an estimate of the time required and a written description of the steps required to complete the task resulting in a service interruption. The inventory, time estimate and written procedure shall be submitted to the Owner for review thirty days prior to the start date of the task. If the proposed procedure submitted by the Contractor is acceptable, the Owner shall authorize in writing, the service interruption pending the verification of materials and labor and the final notification specified herein.
2. No service interruption shall be initiated until the Engineer verifies the list of materials and labor at the site at least one week prior to the proposed start date. After verification of the list of materials and labor, the Contractor shall notify the Engineer of the exact date that he/she wishes to perform the work in writing two normal working days, excluding Saturdays, Sundays and holidays, prior to the proposed date.
3. When the normal operations of a treatment unit are suspended longer than twenty-four hours, then the procedures for a shutdown, specified hereinafter, shall be enforced.
4. Forms included at the end of this section must be used to request shutdowns and service interruptions.

H. Shutdowns

1. Shutdown shall be defined to indicate that the normal operation of a unit has to be suspended or taken out-of-service for more than twenty-four hours in order to perform specified work.
2. For each shutdown the Contractor shall compile an inventory of its labor and materials required to perform the tasks, an estimate of the time required and a written description of the steps required to complete the tasks. The inventory, time estimate and written procedure shall be submitted to the Engineer for review thirty (30) calendar days prior to the start date of the shutdown. The Contractor shall also request in writing, from the Engineer approval for each shutdown a minimum of fourteen (14) calendar days prior to the proposed initiation date. No shutdown shall be initiated until the list of materials, labor and equipment is verified as on site or in the Contractor's secure storage area at least one week prior to the proposed start date.
2. The work specified herein and any other work required at the request of the Owner, which may interrupt the normal operations, shall be accomplished at such times that will be convenient to the Owner.
3. The Contractor shall also have on hand, located in close proximity to the work area(s), all tools, equipment and materials, both temporary and permanent, necessary to complete each work category, without interruption. Where temporary pumping is required, contractor shall have on hand 100% backup for the largest unit installed. Prefabrication of all piping and other assemblies shall be completed to the greatest degree possible, prior to any shutdowns. The Engineer must be satisfied that the Contractor has complied with these requirements, to the fullest extent possible, before any shutdowns will be authorized. Once any shutdown is initiated, work shall be continuous until completed.
4. The Contractor must remove the contents in all cases from any tank, conduit or pipe during a shutdown longer than twenty-four continuous hours.
5. Contractor shall tag out all valves and equipment which are shutdown by the Owner indicating valve/equipment status for the shutdown duration to insure the Owner and Contractor are both fully aware of valve/equipment status during shutdown, and to eliminate an uncoordinated valve/equipment operation.

I. Shutdown of Electrical Systems

For electrical shutdowns, the Contractor shall notify the Engineer of the exact date he wishes to perform the work in writing seven (7) normal working days excluding Saturdays, Sundays and holidays prior to the proposed date.

After the final notification and with the approval of the Owner and Engineer, the Contractor shall lock out and tag existing circuit breakers, motor starters and switches, which shall be operated by the Owner. The Contractor shall check cables and wires to be sure that they are de-energized to ground potential before work begins. Upon completion of the work, the Contractor shall notify the Owner and Engineer that the facilities are available for use. With the approval by the Owner and Engineer, the Contractor shall remove the locks and tags from the circuit breakers, motor starters or switches. The Contractor shall not operate any existing electrical equipment without the approval, direction and supervision of the Owner or the Engineer.

J. Overtime

Overtime work by the Contractor necessary to conform to these requirements shall be considered as normal procedure under this Contract, and the Contractor shall make no claims for extra compensation as a result thereof. The Contractor shall be prepared to work around the clock and supply multiple work crews as necessary to complete the work including testing and acceptance as specified, within the specified time frame.

K. Load Limits on Access Roads and Plant Facilities

Existing and new underground facilities such as electrical duct banks, pipelines, etc., in, under, and crossing plant roads have been designed for a maximum wheel load in accordance with AASHTO H-20. Contractor shall not exceed this weight limit.

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 pressure that will endanger it. For all construction activities that require a crane, heavy machinery, etc., the Contractor shall submit a safe structural loading analysis on the existing facilities. Review of the analysis is required before any work can proceed. The analysis shall require a Professional Engineer's Certification from the State of New Jersey as part of the submittal to the Engineer. Contractor shall take all provisions necessary to distribute concentrated loads due to cranes and heavy machinery.

L. Emergency Repair Crews

In case the Contractor's operations disrupt the treatment process or the minimum operating facilities hereinbefore described, at any time, he/she shall at his/her own expense immediately make all repairs or replacements and do all work necessary to restore the plant to operation to the satisfaction of the Owner.

Such work shall progress continuously to completion on a 24-hour day, seven work-day week basis. The Contractor shall provide the services of emergency repair crews, available on call 24 hours per day.

M. Use of Existing Plant Hoisting Equipment and Tunnel Access Elevators

Use of existing plant hoisting equipment and tunnel access elevators by the Contractor will be permitted at the discretion of the Owner. The Contractor shall inform the Owner of the hoisting equipment and tunnel access elevators the Contractor plans to utilize for approval by the Owner prior to usage. The Contractor shall inspect the hoisting equipment and tunnel access elevators prior to use, report any existing damage to the Owner and Engineer, and make any necessary repairs as a result of damage caused by the Contractor's use at no additional cost.

1.03 TEMPORARY POWER

- A. All work necessary to provide temporary power for maintaining plant operations as described herein below and in Division 16, or as otherwise required, shall be performed by the Contractor. All temporary power facilities shall be furnished in accordance with applicable codes.

- B. The Contractor shall submit a plan for providing the temporary plant power source and for all temporary facilities to be provided for the Engineer's review. The plan shall describe the temporary power installation and identify the type and location of component equipment to be provided.
- C. The Contractor must provide the OWNER and the ENGINEER written notification at least 14 days prior to bringing power generating equipment or stationary equipment containing Reciprocating Internal Combustion Engines (RICE) onsite, such as back-up generators and emergency generators. The Contractor is advised that the OWNER maintains both a Title V Air Permit and a Discharge Prevention Containment and Countermeasure Plan (DPCC), and in order to maintain these permits and Plans, notification is required.
 - 1. The Contractor is advised that emergency generators and back-up or continuous power generators are two distinct categories. An emergency generator* is only used to provide power during power outages.
 - * In order for an event to be classified as an actual emergency (see definition of "emergency generator" at N.J.A.C. 7:27-19.1), there must be a voltage reduction issued by PJM and posted on the PJM internet website (www.pjm.com) under the "emergency procedures" menu.
 - 2. A 14-Day Notification form, entitled "14 Day Notification Letter for temporary Fuel or Chemical Storage tanks, equipment, & Reciprocating Internal Combustion Engines (RICE)", including completion instruction is included at the end of the Section. Each piece of equipment requires a separate form.
 - 3. Provision of a written notification to the OWNER and ENGINEER does not constitute approval of the equipment. No equipment shall be brought on site without prior written approval by the OWNER.
 - 4. All power generating equipment, emergency generators, and stationary RICE containing equipment must be installed in secondary containment if they are capable of storing 5 or more gallons of hazardous material (i.e. fuel) and are subject to the requirements of Contractor Hazardous Material Storage Tanks discussed below.
 - 5. The Contractor shall be responsible for any/all cost of clean-up, fees, fines, etc., that may result from a violation of the OWNER'S Title V Permit, Regulatory Inspection violation, or hazardous material spill.

1.04 CONTRACTOR HAZARDOUS MATERIAL STORAGE TANKS (CHMST)

- A. Contractor hazardous material storage tanks (CHMST) are defined as any storage vessel capable of storing five (5) or more gallons of hazardous materials (including petroleum productions), as defined by N.J.A.C. 7:1E-Appendices A and B. Storage vessels may include chemical vats, drums, pails, and tanks; including those tanks built into non-self-propelled equipment such as stationary RICE containing equipment, pumps, compressors, generators; oil filled transformers, fuel tanker trucks, etc.
- B. The NJDEP regulations (DPCC) require a minimum of 60 days' notice from the OWNER for the installation of any CHMST holding a hazardous substance, which includes all types of petroleum products, and approval of such installation by NJDEP prior to installation. The Contractor shall not furnish, deliver, and/or use any CHMST to any PVSC Facility until the Contractor prepares and submits (at least 60-days in advance of bringing the CHMST on site) to the OWNER and the ENGINEER a letter fully describing the CHMST system including identifying the hazardous substance; a description of the installation, including show the tank will be filled; how the requirements of NJAC 7:1E will be satisfied; and specific dates of installation and removal. Upon installation, the OWNER must prepare and submit a DPCC Plan Amendment to NJDEP within 30

days. The Contractor will provide the OWNER with any information, documentation, and plans required for the DPCC Amendment within five (5) days of a request from the OWNER.

- C. There are circumstances where an OWNER may find it necessary to use a CHMST on a temporary basis. A common example is the use of a fuel tank for a backup electrical generator during a construction project. When a CHMST will be on site for less than six (6) months, it is acceptable to notify the OWNER and ENGINEER in writing of a CHMST without requiring the OWNER to amend its Discharge Prevention, Containment and Countermeasure (DPCC) Plan. This temporary use letter must be received by the OWNER at least 14-days prior to bringing the CHMST on site. The letter must fully describe the installation, including how the CHMST will be filled, and must document how the requirements of N.J.A.C. 7:1E will be satisfied. The letter must also specify dates of installation and removal. This temporary use letter fulfills both the 60-day notification requirement and the plan amendment submission requirement.
1. A 14-Day Notification Letter "form" is included at the end of this section entitled "14 Day Notification Letter for temporary Fuel or Chemical Storage tanks, equipment, & Reciprocating Internal Combustion Engines (RICE)". The form includes the instructions for completing the form as well as a description of the requirements of both the OWNER'S DPCC and Title V Air Permit.
 2. The 14-Day Notification form is available electronically through PMWeb. The Contractor shall submit the 14-Day Notification form through PMWeb as directed by the instructions and ensure all those listed on the form are notified.
 3. Provision of a written notification to the OWNER and ENGINEER does not constitute approval of the equipment. No equipment shall be brought on site without prior written approval by the OWNER.
- D. If a temporary tank will be kept on site for six (6) months or longer, additional notifications and a full plan amendment (as described in 1.04.B above) will be required. After project completion, the plan must be amended a second time when the tank is removed. Also, if the ENGINEER and the Contractor using a temporary CHMST later determines that it must be kept on site for more than six (6) months, a plan amendment must be submitted. Refer to N.J.A.C. 7:1E-4 for more information. The Contractor shall provide a written notification after 90 days of the initial installation of a temporary use CHMST to the OWNER to confirm the status and removal date of the CHMST.
- E. Any and all CHMSTs must be installed in secondary containment meeting the requirements of N.J.A.C. 7:1E when not in active use. CHMSTs in active use shall also be installed in secondary containment when stationary or located in an existing contained area to the greatest extent practicable.
- F. The Contractor, using only trained personnel, shall be required to complete and document weekly visual inspections of each CHMST and monitor and document any hazardous material transfers into and out of each CHMST (such as bulk fueling or chemical transfer) during the entirety of the transfer process. A Standard Operating Procedure entitled "contractor Equipment Visual Leak Inspection SOP" and "Weekly Visual Leak Detection Log" inspection checklist for the Weekly Visual Inspection and hazardous material inspections are included at the end of this Section. The Contractor may also access the forms electronically through PMWeb. Signed copies of the inspection forms must be maintained onsite at all times, and copies provided to the ENGINEER and OWNER.
- G. The Contractor shall be responsible for any/all cost of clean-up, fees, fines, etc., that may result from a violation of the OWNER'S Title V Permit, Regulatory Inspection violation, or hazardous material spill.

- H. The Contractor shall designate specific employees to be trained on the inspection and delivery/hazardous material transfer monitoring procedures, practices, and recordkeeping. The Contractor shall provide the OWNER and ENGINEER with written proof of initial training and annual refresher training. Initial training shall be given to designated employees within five (5) business days of the start of the project or arrival of a new employee onsite. Annual refresher training shall be given once per calendar year. No employee shall go more than 365 consecutive calendar days without initial or refresher training.

1.05 SEQUENCE OF CONSTRUCTION AND OPERATION

- A. In order to maintain continuous operation during construction to the existing wastewater treatment plant facilities, a phased removal and construction sequence shall be required. The Contractor is advised that work may be required to be performed in multiple areas simultaneously in order to complete the entire scope of the Contract within the allotted time.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

**14 DAY NOTIFICATION LETTER FOR TEMPORARY CHEMICAL OR FUEL
STORAGE TANKS, EQUIPMENT, & RECIPROCATING INTERNAL COMBUSTION
ENGINES (RICE)**

BACKGROUND:

The Passaic Valley Sewerage Commission (PVSC) maintains several regulatory required environmental control plans and permits which describe and govern the operation of equipment, tanks, and the overall plant facility, in addition to the standard wastewater treatment plant operational permits. Among these plans are PVSC's Stormwater Pollution Prevention Plan (SPPP), Discharge Prevention Containment and Countermeasure Plan (DPCC) which includes the federally required Spill Prevention Control and Countermeasure Plan (SPCC), Discharge Cleanup and Removal Plan (DCR), and Title V Air Permit. The goal of the Title V Air Permit is to prevent air pollution by restricting PVSC's emission, while the goal of other documents and permits is to prevent and spills or discharges of hazardous materials, oils, and petroleum products into stormwater, groundwater, and adjacent waterbodies.

PVSC is required by these plans and permits to keep a record of all equipment and storage tanks on its property which may be regulated under its DPCC Plan or Title V Air Permit to ensure spill prevention and prevent permit violations. As a result, PVSC requires any and all outside contractors to provide advanced written notification of their intent to bring temporary storage tanks or RICE equipment, for PVSC review and approval, at least fourteen (14) days prior to the start of construction and/or delivery of such equipment onsite. To meet the notification requirements, please complete and deliver, through PM Web, the attached form letter and requested documents for each piece of applicable equipment. PVSC will review the provided information, and if acceptable, approve the equipment and provide additional inspection requirements, record keeping requirements, and onsite time limitations.

It is important to note that PVSC does not distinguish between equipment that is "dry" or "empty." If the equipment is capable of holding liquid and is on PVSC property, it is considered onsite and a notice is required.

GENERAL APPLICABILITY:

NOTIFICATION REQUIREMENTS APPLICABLE TO THE FOLLOWING TYPES EQUIPMENT: (including, but not limited to)		
• Emergency Generators	• Compressors	• Fuel Storage Tanks/ Dispensers
• Chemical Storage Tanks	• Pumps	• Welding Equipment (fossil fuel burning and non-acetylene)
• Fuel/Chemical Tanker Trucks	• Concrete Mixers	• Any petroleum powered equipment with onboard storage of 5 gallons or more onsite for a minimum of 24 hours
• Blowers	• Oil Filled Transformers	
• Reciprocating Internal Combustion Engines (RICE)	• Surface Coating Equipment, such as sprayers or blasting equipment.	

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS AT 973-817-5858

14 DAY NOTIFICATION LETTER FOR TEMPORARY CHEMICAL OR FUEL STORAGE TANKS, EQUIPMENT, & RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)

DPCC Information:

The DPCC plan governs the storage of hazardous chemicals, oils, and petroleum products. As part of this Plan, PVSC must be notified of any temporary equipment which is capable of storing or holding five (5) gallons or more of hazardous materials or petroleum product.

Temporary, according to the DPCC, is defined as being onsite for one (1) night and less than 180 consecutive calendar days. Also, should a piece of equipment or storage tank be onsite for more than 180 days, PVSC must submit notifications and amendments to its plan to the NJDEP for review and approval. In addition, leak detection inspections are required, and information will be provided to you upon PVSC's review of the 14 Day Notice. In addition, weekly leak inspection and monitoring of all fuel deliveries are required. Leak inspection and fuel delivery monitoring must be documented using the "Weekly Visual Leak Detection Log," which is attached to the instructions. The Logs must be provided to PVSC's Project Manager on a weekly basis. The Logs will be retained for a minimum of three (3) years.

Equipment that is used for transport, such as forklifts, excavators, backhoes, cars, trucks, self-propelled pile drivers, etc. are excluded from the notification requirements for the DPCC and the Title V Air Permit, as they are covered under different portions of the DPCC Plan, however, they are not necessarily excluded from Title V Air Permit requirements. Regardless, these types of equipment must still comply with the material transfer requirements discussed below.

Title V Air Permit Information:

PVSC's Title V Air Permit regulates the site-wide air pollution emissions. Its regulations are applicable to stationary RICE containing equipment, particularly, but not limited to, emergency/back-up generators, surface coating equipment, and certain sized engines.

The Title V Air Permit defines "Temporary" as less than or equal to 90 days. If the equipment is planned to be onsite longer than 90 days, an amendment to PVSC's Air Permit must be written and approved prior to bringing the equipment onsite. Based on the information provided in the form, PVSC will determine if the equipment is regulated under the Title V Air Permit, and the 90 day limitation applies.

FORM INSTRUCTIONS:

Please complete the following form letter for each temporary storage tank, temporary piece of equipment, and/or RICE containing machine. Provide, at minimum, the information requested, and transmit to the listed addressees using PM Web.

Complete **Section A** for each piece of equipment that can potentially store 5 gallons or more of a chemical or fuel, or is a RICE machine. Provide a separate form for each item.

Complete **Section B** if the equipment is meant to provide storage for chemicals or fuels, such as hypochlorite or solvents, or fuel storage to be dispensed into other equipment.

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS AT 973-817-5858

**14 DAY NOTIFICATION LETTER FOR TEMPORARY CHEMICAL OR FUEL
STORAGE TANKS, EQUIPMENT, & RECIPROCATING INTERNAL COMBUSTION
ENGINES (RICE)**

Complete **Section C** for all equipment with a Reciprocating Internal Combustion Engine (RICE), such as non-emergency generators and trailer-mounted pumps.

Complete **Section D** only if the equipment is an emergency generator* used to provide power during power outages.

* In order for an event to be classified as an actual emergency (see definition of "emergency generator" at N.J.A.C. 7:27-19.1), there must be a voltage reduction issued by PJM and posted on the PJM internet website (www.pjm.com) under the "emergency procedures" menu.

Complete **Section E** only for surface coating equipment.

Attach any additional data, cut sheets, or shop drawings as needed. Please note, all equipment which stores chemicals or fuel must be protected by secondary containment, and secondary containment must have overfill protection such as high level alarms, visual inspections, spill alarms, leak detection, etc.

In addition, any material transfer, such as filling a fuel tank from a tanker, or dispensing fuel into an onboard belly tank of a generator, must be protected by secondary containment.

Required information is outlined in red on the PDF version of the form. An MS Word format is available upon request.

Please note, no regulated equipment shall be brought onsite without written approval by PVSC's Process Control Engineering Department. Any violations, fines or fees resulting from failure to meet the notification requirements will be the responsibility of the Contractor. If you have any questions, or require additional information on the 14 Day Notice requirements, please contact Bridget McKenna, Chief Operating Officer at 973-817-5976 or BMcKenna@pvsc.com, Michael Urbanski, Plant Superintendent at 973-817-5786 or MUrbanski@pvsc.com, PVSC's Operations Department at 973-817-5783, or the PVSC Project Manager.

The following shall be notified by the Contractor of a temporary chemical or fuel storage tank. Notifications shall be sent through PMWeb.

- | | |
|--|--|
| • Resident Engineer | • Ed Enright, Engineer – Process Control:
EEnright@pvsc.com |
| • PVSC Engineering Project Manager | • Marques Eley, Sr. Engineer – Process
Control: MEley@pvsc.com |
| • John Bolcar, P.E., PVSC Manager of
Engineering: JBolcar@pvsc.com | • Greg Alber, Sr. Scientist – Process Control:
GAlber@pvsc.com |
| • Patricia Lopes, PVSC Director of Process
Control Engineering and Regulatory
Compliance: PLopes@pvsc.com | |
| • Elizabeth Engelbert, Sr. Engineer - Process
Control: EEngelbert@pvsc.com | |

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS AT 973-817-5858

Date:

Passaic Valley Sewerage Commission
600 Wilson Avenue
Newark, NJ 07105

Attn: Michael Urbanski, P.E., Plant Superintendent
2nd Floor OEM Building

RE: Temporary Tankage/Equipment Usage 14 Day Notification

PVSC Project Name:

PVSC Contract Number:

PVSC Project Facility Location:

Contractor Company:

Contractor Contact Person:

Dear Mr. Urbanski:

This letter is to provide PVSC notification that _____ will be bringing temporary equipment onsite which may affect PVSC's Discharge Pollution Containment and Countermeasure (DPCC) Plan and/or Title V Air Permit. The equipment will temporarily store more than 5 gallons of fuel, oils, and/or hazardous materials for more than one (1) working day.

Section A: General Equipment Description (to be completed for all equipment)

Equipment: _____

- Arrival Date: _____ Estimated Departure Date: _____
Duration onsite: _____ Calendar Days Date of Manufacture: _____
Serial Number: _____
- Equipment size, type, make, model, and material of construction: Select Type
- Type of secondary containment to be provided for tank, equipment, and/or piping (Attach sketch):

- Alarm description and type (audible/ visual, local/remote) for leaks, spills, or major malfunctions
- PVSC Facility Location of equipment (**Attach sketch**):
- Fill/emptying methodology:
- Emergency Contact: _____ 24 hr. phone number: (____) _____

Recordkeeping Requirement: "Weekly Visual Leak Detection Log" must be completed weekly and for every fuel, chemical, and/or hazardous material delivery.

Section B: Chemical or Material Storage (to be completed for all storage tanks)

- Volume and Chemical to be stored in gallons (**Attach chemical SDS**):
- Use of the temporary storage tank and stored material:
- Alarm description and type (audible/ visual, local/remote) for over fill for tanks in excess of 2000 gallons.

Recordkeeping Requirement: "Weekly Visual Leak Detection Log" must be completed weekly and for every fuel, chemical, and/or hazardous material delivery.

Section C: General Equipment Emissions (to be completed for all Reciprocating Internal Combustion Engines (RICE))

- Type of Fuel: _____ Volume of Fuel Tank: _____ gallons
- Maximum Heat Input: _____ MMBTU/hr (million BTU/hr)

For reference: 1 million BTU/hr = 7.2 gal/hr of No. 2 diesel fuel (ULSD)
8.0 gal/hr of unleaded gasoline
10.8 gal/hr of liquefied propane
980 scf/hr of natural gas

Recordkeeping Requirement: if Maximum Heat Input ≥ 1 MMBTU/hr., Contractor must track Fuel Usage and submit to PVSC on a monthly basis at the end of each month or until the equipment leaves the site.

Section D: Emergency Generator Emissions

- Kilowatt Rating: _____ KW
- EPA Tier rating: _____ (Attached electronic copy of cut sheets with EPA Tier Certification)

Recordkeeping Requirement: if Kilowatt Rating ≥ 37 KW, Contractor must track Fuel Usage and Total Run Hours. This information must be submitted to PVSC on a monthly basis at the end of each month or until the equipment leaves the site.

Section E: Surface Coating Equipment Emissions (for coating equipment only)

Coating Material: _____

Select Coating Type: ☐ Architectural Coating, ☐ Paint, ☐ Sealant, ☐ Other.

Does material comply with N.J.A.C. 7:27-23.3? ☐ YES ☐ NO

VOC Content (☐ % by weight or ☐ % by volume) _____ %

Additional information such as shop drawings, schematics, etc. will be available within 24 hours of PVSC's request. If you have any questions, please contact _____ at _____ Via _____.

Sincerely,

SIGNATURE

COMPANY

Type of Print Full Name

Title

Date

Telephone Number

Email Address or Fax Number

Enclosures: (Check box if included)

- ☐ Stored material SDS
- ☐ Tank secondary containment sketch
- ☐ Truck unloading area secondary containment sketch
- ☐ Facility/equipment location plan
- ☐ EPA Tier Certificate

CC/PM Web Notification sent to:

_____, _____, Resident Engineer

_____, PVSC Engineering Project Manager

John Bolcar, P.E., PVSC Manager of Engineering

Patricia Lopes, PVSC Director of Process Control Engineering and Regulatory Compliance

Elizabeth Engelbert, P.E., Sr. Engineer - Process Control

Marques Eley, P.E., Sr. Engineer - Process Control

Ed Enright, P.E., Engineer - Process Control

Greg Alber, Sr. Scientist - Process Control

CONTRACTOR EQUIPMENT VISUAL LEAK INSPECTION SOP

SCOPE:

The scope of this Standard Operating Procedure (SOP) is to provide methods for the visual inspection of contractor supplied equipment with onboard fuel or chemical storage or storage tanks when in use on PVSC property. This inspection is intended to note leaks, damage, and deterioration of the tanks and connecting piping.

APPLICABLE TO THE TYPES FOLLOWING EQUIPMENT: (including, but not limited to)

- Generators
- Chemical Storage Tanks
- Fuel/Chemical Tanker Trucks
- Compressors
- Pumps
- Concrete Mixers
- Fuel Storage Tanks/ Dispensers
- Welding Equipment (non-acetylene)
- Any petroleum powered equipment with onboard storage of 5 gallons or more onsite for a minimum of 24 hours

TRAINING:

Personnel shall be provided with training on this SOP as a supplement to existing operational SOPs.

PERSONAL PROTECTIVE EQUIPMENT:

All operators must use personal protective equipment (PPE) as needed when inspecting the tanks including:

- Gloves (chemically compatible)
- Safety shoes
- Safety glasses or goggles
- Hard hat
- High visibility vest

PROCEDURES:

1. Once per week, and during fill and/or emptying of the fuel and/or chemical tank, visually inspect the unit for the following items.
 - a. Any leaks or damage to the piping and valving at fill port;
 - b. Any damage, deterioration, corrosion, or leaks at the unit;
 - c. Any visual evidence of a leak, such as fuel on the surface below the unit;
 - d. Any audio or visual alarms, which are not already being addressed by the contractor (notify the PVSC Security Department at 973-817-5858 if an alarm is observed); and
 - e. Spill Containment Kit equipment is complete and usable and cabinet seal is secure.
2. Note if any of the above are need of repair or are leaking, or if any alarms were observed.
3. Complete the "Weekly Visual Leak Detection Log" checklist, and fill in written descriptions of any leaks.
4. For fuel delivery events, record the volume of fuel delivered.
5. Provide Run Hours for Emergency Generators ONLY!
6. Notify via email or PMWeb, the Project Representative or Inspector, PVSC's Project Engineer, John Bolcar, P.E., PVSC Manager of Engineering: JBolcar@pvsc.com, Patricia Lopes, PVSC Director of Process Control Engineering and Regulatory Compliance: PLopes@pvsc.com, Elizabeth Engelbert, Sr. Engineer - Process Control: EEngelbert@pvsc.com, Ed Enright, Engineer

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS AT 973-817-5858

Process Control

7/17/2017

CONTRACTOR EQUIPMENT VISUAL LEAK INSPECTION SOP

– Process Control: EEnright@pvsc.com, Marques Eley, Sr. Engineer – Process Control:
MEley@pvsc.com, Greg Alber, Sr. Scientist – Process Control: GAlber@pvsc.com

CONTACT INFORMATION:

Security Office	973-817-5858 or 5858 from plant telephones
Wet Train Shift Supervisor	973-817-5819 or 5819 from plant telephones
Dry Train Shift Supervisor	973-817-5882 or 5882 from plant telephones
Ed Enright, Process Control	973-817-5977 or 5977 from plant telephones
Beth Engelbert, Process Control	973-817-5768 or 5768 from plant telephones

DOCUMENT REVISION HISTORY

This document was first issued on December 7, 2016.

Revision 1: May 11, 2017

Revision 2: July 17, 2017

Modified and approved:

 07-17-2017

Patricia N. Lopes
Director of Process Control Engineering and
Regulatory Compliance

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS AT 973-817-5858
Process Control 7/17/2017

WEEKLY VISUAL LEAK DETECTION LOG

Contractor: _____

Contract # _____

DATE: _____ TIME: _____ INSPECTOR'S SIGNATURE: _____

Instructions:

1. Perform visual inspection in accordance with the inspection SOP weekly and during material transfer operations, such as filling or emptying a chemical storage tank or fueling.
2. Check the proper box below for each piece of equipment. Use additional sheets as needed.
3. Record Run Hours per Section D of Temporary Tankage/Equipment usage 14 Day Notifications for Emergency Generators ONLY!
4. Describe all leaks in the Comments Section. State any other observations such as missing or damaged spill containment equipment, tank damage, or pump problems here as well. If there are no comments, damage, leaks, etc., check "Not Applicable."
5. Note any repairs or corrective actions recommended to address damage, leaks, or missing items. If none are required, check "Not Applicable."

INSPECTION OF:	Equip. Type/Size	Equip. Type/Size
Location:	_____	_____
PIPING AND VALVING	<input type="checkbox"/> Leaks <input type="checkbox"/> OK	<input type="checkbox"/> Leaks <input type="checkbox"/> OK
EQUIPMENT	<input type="checkbox"/> Leaks <input type="checkbox"/> OK	<input type="checkbox"/> Leaks <input type="checkbox"/> OK
SURFACE BELOW AND AROUND EQUIPMENT	<input type="checkbox"/> Leaks <input type="checkbox"/> OK	<input type="checkbox"/> Leaks <input type="checkbox"/> OK
AUDIO OR VISUAL ALARMS OBSERVED (if yes, call PVSC Security)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
SPILL CONTAINMENT EQUIPMENT	<input type="checkbox"/> Replace <input type="checkbox"/> OK	<input type="checkbox"/> Replace <input type="checkbox"/> OK
FUEL OR HAZARDOUS MATERIAL TRANSFER IN PROGRESS? If yes, indicate volume delivered/removed.	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
Material: _____	_____ gallons	_____ gallons
MAKE:	_____	_____
MODEL/SERIAL NUMBER:	_____	_____
RUN HOURS (see #3 above)	_____	_____

NOTE ALL COMMENTS/DAMAGE AND DESCRIBE ALL LEAKS BELOW: ☐ Not Applicable

NOTE ANY CORRECTIVE ACTION RECOMMENDED BELOW: ☐ Not Applicable

IMMEDIATELY NOTIFY PVSC SECURITY OF ALL SPILLS 973-817-5858
Keep with project records. Process Control 7/17/2017

2.6 TEMPORARY STORAGE TANKS

Description

The PVSC facility may have the occasion to bring temporary storage tanks onsite for use with such equipment as pumps, compressors, emergency generators, oil-filled transformers, concrete mixers temporary fueling stations for construction equipment, chemical storage tanks, and tanker trucks unloading hazardous substances, etc. Temporary storage tanks shall be defined as those tanks which can store in excess of five (5) gallons of fuel or hazardous substances, which are brought and used onsite for 24 hours and for less than six (6) months. These temporary storage tanks may be owned, rented, leased, and/or operated by PVSC or outside contractors contracted to perform work on PVSC facilities and may be separate from or integral to the equipment.

If the temporary storage tank will be used onsite for longer than six (6) months, it is considered a permanent installation and requires PVSC provide the NJDEP with both a written 60 Days' Notice letter and a DPCC Plan Amendment. In addition, when the permanent equipment is removed from the site, PVSC must provide NJDEP with a 60 Days' Notice letter and a Plan Amendment to remove the storage tank for the PVSC DPCC Plan.

If the proposed equipment is determined to meet the requirements of "temporary storage tanks," PVSC will then require the following:

- Weekly visual leak inspections to be performed in accordance with SOP "Contactor Equipment Visual Leak Inspection SOP" and inspection check list. Such inspections will also occur during the transfer of hazardous substances. Written records of inspections shall be kept in accordance with the Section 9 Record Keeping, of this Plan.
- PVSC shall review the status of the temporary storage tank after three (3) months from arrival onsite. This review shall be used to determine if the storage tank continues to meet the definition of a "temporary storage tank," and is on schedule for removal in less than six (6) months from initial installation.

Truck Unloading and Secondary Containment

Temporary storage tanks will require secondary containment, and that containment system shall comply with the secondary containment requirements of the NJDEP Regulations; NJAC 7:1E subsections 2.2 Storage and 2.6 Facility Drainage and Secondary Containment as follows.

- Wherever possible, temporary storage tanks shall be installed in existing, permanent secondary containment areas.
- When an existing area is not accessible, portable and temporary secondary containment structures shall be erected. These containment areas may be prefabricated containment units, constructed onsite from impermeable liner fabric and berms, etc.
- Secondary containment will be sized appropriately.
- Containment areas for large storage tanks, or storage tanks onsite for more than 30 days shall be equipped with portable leak detector sensors and alarms.
- Equipment with storage volumes of 2,000 gallons or more shall be equipped with overflow alarms.

Temporary storage tanks will comply with the leak prevention and detection parts of the NJDEP Regulations, Sections 7:1E-2.2 Storage and 7:1E-2.3 Tank Car or Tank Truck Loading or Unloading Areas cover the requirements that usually impact our projects, as follows:

- Drip pans will be positioned beneath the truck hose couplings.
- Storm drains and sewer manholes shall be covered and/or protected with drain covers.
- Spill kits with appropriate absorbents and/or dry cleaning supplies shall be available.
- Wheels of truck and/or temporary tank shall be chocked.
- Truck unloading area will be provided with secondary containment as follows:
 - A. Wherever and whenever possible, hazardous substances will be unloaded from trucks in existing secondary containment areas.
 - B. When an existing area is not accessible, portable temporary secondary containment structures shall be erected if practical. These containment areas may be prefabricated containment units, constructed onsite from impermeable liner fabric and berms, etc.
 - C. In the event that erection of temporary secondary containment is not practical, the following procedure will be followed:
 1. All storm drain and manhole cover in the vicinity of the truck unloading are blocked with drain covers
 2. A spill kit with appropriate clean-up materials must be within 100 feet of the unloading area.
 3. A trained observer must be within eyesight (no more than 100' away) of the unloading area and monitor the entire process. Observer must have a means of contacting PVSC Security at all times, in the event of a spill.
 4. Unloading will not occur during rain events
 5. Unloading will not occur within 50 feet of water bodies

During the use of the temporary facilities, PVSC will comply with the leak inspection and delivery monitoring requirements of the regulations (NJAC 7:1E-2.10), including the following:

- Weekly documented visual inspections for leaks to be performed in accordance with SOP
- Monitor of each fuel or chemical delivery.
- Use overfill alarms, inventory controls such as monitoring fuel gauges, checking pre-and post-transfer tank levels, or other methods to prevent overfilling.
- Written records of inspections shall be kept in accordance with the Section 9 Record Keeping, of this Plan.

SECTION 02 31 27

SOIL RESISTIVITY TESTING

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. The Contractor shall furnish all labor, equipment, materials, tools, supervision, testing, and other services required to perform soil resistivity testing as specified herein.

1.2 RELATED WORK

- A. Submittals are included in Section 01300.
- B. Site Preparation is included in Section 31 10 00.
- C. Earthwork is included in Section 31 23 19
- D. Granular Materials is included in Section 31 23 23.

1.3 SUBMITTALS

- A. In Situ Soil Resistivity Test Report
- B. In Situ Electrical Soil Resistivity Measurement Data Form
- C. In Situ Electrical Soil Resistivity Summary Data Form

1.4 GOVERNING STANDARDS

- A. In-Situ Electrical Soil Resistivity Testing performed under these specifications shall be in accordance with the following codes and standards. Unless otherwise specified, the applicable governing edition and addenda to be used for all references to codes or standards specified herein shall be interpreted to be the jurisdictionally approved edition and addenda. If a code or standard is not jurisdictionally mandated, then the current edition and addenda in effect at the date of this document shall apply.
 - 1. ASTM G57 – Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method
 - 2. IEEE 81 – Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System.

1.5 GENERAL REQUIREMENTS

- A. Electrical soil resistivity tests shall be performed to support a future grounding and cathodic protection design. The data will not be used for geophysical exploration purposes.
- B. Prior to mobilizing and performing any in situ soil resistivity testing, Contractor shall

participate in an Owner/Engineer/Contractor teleconference call five (5) business days prior to mobilization to review Contractor's work plan to execute the work.

- C. Drawings indicating the site vicinity and the location plan of the electrical soil resistivity tests are included in Attachment 1 to this section.
- D. The Contractor shall conduct in situ electrical soil resistivity tests, as required, at locations indicated on the Subsurface Investigation Plan drawings provided in Attachment 1 to this section. In situ testing shall be by Wenner Four-Electrode Method.
- E. The Contractor shall be responsible for locating all underground utilities at each investigation location. No work shall begin until all utility services have been notified, and utility locations have been marked at each investigation location.
- F. The Contractor shall become familiar with the site prior to performing the work. The Contractor is advised he may need to perform limited hand clearing of brush to provide access to the work areas.
- G. The Contractor shall furnish all material and equipment required for the subsurface investigation. Material shall be new and undamaged and shall conform to the requirements specified in this section.
- H. Contractor shall ensure work will be performed in accordance with the codes and standards specified herein.
- I. Contractor shall be responsible to furnish all water required and shall obtain approval from the Authority Having Jurisdiction with using water from fire/yard hydrants. No separate payment will be made for providing water.
- J. The Contractor shall furnish all electrical power required. No separate payment will be made for providing electrical power.
- K. In situ soil resistivity test(s) shall be performed after placement of new fill material at the project site.

1.6 QUALIFICATIONS

- A. The operator of the electrical soil resistivity test instrument shall have previously performed a minimum of ten (10) similar electrical soil resistivity tests within the last five (5) years and have significant experience with the instrument to be used to perform the testing.

PART 2 – PRODUCTS

2.1 IN SITU ELECTRICAL SOIL RESISTIVITY METER

- A. Super Sting R1 or Super Sting R8 as manufactured by Advanced Geosciences, Inc.
- B. SYSCAL R1 Plus, SYSCAL R2, or SYSCAL Pro as manufactured by Iris Instruments
- C. Or Approved Equal.

2.2 ELECTRODES

- A. Type as required by the in situ electrical soil resistivity meter manufacturer.

2.3 MATERIALS

- A. Water: Clean, potable, and free from oil, acids, organic materials, or other deleterious substances.

PART 3 – EXECUTION

3.1 EQUIPMENT

- A. Advanced Geosciences Inc. (AGI) meters shall be set per the following schedule:
 - 1. Allow full meter current output capability (2,000 mA and not 2 mA defaults).
 - 2. One percent max standard deviation (not 2 percent default).
 - 3. Maximum of 4 cycles (not 2 cycles default).
- B. Equipment shall be in good operating condition and shall operate at the capacity specified or required to perform the work required for the subsurface investigation.
- C. Contractor shall provide Owner/Engineer calibration certificates of all equipment used for the in situ electrical soil resistivity tests.

3.2 IN SITU TESTS

- A. In situ electrical soil resistivity tests shall be conducted in accordance with the instrument manufacturer's instruction manual and adhere to the requirements of ASTM G57 – Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method and IEEE 81 – Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System.
- B. The in-situ testing instrument batteries shall be fully charged immediately prior to each day's testing
- C. The longest "a" spacing of each traverse location and the array of "a" spacings for the soil traverses are shown on the attached Soil Resistivity Measurement Location Plan provided in Attachment 1 to this section. The orientation of each traverse indicated on the drawings is intentional.
- D. One set of data shall be obtained from each test location as shown on the Soil Resistivity Measurement Location Plan. One set of data consists of measurements from two traverses that are perpendicular. For example, if one traverse is made up of seven (7) "a" spacings, then one set of data will have total of fourteen (14) measurements.
- E. The four (4) electrodes shall be placed in a straight line along the traverse with equal spacing between them, and driven into the soil. The electrode depth is indicated on the data form

provided in Attachment 1. It is recommended that short probes or surface mount reference cells utilizing a copper-sulfate solution be used for the 1 foot and 2 foot measurements. The depth of the electrodes shall not exceed 10 percent of the "a" spacing at each measurement. The Contractor shall record the actual probe depth, if different from the value on the data form.

- F. To ensure proper instrument performance, special care shall be taken to minimize the resistance between the soil and the electrodes. The electrodes shall be clean, shiny, and in firm contact with the soil. The soil immediately surrounding each electrode may be wetted with water or a copper sulfate solution taking care to limit the area of influence for the short electrode "a" spacings. The instrument batteries shall be fully charged immediately prior to testing.
- G. When the soil is difficult to insert the electrodes, a hole may be drilled and filled with a copper sulfate solution to ensure good electrical contact with the soil.
- H. Care shall be taken to keep current and potential cables separated as much as possible to prevent measurement error caused by coupling between the current and potential cables, especially for "a" spacings 60 feet or greater.
- I. Care shall be taken to keep current and potential electrode spans at least 1/2 times "a" spacing from conductive underground structures such as fences, utilities, etc., unless they are at right angle to the span. For instance, if the "a" spacing is 30 feet, then the current and potential electrode span shall be at least 15 feet (1/2 times 30 feet) from metallic structures. Avoid aligning current and potential electrode spans parallel to the routing of underground structures. Whenever possible, current and potential electrode spans shall be placed perpendicular to transmission and distribution lines that are in close proximity, to avoid coupling between them.
- J. Contractor shall adjust the traverse bearings or test location up to 200 feet (60 m) in any direction for the following cases:
 - 1. Equipment, structures or material stockpiles block the bearing.
 - 2. Any traverse with three or more measurements that indicate high noise or fail to stabilize; i.e., the measurements vary and will not resolve to a single value.
 - 3. Any traverse with four or more perpendicular "a" spacing that have a difference greater than fifty percent.
- K. The adjusted traverse location shall be greater than 50 feet from the center point of any adjacent traverse.
- L. The bearings of an adjusted traverse or relocated test location should remain perpendicular. Under some circumstances, the bearings may not be able to remain perpendicular and shall be explained in the report. The new bearing and/or location shall be marked on a drawing and submitted with the report.
- M. Contractor may test in frozen soil and the electrode depth shall not exceed 10 percent of the "a" spacing. Contractor may push the electrodes through the frozen soil or drill a hole and fill it with highly conductive slurry such as bentonite mud, salt water infused mud, etc. All

four electrodes for each "a" spacing shall be similar. Contractor shall record the process on a data form for each traverse.

- N. Contractor shall contact the Owner/Engineer's grounding specialist or grounding process owner before leaving the site when traverses are required to be moved greater than 200 feet or when other clarifications are needed.

3.3 TEST REPORTS

- A. The Contractor shall complete and submit a final test report, including but not limited to, the form(s) provided in Attachment 1 of this section. One (1) blank hard copy of each form and an MS Excel electronic file containing separate tabs will be made available for the Contractor's use. All fields on the hard copy and electronic data forms shall be completed. The Contractor shall append the Notes field to include any meter setting or measured value not specifically listed on the forms. The Contractor shall complete and submit the following:

1. One (1) hard copy of the completed In Situ Electrical Soil Resistivity Measurement Data Form per individual traverse.
2. One (1) hard copy of the completed In Situ Electrical Soil Resistivity Summary Data Form.
3. One (1) completed MS Excel electronic file with multiple worksheets (tabs), each containing one In Situ Electrical Soil Resistivity Measurement Data Form per individual traverse, and with one worksheet containing the In Situ Electrical Soil Resistivity Summary Data Form.

- B. Contractor shall provide all the information requested in the list below and include the information with the in situ test report. Failure to record and submit all of the below listed information to the Owner/Engineer shall require the Contractor to repeat all of the resistivity tests at no additional cost to the Owner:

1. Contractor name, contact information, and project or purchase order number.
2. Site location.
3. Owner/Engineer name and project number.
4. Date of measurement or sample retrieval.
5. Test type; i.e., in situ.
6. Manufacturer and model number of the meter(s) used.
7. Date of last meter calibration (must be at least within the last calendar year).
8. Resistance and resistivity values as displayed on meter's screen.
9. Ambient air temperature (°F or °C) on date of test or sample retrieval.

10. Describe the weather conditions; i.e., snow, rain, ice, slush, arid, fog, humid, etc.
11. Describe recent precipitation; i.e., 2 inches of rain yesterday, 6 inches of snow on the ground during testing, etc.
12. Describe the soil composition for each traverse; i.e., grassy, rocky, sandy, clayey, silty, spoils, etc.
13. Describe the difficulty of inserting the electrodes; i.e., easy, required some force, hard, drilled and filled with a highly conductive slurry such as bentonite mud, saltwater infused mud, etc.
14. Describe traverse terrain near or through obstacles such as equipment, foundations, structures, swales, roads, significant elevation changes, etc.
15. Electrode "a" spacing or soil sample depth (feet or meters).
16. Electrode penetration depth (inches or millimeters).
17. Current and potential test lead cable size.
18. Electrode length, diameter, and material.
19. Hand marked drawing of any relocated traverse.
20. Frost line depth (feet or meters), if working in frozen soil.
21. Note any conducting solution used to assist with probe-soil contact.

PART 4 – ATTACHMENTS

4.1 TECHNICAL ATTACHMENTS

- A. The following documents are included as Attachment 1 to this Section and accompany this section in either paper or electronic format:
 1. Document Number 193946-SK-E0001, Soil Resistivity Measurement Location Plan, Rev. 0.
 2. In Situ Electrical Soil Resistivity Measurement Data Form (In Situ Electrical Soil Resistivity Data Forms blank English.xls).
 3. In Situ Electrical Soil Resistivity Summary Data Form (In Situ Electrical Soil Resistivity Data Forms blank English.xls).

END OF SECTION

ATTACHMENT 1

In Situ Electrical Soil Resistivity Measurement Data Form

Revision 0
Wenner Array

Project Name: <u>Passaic Valley Standby Power Project</u> Black & Veatch Project No.: <u>193946</u> Supplier Name & Operator _____ Project Location: _____ Date: _____ Measurement No. & Orientation: _____ Description of Terrain & Probe Insertion: _____ Weather (Present and Recent): _____ Meter Model Type: _____ Serial No. & Calibration Date: _____ / _____	Notes:
---	---

Electrode "a" Spacing (ft)	Preferred Electrode Depth (in)	Actual Electrode Depth (in)	Electrode Configuration					Source Voltage (V)	V_{M-N} (mV) ¹	Current Injected, I (mA)	Standard deviation (%)	Apparent Resistance (Ohm)	Apparent Resistivity (Ohm-m)
			A (ft)	M (ft)	0	N (ft)	B (ft)						
1	1		1.5	0.5		0.5	1.5						
2	2		3	1		1	3						
3	4		4.5	1.5		1.5	4.5						
6	6		9	3		3	9						
10	6		15	5		5	15						
20	12		30	10		10	30						
30	12		45	15		15	45						
60	12		90	30		30	90						
100	12		150	50		50	150						
200	12		300	100		100	300						
300	12		450	150		150	450						

¹ Not required if using AGI meters.

Note: Due to soil conductivity, the electrode depth may have to be increased. However, electrode depth shall not exceed 10% of "a" spacing.

Supplier Name:

Revision 0

1. Enter resistance and resistivity values of all traverse locations listed below.
2. Submit this completed spreadsheet with the final report.

**Apparent Resistance
(ohm)**

[illegible]

**Apparent Resistivity
(ohm-m)**

[illegible]

SECTION 02 41 00

DEMOLITION AND MODIFICATIONS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and demolish, remove and dispose of work shown on the Drawings and as specified herein.
- B. Included, but not limited to, demolition and removal of existing underground structures and demolition debris consisting of reinforced concrete as shown on the Drawings and as specified herein.
- C. Demolition and removals which may be specified under other Sections shall conform to requirements of this Section.
- D. Demolition and modifications include:
 - 1. Existing Concrete Conduits.
 - 2. Existing Concrete Sedimentation Basins.
 - 3. Existing Concrete Slab.
- E. Blasting and the use of explosives will not be permitted for any demolition work.

1.02 RELATED WORK

- A. Summary of Work is included in Section 01010.
- B. Submittals are included in Section 01300.
- C. Construction Schedule is included in Section 01311.
- D. Dewatering and Drainage is included in Section 31 23 19.
- E. Permanent Soldier Pile Retaining Wall is included in Section 31 37 17.
- F. Excavation Support and Protection is included in Section 31 75 01.
- G. Geotechnical Instrumentation is included in Section 31 09 00.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, six copies of proposed methods and operations of demolition of the structures prior to the start of work.

- B. Furnish a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the Owner's operations.

1.04 JOB CONDITIONS

A. Protection

1. Execute the demolition and removal work to prevent damage or injury to structures, 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. Closing or obstructing of roadways, sidewalks 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 traffic on these ways.
3. Erect and maintain barriers, lights and other required protective devices.

B. Scheduling

1. Carry out operations so as to avoid interference with operations and work in the existing facilities.

C. Notification

1. At least 48 hours prior to commencement of a demolition or removal, notify the Engineer in writing of proposed schedule therefor.

D. Repairs to Damage

1. Promptly repair damage caused to adjacent facilities by demolition operation when directed by Engineer and at no additional cost to the Owner. Repairs shall be made to a condition at least equal to that which existed prior to construction.

E. Traffic Access

1. Conduct demolition operations and the removal of debris to ensure minimum interference with roads, streets, walks both onsite and offsite and to ensure minimum interference with occupied or used facilities.
2. Special attention is directed towards maintaining safe and convenient access to the existing facilities by plant personnel and plant associated vehicles.
3. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the Engineer. Furnish alternate routes around closed or obstructed traffic in access ways.
4. The Owners security forces will provide staffing for traffic control during active construction activities at the Contractor's expense.

1.05 RULES AND REGULATIONS

- A. The Building Code of the State of New Jersey, shall control the demolition of the existing structures.

1.06 DISPOSAL OF MATERIAL

- A. All concrete, miscellaneous metals and other material shall become the Contractor's property and must be removed from the site.
- B. The storage or sale of removed items on the site will not be allowed.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Dispose of all demolition materials, debris and all other items not marked by the Owner to remain, off the site and in conformance with all existing applicable laws and regulations.
- B. Pollution Controls
 - 1. Use water sprinkling, temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
 - 2. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding and pollution.
 - 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. Structure Demolition
 - 1. Demolish concrete in small sections.
 - 2. Break up and remove foundations and slabs-on-grade, unless otherwise shown to remain. Expose timber piles to remain in place and survey prior to backfilling.

3.02 STRUCTURAL REMOVALS

- A. Remove structures to the lines and grades shown unless otherwise directed by the Engineer.
- B. All concrete, reinforcement, structural or miscellaneous metals and other items contained in or upon the structure shall be removed and taken from the site, unless otherwise approved by the Engineer. Demolished items shall not be used in backfill.

- C. Existing pile foundations shall not be pulled or completely removed but rather shall be cut off as required to the level indicated on the Drawings or as directed by the Engineer.

3.03 CLEAN-UP

- A. Remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the work, all materials, waste and debris of every sort shall be removed and premises shall be left, clean, neat and orderly.

END OF SECTION

SECTION 03 15 00
CONCRETE JOINTS AND JOINT ACCESSORIES

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install accessories for concrete joints complete as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Concrete and reinforcing steel is included in Section 03 30 01.
- B. Grout is included in Section 30 60 00.
- C. Miscellaneous metals are included in Section 05 50 00.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, shop drawings and product data for:
 - 1. Preformed expansion joint material: Product data including location of use, catalogue cut, dimensions, technical data, storage requirements, installation instructions, and conformity to ASTM standards.
 - 2. Sealant: Product data including location of use, catalogue cut, technical data, storage requirements, mixing and application instructions, and conformity to ASTM standards.
 - 3. Bond Breaker: Product data including location of use, catalogue cut, technical data, storage requirements, and application instructions.
 - 4. Joints: submit a dimensioned plan showing the locations of construction joints, expansion joints, and control joints.

1.04 REFERENCE STANDARDS

- A. ASTM International
 - 1. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.
 - 2. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original, unopened containers displaying the manufacturer's label showing manufacturer name, product identification and batch number.

- B. Store products as recommended by the manufacturer.

PART 2 PRODUCTS

2.01 GENERAL

- A. All materials used together in a given joint shall be compatible with one another. Coordinate selection of suppliers and products to provide compatibility.

2.02 MATERIALS

A. Premolded Joint Filler

- 1. Premolded Joint Filler – Structures: Self-expanding cork premolded joint filler conforming to ASTM D1752, Type III. Provide 1-in thickness unless otherwise indicated on the Drawings.

B. Bond Breaker

- 1. Bond Breaker Tape: Adhesive-backed glazed butyl or polyethylene tape which will adhere to the premolded joint filler or concrete surface. Provide tape the same width as the joint.
- 2. Bond breaker for concrete other than where tape is indicated on the Drawings or specified: Either bond breaker tape or a non-staining type bond prevention coating such as Crete-Lease Bond Breaker for Tilt-Up by Cresset Chemical Co.; Sure-Lift J-6 WB by Dayton Superior; Silcoseal Select by Nox-Crete, or equal.

C. Sealant:

- 1. Provide sealant for joints in sloping and vertical surfaces conforming to ASTM C920, Type S or M, Grade NS, Class 25. Provide Use NT sealant in non-traffic areas.

PART 3 EXECUTION

3.01 INSTALLATION

A. Construction Joints

- 1. Make construction joints only at locations shown on the Drawings or as approved by the Engineer. Any additional or relocation of construction joints proposed by the Contractor must be submitted to the Engineer for written approval. Do not eliminate construction joints.
- 2. Unless indicated otherwise, provide joints perpendicular to main reinforcement. Continue reinforcing steel through the joint as indicated on the Drawings and provide a Class B tension lap splice.
- 3. At all construction joints and at concrete joints indicated on the Drawings to be "roughened", uniformly roughen the surface of the concrete to a full amplitude (distance between high and low points and side to side) of 1/4-in with chipping tools to expose a fresh face. Thoroughly clean joint surfaces of loose or weakened materials by waterblasting or sandblasting and prepare for bonding. At least two hours before and again

shortly before the new concrete is deposited, saturate the joints with water. After glistening water disappears, coat joints with neat cement slurry mixed to the consistency of very heavy paste. The surfaces shall receive a coating at least 1/8-in thick, scrubbed-in by means of stiff bristle brushes. Deposit new concrete before the neat cement dries.

4. Do not use keyways in construction joints unless specifically shown on the Drawings or approved by the Engineer.

B. Expansion Joints

1. Make expansion joints at locations indicated on the Drawings. Do not eliminate or relocate expansion joints.
2. Provide formed expansion joints 1-in in thickness unless otherwise indicated on the Drawings.
3. Do not extend through expansion joints, reinforcement or other embedded metal items that are continuously bonded to concrete on each side of the joint.
4. Place joint filler over the face of the joint, allowing for sealant grooves as indicated. Tape all joint filler splices to prevent intrusion of mortar. Position premolded joint filler material parallel to finished surfaces. Secure the joint filler against displacement during concrete placement and consolidation. Seal expansion joints as indicated on the Drawings.

C. Control Joints:

1. Install control joints as shown on the Drawings.

D. Sealant

1. Install sealants in clean dry recesses free of frost, oil, grease, form release agent, loose material, laitance, dirt, dust and other materials which will impair bond at the locations shown on the Drawings. Apply sealant conforming to the manufacturer's recommendations including concrete cure, temperature, moisture, mixing, primer, primer cure time, joint and recess preparation, tooling, and curing. Apply masking tape to each side of the joint prior to the installation of the sealant and remove afterwards along with any spillage to leave a sealant installation with neat straight edges.

E. Bond Breaker

1. Install bond breaker as shown on the Drawings.

END OF SECTION

SECTION 03 30 01
CONCRETE AND REINFORCING STEEL

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install all concrete work complete as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Grout is included in Section 03 60 00.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, shop drawings and product data for:
 - 1. Placing drawings and bar bending details in conformity with the recommendations of ACI 315.
 - 2. Technical data on all materials and components.
 - 3. Material Safety Data Sheets (MSDS) for all concrete admixtures and curing agents.
- B. Test Reports
 - 1. Sieve analysis, mechanical properties and deleterious substance content for fine and coarse aggregates.
 - 2. Concrete mixes: For each formulation of concrete proposed for use, submit constituent quantities per cubic yard, water cementitious ratio, concrete slump, type and manufacturer of cement. Provide either a. or b., below, for each mix proposed.
 - a. Standard deviation data for concrete mixes based on statistical records.
 - b. Water cementitious ratio curve for concrete mixes based on laboratory tests. Provide average cylinder strength test results at 7 and 28 days for laboratory concrete mix designs. Provide results of 14 day tests if available.
- C. Certifications
 - 1. Certify that admixtures used in the same concrete mix are compatible with each other and the aggregates.
 - 2. Certificate of conformance for concrete production facilities from NRMCA.

1.04 REFERENCE STANDARDS

- A. ASTM International

1. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
2. ASTM A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
3. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
4. ASTM C33 - Standard Specification for Concrete Aggregates.
5. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
6. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
7. ASTM C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete
8. ASTM C150 - Standard Specification for Portland Cement
9. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
10. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
11. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
12. ASTM C311 - Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland-Cement Concrete.
13. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
14. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Portland Cement Concrete.

B. American Concrete Institute (ACI).

1. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
2. ACI 232.2R - Use of Fly Ash in Concrete
3. ACI 301 - Specification for Structural Concrete.
4. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete.
5. ACI 305R - Hot Weather Concreting.
6. ACI 306R - Cold Weather Concreting.
7. ACI 315 - Details and Detailing of Concrete Reinforcement.

- 8. ACI 318 - Building Code Requirements for Structural Concrete.
 - C. Concrete Reinforcing Steel Institute (CRSI)
 - 1. MSP - Manual of Standard Practice
 - D. National Ready Mixed Concrete Association (NRMCA)
 - 1. Quality Control Manual, Section 3- Certification of Ready Mixed Concrete Production Facilities
 - E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.
- 1.05 QUALITY ASSURANCE
- A. Comply with ACI 318, and other stated specifications, codes and standards. Apply the most stringent requirements of stated specifications, codes, standards, and this Section when conflicts exist.
 - B. If, during the progress of the work, it is impossible to secure concrete of the specified workability and strength with the materials being furnished, the Engineer may order such changes in proportions or materials, or both, as may be necessary to secure the specified properties. Make all changes so ordered at the no additional cost to the Owner.
 - C. All field testing and inspection services and related laboratory tests required will be provided by the Owner. The cost of such work will be paid for by the Owner. Methods of testing will comply with the latest applicable ASTM methods.
 - D. Develop concrete mixes and their testing by an independent testing laboratory engaged by and at the expense of the Contractor. Methods of testing shall comply with the latest applicable ASTM methods.
- 1.06 DELIVERY, STORAGE AND HANDLING
- A. Ship and store reinforcing steel with bars of the same size and shape fastened in bundles with durable tags, marked in a legible manner with waterproof markings showing the same designations as those shown on the submitted placement drawings. Provide reinforcing steel free from mill scale, loose rust, mud, dirt, grease, oil, ice or other foreign matter. Store off the ground, protect from moisture and keep free from rust, mud, dirt, grease, oil, ice or other injurious contaminants.
 - B. Store products in conformity with the manufacturer's recommendations.
 - C. Store or stockpile sand, aggregates, cement and fly ash in conformity with ACI 301.

PART 2 PRODUCTS

2.01 GENERAL

- A. The use of manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials shall be the end products of one manufacturer in order to provide standardization for appearance, maintenance and manufacturer's service.
- C. Materials shall comply with this Section and any applicable State or local requirements.

2.02 MATERIALS

- A. Cement: Domestic portland cement conforming to ASTM C150. Do not use air entraining cements. The allowable types of cement for each class of concrete are shown in Table 1.
- B. Fine Aggregate: Washed inert natural sand conforming to ASTM C33.
- C. Coarse Aggregate: Well-graded crushed stone or washed gravel conforming to ASTM C33, size 67 or 467 (see Table 1). Limits of deleterious substances and physical property requirements as listed in ASTM C33, Table 4 for severe weathering regions.
- D. Water: Potable water free of oil, acid, alkali, salts, chlorides, (except those attributable to drinking water) organic matter, or other deleterious substances.
- E. Admixtures: Use admixtures free of chlorides and alkalis (except for those attributable to drinking water). The admixtures shall be from the same manufacturer when it is required to use more than one admixture in the same concrete mix. Use admixtures compatible with the concrete mix including other admixtures [and made for use in contact with potable water after 30 days of concrete curing].
 - 1. Air Entraining Admixture: Conforming to ASTM C260. Proportion and mix in accordance with manufacturer's recommendations.
 - 2. Water Reducing Admixture: Conforming to ASTM C494, Type A. Proportion and mix in accordance with manufacturer's recommendations.
 - 3. Do not use admixtures causing retarded or accelerated setting of concrete without written approval from the Engineer. Use retarding or accelerating water reducing admixtures when so approved.
- F. Fly Ash: Class F fly ash complying with ASTM C618, including the requirements of Table 1 but with the Loss of Ignition (LOI) limited to 3 percent maximum and the optional physical requirements of Table 3.
- G. Deformed Concrete Reinforcing Bars: ASTM A615, Grade 60 deformed bars.
- H. Welded Steel Wire Fabric: Conforming to ASTM A185.
- I. Reinforcing Steel Accessories

1. Plastic Protected Wire Bar Supports: CRSI Bar Supports, Class 1 - Maximum Protection.
2. Stainless Steel Protected Wire Bar Supports: CRSI Bar Supports, Class 2 - Moderate Protection with legs made wholly from stainless steel wire.

J. Tie Wires for reinforcement: 16 gauge or heavier black annealed wire.

2.03 MIXES

- A. Select proportions of ingredients to meet the design strength and materials limits specified in Table 1 and to produce placeable, durable concrete conforming to these Specifications. Proportion ingredients to produce a homogenous mixture which will readily work into corners and angles of forms and around reinforcement without permitting materials to segregate or allowing free water to collect on the surface.
- B. Base concrete mixes on standard deviation data of prior mixes with essentially the same proportions of the same constituents or, if not available, develop concrete mixes by laboratory tests using the materials proposed for the work.
- C. Compression Tests: Provide testing of the proposed concrete mix or mixes to demonstrate compliance with the compression strength requirements in conformity with the provisions of ACI 318.
- D. Entrained air, as measured by ASTM C231, shall be as shown in Table 1.
- E. Slump of the concrete as measured by ASTM C143, shall be as shown in Table 1.
- F. Proportion admixtures according to the manufacturer's recommendations. Two or more admixtures specified may be used in the same mix provided that the admixtures in combination retain full efficiency and have no deleterious effect on the concrete or on the properties of the other admixture(s).

Class	Design Strength (1)	Cement ASTM C150	Cementitious Content (2)	TABLE 1				
				W/C (3)	WR (4)	Fly Ash (5)	Slump Range Inches	Coarse Agg.
D	4000	Type II	560	0.44 max	Yes	Yes	3-5	67
E	4000	Type II	540	0.44 max	Yes	Yes	3-5	467

TABLE 1 NOTES:

- (1) Minimum compressive strength in psi at 28 days
- (2) Minimum cementitious content in lbs per cubic yard (where fly ash is used, cementitious content is defined as cement content plus fly ash content)
- (3) W/C is Maximum Water Cementitious ratio by weight
- (4) WR is water reducing admixture
- (5) Fly ash content in the range of 20-25 percent of the total cement content plus fly ash content, by weight
- (6) All concrete classes shall have 3.5 to 5 percent air entrainment.

2.04 MEASURING, BATCHING, MIXING AND TRANSPORTING CONCRETE

- A. Measure, batch, mix and transport concrete in conformance with ASTM C94 and the requirements herein or as otherwise approved in writing by the Engineer.
- B. Ready-mixed concrete, whether produced by a concrete supplier or the Contractor shall conform to the requirements above. Do not hand mix.
- C. Dispense admixtures into the batch in conformity with the recommendations of the admixture manufacturer.
- D. Mix concrete until there is uniform distribution of the materials and discharge completely before the mixer is recharged. The mixer shall be rotated at a speed recommended by the mixer manufacturer and mixing shall be continued for at least 1-1/2 minutes after all the materials are in the mixer. Place concrete within 1-1/2 hours of the time at which water was first added, otherwise it will be rejected. Concrete which has been remixed or retempered, or to which an excess amount of water has been added, will also be rejected.

2.05 FORMS

- A. Provide forms that are smooth metal or have sanded/coated wood surface free of knot-hole imperfections, watertight and braced and tied to prevent motion when concrete is placed. Wooden spreaders will not be allowed in the concrete.
- B. Design and construct all forms in accordance with ACI 347 to provide a flat, uniform concrete surface requiring no grinding, repairs, or finishing.
- C. The exposed surface of formed cast-in-place elements shall be coordinated with the exposed formed surfaces of the precast lagging such that the cast-in-place elements have a similar appearance to the precast lagging surfaces.
- D. Form Release Agent: Coat all form surfaces in contact with concrete with an effective, non-staining, non-residual, water-based, bond-breaking form coating. Form release agent shall impair the bond of sealant.
- E. Wire ties will not be allowed. Metal ties or anchorages which are necessary within the forms shall be so constructed that the metal work can be removed for a depth of at least 1-1/2-in from the concrete surface without damage by spalling. Clean forms before using and treat with form release agent, or other approved material.
- F. All exposed edges of the finished concrete shall be chamfered 3/4-in, unless noted otherwise.

PART 3 EXECUTION

3.01 CONSTRUCTION JOINTS

- A. See Section 03 15 00 for construction joint requirements.

3.02 REINFORCING STEEL

- A. Fabricate reinforcing steel accurately to the dimensions shown. Bend bars around a revolving collar having a diameter of not less than that recommended in ACI 318. All bars shall be bent cold.
- B. Provide tension lap splices in compliance with ACI 318. Provide Class B tension lap splices at all locations unless otherwise indicated.
- C. Lap splices in welded wire fabric in accordance with the requirements of ACI 318 but not less than 12-in. Tie the spliced fabrics together with wire ties spaced not more than 24-in on center and lace with wire of the same diameter as the welded wire fabric. Offset splices in adjacent widths to prevent continuous splices.
- D. Use plastic protected bar supports or steel supports with plastic tips where the reinforcing steel is to be supported on forms for a concrete surface that will be exposed to weather, high humidity, or liquid. Use stainless steel supports or plastic tipped metal supports in all other locations unless otherwise noted on the Drawings or specified herein.
- E. Before placing in position, clean reinforcement of loose mill scale and rust, mud, dirt, grease, oil and other coatings, including ice that reduce or destroy bond. When there is a delay in depositing concrete after the reinforcement is in place, bars shall be reinspected and cleaned again when necessary.
- F. Coat reinforcement which is to be exposed for a considerable length of time after being placed with a heavy coat of cement grout.
- G. Do not cover any reinforcing steel with concrete until the amount and position of the reinforcement has been checked and the Engineer has given permission to proceed.

3.03 INSPECTION AND COORDINATION

- A. Batching, mixing, transporting, placing and curing of concrete shall be subject to the inspection of the Engineer at all times. Advise the Engineer of readiness to proceed at least six working hours prior to each concrete placement. The Engineer will inspect the preparations for concreting including the preparation of previously placed concrete, the reinforcing and the alignment, cleanliness and tightness of formwork. Do not place concrete without the inspection and acceptance of the Engineer.

3.04 CONCRETE APPEARANCE

- A. Remix concrete showing either poor cohesion or poor coating of the coarse aggregate with paste. If this does not correct the condition, the concrete shall be rejected.
- B. Provide concrete having a homogeneous structure which, when hardened, will have the specified strength, durability and appearance. Provide mixtures and workmanship such that concrete surfaces, when exposed, will require no finishing except as specified herein.

3.05 PLACING AND COMPACTING

- A. Do not place concrete until forms, condition of subgrade and method of placement have been approved by the Engineer. Remove all debris, foreign matter, dirt, ice and standing water from the forms before depositing concrete. Do not place concrete on frozen subgrade, snow or ice. The contact surface between concrete previously placed and new concrete shall be cleaned and brushed with cement paste. Concrete, except as indicated on the Drawings, shall not be placed in water or submerged within 24 hours after placing, nor shall running water be permitted to flow over the surface of fresh concrete within 4 days after its placing.
- B. Deposit concrete as near its final position as possible to prevent segregation due to rehandling or flowing. Pumping of concrete will be permitted when an approved design mix and aggregate sizes suitable for pumping are used. Do not deposit concrete which has partially hardened or which has been contaminated by foreign materials. If the section cannot be placed continuously, place construction joints as specified or as approved. Place concrete for shafts using tremie tubes. Do not drop concrete more than 4-ft.
- C. Use high frequency mechanical vibrators to obtain proper consolidation of the concrete. Do not use vibrators to move or transport concrete in the forms. Do not over-vibrate so as to segregate. Continue vibration until the frequency returns to normal, trapped air ceases to rise and the surface appears liquefied, flattened and glistening. Use spades, rods or forks so that concrete is completely worked around reinforcement, embedded items, pipe stubs, and openings and into corners of forms.

3.06 CURING AND PROTECTION

- A. Protect all concrete work against injury from the elements and defacements of any nature during construction operations.
- B. Cure all concrete in conformance with ACI 301 by water curing. Water curing shall be by ponding, by continuous sprinkling or by covering with continuously saturated burlap.
- C. Protect finished surfaces and slabs from the direct rays of the sun to prevent checking and crazing.
- D. During cold weather concrete shall be batched, delivered, placed, cured and protected in compliance with the recommendations of ACI 306R. Do not use salt, manure or other chemicals for cold weather protection.
- E. During hot weather concrete shall be batched, delivered, placed, cured and protected in compliance with the recommendations of ACI 305R. The temperature of the concrete shall be such that it will cause no difficulties from loss of slump, flash set or cold joints. Immediately cover plastic concrete with sheet curing material during hot weather.

3.07 FIELD TESTS

- A. Sets of field control cylinder specimens will be taken by the Engineer during the progress of the work, in compliance with ASTM C31. The number of sets of concrete test cylinders taken of each class of concrete placed each day will not be less than one set per day, nor less than one set for each 150 cu yds of concrete nor less than one set for each 5,000 sq ft of surface area for

slabs or walls. Specimens will be formed in 6-in diameter by 12-in long non-absorbent cylindrical molds.

1. A "set" of test cylinders shall consist of four cylinders: one to be tested at seven days and two to be tested and their strengths averaged at 28 days. The fourth may be used for a special test at 3 days or to verify strength after 28 days if 28 day test results are low.
 2. When the average 28 day compressive strength of the cylinders in any set falls below the required compressive strength or below proportional minimum seven-day strengths (where proper relation between seven and 28 day strengths have been established by tests), change proportions, cementitious content, or temperature conditions to achieve the required strengths at no additional cost to the Owner.
- B. Cooperate in the making of tests by allowing free access to the work for the selection of samples. Provide an insulated closed curing box for the specimens and protect the specimens against injury or loss through construction operations. Furnish material and labor required for the purpose of taking concrete cylinder samples. All shipping of specimens will be paid for by the Owner.
- C. Slump tests will be made in the field by the Engineer in conformity with ASTM C143.
- D. Tests for air content will be made in the field by the Engineer in compliance with either the pressure method (ASTM C231) or by the volumetric method (ASTM C173).

3.08 STRIPPING AND FINISHING CONCRETE

- A. Do not remove forms before the concrete has attained a strength of at least 30 percent of the specified design strength nor before reaching approximately "100 day-degrees" of moist curing (whichever is the longer). Degree-days are defined as the total number of 24 hour periods multiplied by the weighted average daily air temperature at the surface of the concrete (e.g., 7 days at an average 50 degrees F = 350 degree-days).
- B. Contractor is responsible for all damage resulting from removal of forms. Exercise care to prevent damaging edges or obliterating the lines of chamfers, rustications or corners when removing the forms or doing any other work adjacent thereto. Make repairs to formed surfaces that become damaged at no additional cost to the Owner.
- C. Clean all exposed concrete surfaces and adjoining work stained by leakage of concrete, to the satisfaction of the Engineer.
- D. If form ties are necessary, remove tie cones and metal portions of ties immediately after removal of forms. Fill holes promptly upon stripping as follows: Moisten the hole with water, followed by a 1/16-in brush coat of neat cement slurry mixed to the consistency of a heavy paste. Immediately plug the hole with a 1 to 1.5 mixture of cement and concrete sand mixed slightly damp to the touch (just short of "balling"). Hammer the grout into the hole until dense, and an excess of paste appears on the surface in the form of a spider web. Trowel smooth with heavy pressure. Avoid burnishing.
- E. Defective concrete and honeycombed areas: Chip down square and at least 1-in deep to sound concrete with hand chisels or pneumatic chipping hammers. Irregular voids or surface stones need not be removed if they are sound, free of laitance, and firmly embedded in the parent

concrete. If honeycomb exists around reinforcement, chip to provide a clear space at least 3/8-in wide all around the steel. For areas less than 1-1/2-in deep, the patch may be made in the same manner as described above for filling form tie holes, care being exercised to use adequately dry (non-trowelable) mixtures and to avoid sagging. Thicker repairs will require build-up in successive 1-1/2-in layers on successive days, each layer being applied (with slurry, etc.) as described above.

- F. Concrete to receive dampproofing and concrete not exposed in the finished work shall have off-form finish with fins and other projections removed and tie cones and defects filled as specified above.

3.09 SCHEDULE

- A. The following (Table 2) are the general applications for the various concrete design strengths to be used:

TABLE 2

Class	Design Strength (psi)	Description
D	4,000	All structural concrete other than for drilled shafts
E	4,000	Concrete for drilled shafts

END OF SECTION

SECTION 03 40 04
PRECAST CONCRETE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and design, fabricate, deliver, and install precast lagging, and accessories complete as shown on the Drawings and as specified herein.
- B. The work of this Section includes:
 - 1. Precast lagging.
 - 2. All inserts, reinforcing bars which are shown on the Drawings to be cast into the precast concrete members.
 - 3. Furnish all inserts, reinforcing bars and other accessories to be placed in concrete for installation under Section 03 30 00.
 - 4. Erection, including all shimming, and removal of lifting attachments.

1.02 RELATED WORK

- A. Concrete reinforcement, except as specified herein, is included in Section 03 30 01.
- B. Concrete is included in Section 03 30 01.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, shop drawings and calculations for all members. Submittals shall include the following:
 - 1. Shop drawings, fabrication drawings, and erection drawings showing member locations, dimensions, reinforcement and details of all inserts, and accessories.
 - 2. Concrete design mix data and concrete test cylinder reports from an approved concrete testing laboratory certifying that the concrete used in the precast structures conforms with the strength requirements specified herein.
 - 3. Submit installation and handling literature.
 - 4. Copy of PCI Plant Certification for manufacturer.
 - 5. Welder's certification in accordance with AWS D1.4, as applicable, for the shop welding procedures to be used.
- B. Review will be for conformance to these Specifications only and approval shall not relieve the Contractor of responsibility for precast concrete members.

1.04 REFERENCE STANDARDS

A. ASTM International

1. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
2. ASTM C33 - Standard Specification for Concrete Aggregates.
3. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
4. ASTM C150 - Standard Specification for Portland Cement.
5. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
6. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.

B. American Concrete Institute (ACI)

1. ACI 318 - Building Code Requirements for Structural Concrete.

C. American Welding Society (AWS)

1. AWS A5.1 - Specification for Covered Carbon Steel Arc Welding Electrodes.
2. AWS D1.1 - Structural Welding Code - Steel.
3. AWS D1.4 - Structural Welding Code - Reinforcing Steel

D. Precast/Prestressed Concrete Institute (PCI)

1. MNL-116 - Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products.

E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All precast, concrete shall be manufactured at an existing plant certified by the Precast/Prestressed Concrete Institute Plant Certification Program. Manufacturer shall be certified at the time of bidding.
- B. All precast concrete shall conform to PCI MNL-116 and the additional requirements specified herein.
- C. Welding Rebar: In accordance with AWS D1.4, as applicable.
- D. Welders Certification: In accordance with AWS D1.4, as applicable, by test within the past 6 months to perform type of work required in conformance with AWS D1.4, as applicable.

Testing to be conducted and witnessed by an independent testing laboratory provided by the Contractor.

E. Mock Ups

1. Construct a mock up showing off form finish of precast lagging. Mock-up shall consist of one 10"x20"x24" precast lagging panel and shall have the same forms as will be used for fabrication. The Engineer and Owner shall review and approve the mock-up lagging panel for appearance of concrete finish.
2. Mock-up shall be fabricated and stored at plant for Engineer and Owner to observe.
3. Mock-up shall be approved prior to fabrication of any precast lagging panels used for production at the project site.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Transport, store, and handle precast concrete to protect from cracking, distortion, warping, staining and other damage and in accordance with the manufacturers' recommendations.
- B. Handle by means of lifting inserts or other means approved by the manufacturer.
- C. Lift, transport and support at points indicated by the manufacturer which are consistent with the shape and design of the member.
- D. Repair or replace damaged units at no additional cost to the Owner.

1.07 PROJECT / SITE REQUIREMENTS

- A. Existing Conditions
 1. Notify the Engineer of any inaccuracies in alignment or level of cast in place concrete, structural steel in writing and correct before the precast concrete is placed at no additional cost to the Owner.

PART 2 PRODUCTS

2.01 GENERAL

- A. While "or equal" products are authorized, all like items of materials shall be the end products of one manufacturer in order to provide standardization for appearance, maintenance and manufacturer's service.

2.02 MATERIALS

- A. All cement, sand and gravel used in this Section, including patching of members, shall be obtained from one single source to provide a uniform color and texture.
- B. Cement: Portland cement conforming to ASTM C150, Type II or III.
- C. Aggregates: Sand and gravel conforming to ASTM C33. Maximum size of coarse aggregate shall be no larger than 3/4-in.

- D. Concrete Admixtures: Water reducing admixture in accordance with ASTM C494 and air entraining admixture in accordance with ASTM C260.
- E. Deformed Concrete Reinforcing Bars: ASTM A615, Grade 60 deformed bars.
- F. Welding Electrodes, steel: AWS A5.1 E70xx.
- G. Lifting anchors and inserts: shall be Type 304 stainless steel.
- H. Epoxy Paste for filling lifting inserts: Sikadur 31, Hi-Mod Gel by Sika Corporation, MasterEmaco ADH 327 by BASF Corporation, or EUCO #452 GEL by Euclid Chemical Company.

2.03 CONCRETE MIXES

- A. Concrete for all precast concrete members shall have a minimum 28-day compressive strength of 5,000 psi as determined by cylinder tests in accordance with ASTM C39.
- B. Maximum water-cementitious materials ratio, by weight, shall be 0.45. Minimum cementitious content shall be 470 lbs per cubic yard.
- C. All concrete mixes shall incorporate a water reducing admixture and an air entraining admixture, each at a rate in accordance with manufacturers' recommendations. Minimum air content shall be in the range of 3.5% to 5.0%.
- D. Admixtures containing chlorides shall not be used.

2.04 FABRICATION

- A. Procedures and tolerances shall conform to PCI MNL-116.
- B. Use steel or smooth coated wood forms at all exposed formed surfaces. Provide Grade B finish for formed surfaces. Coordinate exposed formed surfaces of precast elements with cast-in-place elements located adjacent to precast elements in the cantilever soldier pile wall.
- C. Provide a minimum 3/4-in chamfer at exposed corners unless otherwise indicated on the Drawings.
- D. Place concrete continuously without joints for each precast member.
- E. Provide formed surfaces smooth and free of honeycomb, structural defects, imperfections, chips, spalls, joint marks, or fins.
 - 1. At surfaces exposed to view, provide smooth form finish.
 - 2. At surfaces not exposed to view, provide a trowel finish.
- F. All inserts and accessories required or as indicated, located, and detailed on the final approved shop drawings shall be cast as such. Correct any omission or change in location or details indicated or required by the various trades as a result of the Contractor's actions at no additional cost to the Owner.

PART 3 EXECUTION

3.01 ERECTION

- A. Install precast concrete as shown on the Drawings, in accordance with manufacturer's instructions, and in accordance with approved shop drawings. Provide temporary shoring and bracing as required to install precast lagging panels. Remove temporary shoring and bracing when erection is complete.
- B. Verify that supports, bearing surfaces, and inserts are within required tolerances and are prepared as specified prior to erecting precast concrete.
- C. Maintain uniform joint widths between members. Joint width between precast lagging panels shall not exceed 1/4 in.
- D. Fill lifting inserts in top of precast lagging panels with epoxy paste once panels are secured in place.

3.02 INSPECTION

- A. The Engineer will inspect precast concrete in the field for compliance with this Section and the approved shop drawings. The Engineer may require repair or replacement of any items not meeting the requirements of this Section at no additional cost to the Owner.

END OF SECTION

SECTION 03 60 00
GROUT

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install grout as specified herein at top of drilled shafts which will support precast lagging members.

1.02 RELATED WORK

- A. Miscellaneous metals are included in Section 05 50 00.
- B. Concrete and reinforcing steel is included in Section 03 30 01.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, product data showing materials of construction and details of surface preparation, mixing and installation for:
 - 1. Commercially manufactured non-shrink cementitious grout. Include catalog cuts, technical data, storage requirements, product life, working time after mixing, temperature considerations, conformity to the specified ASTM standards, and Material Safety Data Sheet.
- B. Qualifications
 - 1. Submit documentation that grout manufacturers have a minimum of 10 years' experience in the production and use of the grouts proposed.

1.04 REFERENCE STANDARDS

- A. ASTM International
 - 1. ASTM C33 - Standard Specification for Concrete Aggregates
 - 2. ASTM C150 - Standard Specification for Portland Cement
 - 3. ASTM C531 - Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts and Monolithic Surfacing and Polymer Concretes
 - 4. ASTM C579 - Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes
 - 5. ASTM C827 - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures
 - 6. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation

7. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)

- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

A. Qualifications

1. Grout manufacturers shall have a minimum of 10 years' experience in the production and use of the type of grout proposed.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the jobsite in original, unopened packages, clearly labeled with the manufacturer's name, product identification, batch numbers and printed instructions.
- B. Store materials in full compliance with the manufacturer's recommendations. Limit total storage time from date of manufacture to date of installation to six months or the manufacturer's recommended storage time, whichever is less.
- C. Remove immediately from the site material which becomes damp, contains lumps, or is hardened and replace with acceptable material at no additional cost to the Owner.
- D. Deliver non-shrink cementitious grout as a pre-portioned blend in prepackaged mixes requiring only the addition of water.

1.07 DEFINITIONS

- A. Non-shrink Grout: A commercially manufactured product that does not shrink in either the plastic or hardened state, is dimensionally stable in the hardened state and bonds to a clean base plate.

PART 2 PRODUCTS

2.01 GENERAL

- A. The use of a manufacturer's name and product or catalog number is for the purpose of establishing the standard of quality desired.
- B. Like materials shall be the products of one manufacturer or supplier in order to provide standardization of appearance.

2.02 MATERIALS

A. Non-shrink Cementitious Grout

1. Non-shrink cementitious grouts: Conform to ASTM C1107. Grouts shall be portland cement based, contain a pre-proportioned blend of selected aggregates and shrinkage compensating agents and require only the addition of water. Non-shrink cementitious grouts shall not contain expansive cement or metallic particles. The grouts shall exhibit no shrinkage when tested in conformity with ASTM C827.

- a. General purpose non-shrink cementitious grout: Conform to the standards stated above. SikaGrout 212 by Sika Corp.; Set Grout by BASF Building Systems; NS Grout by The Euclid Chemical Co.; Five Star Grout by Five Star Products, Inc., or equal.

B. Water

1. Potable water free of oil, acid, alkali, salts, chlorides (except those attributable to drinking water), organic matter, or other deleterious substances.

PART 3 EXECUTION

3.01 PREPARATION

- A. Place grout at the top surface of drilled shafts where precast lagging members will bear on top of the drilled shaft. The grout shall be a minimum of 1" in thickness and shall provide an even and level bearing surface for the entire width and length of the precast lagging member bearing area.
- B. Concrete surfaces to receive grout shall be clean and sound; free of ice, frost, dirt, dust, grease, oil, form release agent, laitance and paints and free of all loose material or foreign matter which may affect the bond or performance of the grout.

3.02 INSTALLATION - GENERAL

- A. Mix, apply and cure products in strict compliance with the manufacturer's recommendations and these specifications.
- B. Provide staffing and equipment available for rapid and continuous mixing and placing. Keep all necessary tools and materials ready and close at hand.
- C. Allow grout to harden prior to installing precast panels. Grout compressive strength shall reach a minimum of 1,000 psi.
- D. Take special precautions for hot weather or cold weather grouting as recommended by the manufacturer when ambient temperatures and/or the temperature of the materials in contact with the grout are outside of the 40 to 90 degrees F range.

3.03 INSTALLATION - NON-SHRINK CEMENTITIOUS GROUTS

- A. Mix in accordance with manufacturer's recommendations. Do not add cement, sand, pea gravel or admixtures without prior approval by the Engineer.
- B. Do not mix by hand. Mix in a mortar mixer with moving blades. Pre-wet the mixer and empty excess water. Add pre-measured amount of water for mixing, followed by the grout. Begin with the minimum amount of water recommended by the manufacturer and then add the minimum additional water required to obtain workability. Do not exceed the manufacturer's maximum recommended water content.
- C. Do not add additional water to the mix (retemper) after initial stiffening.

END OF SECTION

SECTION 05 12 00
STRUCTURAL STEEL

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required to fabricate and ship soldier piles as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Concrete and reinforcing steel are included in Section 03 30 01.
- B. Permanent soldier pile retaining wall is included in Section 31 37 17

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, shop drawings and product data including the following:
 - 1. Detailed shop drawings, schedules, and data for all structural steel. Approval will be for strength only and shall not relieve the Contractor of responsibility for proper fit of members and for supplying all material required by the Contract Documents. Clearly identify the portion of the Work represented by the shop drawings, and clearly identify the placement of each piece shown on the detail drawings. Identify all welds in conformance with AWS A2.4. Mark numbers painted on the shop assembled pieces of steel shall be the same mark numbers used on the detailed shop and erection drawings.
- B. Test Reports
 - 1. Certified mill test reports for the structural steel.
 - 2. Certifications that welders are qualified, in accordance with AWS D1.1, on the shop and field welding procedures to be used.

1.04 REFERENCE STANDARDS

- A. American Institute of Steel Construction (AISC)
 - 1. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges
 - 2. AISC 316 - Manual of Steel Construction – 14th Edition
- B. ASTM International
 - 1. ASTM A123 - Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products
 - 2. ASTM A780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coating

3. ASTM A992 - Standard Specification for Structural Shapes

C. American Welding Society (AWS)

1. AWS A2.4 - Standard Symbols for Welding, Brazing and Non-destructive Examination
2. AWS A5.1 - Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding
3. AWS D1.1 - Structural Welding Code - Steel

- D. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply, unless otherwise noted.

1.05 QUALITY ASSURANCE

- A. Structural steel shall be in accordance with the AISC Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design, including Supplement No. 1 and the Code of Standard Practice for Steel Buildings and Bridges, unless otherwise specified herein.
- B. Welding shall be in accordance with AWS D1.1 unless otherwise specified herein or in the AISC Specification.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials promptly so as to cause no delay with other parts of the work.
- B. Store materials on skids and not on the ground. Pile and block materials so that they will not become bent or otherwise damaged.
- C. Handle materials with cranes or derricks as far as practicable. Do not dump steel off cars or trucks nor handle in any other manner likely to cause damage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Rolled steel wide flange shapes: ASTM A992.
- B. Plates, rods, bars, and structural steel shapes other than wide flange shapes, unless otherwise noted: ASTM A36.
- C. Welding electrodes: AWS A5.1, E70XX.
- D. Galvanizing: Zinc with 0.05 percent (minimum) nickel added.

2.02 FABRICATION

- A. Locate piece marks on hidden faces of piles.
- B. Welding of parts shall be done only where shown on the Drawings or specified herein and by welders and welding operators qualified for the procedures used.

2.03 SURFACE PREPARATION AND SHOP COATINGS

- A. Galvanize members to be embedded in concrete. Galvanizing shall be done after fabrication and in accordance with ASTM A123. Thoroughly clean, pickle, flux and immerse members in bath of molten zinc until their temperature becomes the same as the bath. Coating shall be 2-oz per sq ft.

PART 3 EXECUTION

3.01 INSTALLATION

- A. See Section 31 37 17 for installation of steel soldier piles.
- B. Make all steel to steel connections by welding.

END OF SECTION

SECTION 05 50 00
MISCELLANEOUS METALS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and design, fabricate, deliver, and install guardrail and all associated components complete as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Cast-in-Place Concrete and Reinforcing is included in Division 3.
- B. Structural steel is included in Division 5.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, shop drawings and product data showing materials of construction and details of installation for:
 - 1. Shop drawings, showing sizes of members, method of assembly, length and size of all shop and field welds, anchorage and connection to other members.
 - 2. Furnish the Engineer with a letter signed and sealed by a professional engineer licensed in the state of New Jersey that the metal railing system design conforms to the design criteria set forth by the Engineer.
 - 3. Data showing the location, magnitude, and direction of all dead and live load reactions imposed on the structure by the metal railing system.
- B. Test Reports:
 - 1. Certified copy of mill test reports on each aluminum proposed for use showing the physical properties and chemical analysis.
- C. Certificates:
 - 1. Certify that welders have been qualified under AWS, within the previous 12 months, to perform the welds required under this Section.

1.04 REFERENCE STANDARDS

- A. Aluminum Association (AA):
 - 1. AA M31C22A41:
 - a. M31: Mechanical Finish, Fine Satin.
 - b. C22: Finish, Medium Matte.
 - c. A41: Clear Anodic Coating, Class I.
- B. American Concrete Institute (ACI):

1. ACI 318 - Building Code Requirements for Structural Concrete.

C. ASTM International (ASTM):

1. ASTM A570 - Standard Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality.
2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
3. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
4. ASTM B429 - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
5. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.

D. American Welding Society (AWS):

1. AWS D1.1 - Structural Welding Code - Steel.
2. AWS D1.2 - Structural Welding Code - Aluminum.
3. AWS D1.6 - Structural Welding Code - Stainless Steel.

E. Federal Specifications:

1. FS-FF-B-575C - Bolts, Hexagonal and Square.

F. Occupational Safety and Health Administration (OSHA).

G. Uniform Construction Code (NJAC 5:23)

1. International Building Code/2015, NJ ed.

H. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

A. General:

1. The work of this Section shall be completely coordinated with the work of other Sections. Verify, at the site, both the dimensions and work of other trades adjoining items of work in this Section before fabrication and installation of items herein specified.
2. Furnish to the pertinent trades all items included under this Section that are to be built into the work of other Sections.

3. All welding shall be performed by qualified welders and shall conform to the applicable AWS welding code. Welding of steel shall conform to AWS D1.1 and welding of aluminum shall conform to AWS D1.2

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver items to be incorporated into the work of other trades in sufficient time to be checked prior to installation.
- B. Store materials on skids and not on the ground and block up so that they will not become bent or otherwise damaged. Handle materials with cranes or derricks. Do not dump material off cars or trucks nor handle in any other way that will cause damage.
- C. Repair items that have become damaged or corroded to the satisfaction of the Engineer prior to incorporating them into the work.

1.07 PROJECT/SITE REQUIREMENTS

- A. Field measurements shall be taken at the site, prior to fabrication of items, to verify or supplement indicated dimensions and to ensure proper fitting of all items.

PART 2 PRODUCTS

2.01 DESIGN CRITERIA

- A. Railing systems shall conform to applicable regulations of the New Jersey Building Code.
- B. Design railing systems to meet the building code requirements, but at a minimum the system shall be designed for a 200 lb load applied anywhere on the system and in any direction, or 50 lbs per horizontal foot, whichever is greater.

2.02 GENERAL

- A. The use of manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials shall be the end products of one manufacturer in order to provide standardization for appearance, maintenance and manufacturer's service.

2.03 MATERIALS

- A. Unless otherwise noted, materials for miscellaneous metals shall conform to the following standards:
 1. Aluminum Extruded Pipe: ASTM B429, Alloy 6063 T6 and Alloy 6061 T6 as indicated.
 2. Aluminum Extruded Shapes: ASTM B221, Alloy 6061 T6.
 3. Aluminum Sheet and Plate: ASTM B209, Alloy 6061 T6.
 4. Stainless Steel Bolts: ASTM F593, Type 316.

2.04 ANCHORS, BOLTS AND FASTENING DEVICES

- A. Machine bolts and nuts shall conform to Federal Specification FF-B-575C. Bolts and nuts shall be hexagon type. Bolts, nuts, screws, washers and related appurtenances shall be Type 316 stainless steel.

2.05 RAILINGS

- A. Railing systems shall comply with the requirements of OSHA and NJAC 5:23. Size members as required by design calculations and to conform to layout details shown.
- B. Aluminum railing shall be a welded, seamless, extruded aluminum pipe system. Rails shall be 6063-T6 alloy. Posts shall be 6061-T6 alloy. Splice and reinforcing sleeves, brackets, end caps, etc., shall be aluminum alloy 6063-T6 or 6061-T6. Cast fittings shall be aluminum alloy No. 214. Aluminum shall have a mill finish.
- C. Railings shall be 2 rail welded railing systems, as shown on the Drawings, fabricated with 1-1/2-in nominal diameter pipe. Posts shall be Schedule 80 pipe, minimum and rails shall be Schedule 40 pipe, minimum. Posts and top rails shall be continuous. Spacing of posts shall not exceed 3 ft. 8 in. on center and shall be uniformly spaced except as otherwise shown on the Drawings. Posts will be required on each side of structure expansion joints. All railing posts shall be vertical.
- D. Welds shall be circumferential welds ground smooth and even to produce a railing that is neat in appearance and structurally sound. Welding methods shall be in conformity with AWS standards for the materials being joined. For welding aluminum, use a weld filler alloy that is compatible with the alloys to be joined. All rails to post connections shall be coped and fastened by continuous welds. There shall be no burrs, sharp edges or protrusions on any weld on any part of the railing system. After fabrication, the welds and surrounding area shall be cleaned and hand buffed to blend with the adjacent finish. All mechanical fasteners shall be unobtrusively located in countersunk holes with the top flush with the surface of the rail. Bends in the railing shall be as indicated by the Drawings. No distortion of the circular railing shape will be allowed. Bends and terminal sections shall be made without the use of fittings. Corner bends shall be 3-in centerline radius.
- E. Railing shall be assembled in sections as long as practical but shall not be greater than 24-ft in length. A field splice shall be used when an assembled section is to be attached to another section.
 - 1. Field splices shall use internal splice sleeves located within 8-in of railing posts. The sleeve shall be welded to the rail on one side and fastened with a set screw to the rail on other side. The field splice shall be detailed to take the differential expansion between the railing system and the supporting structure.
 - 2. When the field splice occurs in a railing panel crossing a structure expansion joint, the sleeve shall be welded to the rail on one side and be free to slide in the rail on other side. The field splice shall be detailed to take the same movement as the structure expansion joint.
- F. The bases or supports for railing posts shall be the types indicated on the Drawings.

1. Aluminum railing posts, which may collect condensation, shall have a 3/16-in drain hole drilled immediately above the concrete encased area, the base flange, or supporting socket on the side away from the walking area. The bottom of the rail post between the drain hole and the bottom of the post shall be filled with an inert material such as a compressed closed cell neoprene rod.
- G. All railings shall be properly protected by paper, or by an approved coating or by both against scratching, splashes or mortar, paint, or other defacements during transportation and erection and until adjacent work by other trades has been completed. After protective materials are removed, the surfaces shall be made clean and free from stains, marks, or defects of any kind.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install all items except those to be embedded in concrete which shall be installed under Division 3.
- B. Install railing systems and components as shown and in conformance with approved shop drawings.
- C. Protect railing systems and finishes against harmful substances and construction activities.
- D. Specialty products shall be installed in accordance with the manufacturer's recommendations.
- E. Headed anchor studs shall be welded in accordance with manufacturer's recommendations.
- F. All railings shall be erected to line and plumb.
- G. Where aluminum contacts concrete, apply a heavy coat of approved alkali resistant paint to the aluminum.

END OF SECTION

SECTION 31 09 00
GEOTECHNICAL INSTRUMENTATION

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Conduct pre-construction surveys as specified herein.
- B. Coordinate and obtain all permissions required, both public and private, to install geotechnical instrumentation.
- C. Install instruments with the Engineer present to observe their installation.
- D. Establish response actions to be taken if the maximum allowable instrument readings are exceeded so that existing structures and utilities are protected from damage. Implement response actions if maximum allowable instrument readings are exceeded.
- E. Dispose of all instruments at the end of the project.
- F. This specification includes, but is not limited to, to any utility within 50 feet of the excavation limits, the Garfield Street overpass and embankment, Doremus Avenue and the Sludge Unloading Facility.

1.02 RELATED WORK

- A. Demolition is included in Section 02 41 00.
- B. Dewatering and Drainage are included in Section 31 23 19.
- C. Earthwork is included in Section 31 23 00.
- D. Excavation Support and Protection is included in Section 31 75 01.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300.
- B. Submit for review by the Engineer the following information four weeks prior to instrument installation:
 - 1. Installation Plan and Schedule: Full details of the proposed plan and schedule for installing and monitoring instruments, including proposed locations, types, installation methods, and monitoring schedule of the instruments.
 - 2. The names, qualifications, and experience of the personnel or subcontractor(s) who will install the instruments, perform optical level survey and vibration monitoring, read the instruments, and report data to the Engineer demonstrating compliance with "Quality Assurance" Article included in this specification.
 - 3. Layout of monitoring points, observation wells, seismographs and reference points and description of monitoring provisions, including full details of the proposed instruments,

- proposed plan and schedule for installing the instruments, and schedule for monitoring and data reporting.
4. Description of methods for installing and protecting all instrumentation including but not limited to seismographs, observation wells, monitoring points, and reference points.
 5. Copies of all instrument calibrations and certifications specified.
 6. Groundwater observation well construction details including casing type, filter gradation, screen interval, grout mix, drilling methods, and depth of wells.
 7. For all instrumentation installed in borings provide a detailed procedure for installation, including post-installation acceptance test, together with a sample installation record sheet. The installation procedures shall include:
 - a. The method to be used for cleaning the inside of casing or augers.
 - b. Drill casing or auger type and size.
 - c. Depth increments for backfilling boreholes with sand and bentonite.
 - d. Method for overcoming buoyancy of instrumentation components during grouting.
 - e. Method of sealing joints in pipe casing to prevent ingress of grout.
 - f. Installations Records: Within five days of installing each instrument, submit to the Engineer, the as-built instrument location as specified, and its corresponding installation record sheet. Include in the installation record sheet, but do not limit the information to, the installed location of each instrument with instrument identification numbers, established elevations, initial elevations, initial coordinates, boring log, installation and/or monitoring date and time. Furnish details of installed instruments showing all dimensions and materials used, and as-built drawings of each instrument.
 8. Field Calibration: Within 5 working days of performing a field calibration, submit results of the calibration to the Engineer.
 9. Reports and Records: Provide reports of monitoring data to the Engineer. include the following minimum information:
 - a. Preconstruction survey.
 - b. As-installed location plan, installation records and baseline values for all instrumentation.
 - c. Monitoring data for all instruments with plots against threshold values.
 - d. Event reports and summary from vibration monitoring.
 - e. Discussion and associated action related to any result exceeding the threshold values set herein.
 10. Certificates: For each seismograph instrument to be furnished submit a certificate issued by the instrument's manufacturer stating that the manufacturer has inspected and tested each instrument before it leaves the factory to confirm that the instrument is working correctly and has no defects or missing parts.
 11. Submit three copies of the pre-construction condition surveys as specified herein.
- C. Submit proposed remedial measures to the Engineer of action to be taken in the event that the instrument Threshold Values are reached.

1.04 REFERENCED STANDARDS

A. ASTM International

1. ASTM A53 / A 53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
2. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 GEOTECHNICAL INSTRUMENTATION PROGRAM

A. The purpose of the geotechnical instrumentation is to monitor:

1. Performance of the Contractor's excavation support systems.
2. Groundwater levels inside and outside the limits of the excavations.
3. Vertical deformation of ground surface adjacent to the work.
4. Vertical and horizontal deformation of existing utilities and structures adjacent to and within the work.
5. Ground vibration levels at adjacent facilities due to Contractor activities including but not limited to demolition and support of excavation installation.

1.06 DEFINITIONS

- A. Surface Monitoring Points (SMPs): Inscribed marking or approved surveyor's nail installed to measure vertical (elevation) movement.
- B. Deformation Monitoring Points (DMPs): Fixed markers placed on existing utilities and structures to measure both vertical and horizontal movement. Initial coordinate locations and vertical controls are determined by optical survey methods.
- C. Excavation Support Monitoring Points (ESMPs): Inscribed marking or fixed markers placed on excavation support systems to measure horizontal movement of the excavation support system.
- D. Utility Monitoring Points (UMPs): Steel rod inside fully cased hole that is resting on existing utilities or underground structures to measure movement of the existing underground structure or utility.
- E. Groundwater Observation Wells: Screened or slotted pipe with solid riser pipe installed in a drilled hole with the annulus around the pipe backfilled with sand. Near surface groundwater levels are measured in the well.

- F. Seismographs: Electronic recording device with vibration transducer capable of monitoring and recording ground vibrations induced by construction activity.

1.07 QUALITY ASSURANCE

- A. Personnel Qualifications for Instrument Installation.
 - 1. Employ qualified technicians with comparable experience in the installation of geotechnical instrumentation similar to that specified herein.
 - 2. Employ a qualified Geotechnical Instrumentation Engineer who is a professional engineer, with at least 5 years of experience in the installation of instrumentation specified herein, to supervise and direct technicians and be responsible for instrument installation. This person is to be present at the installation site(s) to direct and supervise the installations, oversee the reading of the instrumentation and supervise the interpretations of geotechnical instrumentation data.
- B. Installation of instrumentation shall, at all times, be performed in the presence of the Engineer.
- C. The Contractor shall be responsible for all aspects pertaining to the installation, maintenance and monitoring of the geotechnical instrumentation specified herein.
- D. Provide each instrument or component of instrument specified herein from an approved manufacturer currently engaged in manufacturing geotechnical instrumentation hardware of the specified types.
- E. Surveyor Qualifications: The professional Land Surveyors shall be registered in the state in which the work is performed and with at least 3 years of experience in surveying of similar instruments. The professional Land Surveyors shall establish the Deformation Monitoring Points, Surface Monitoring Points, Utility Monitoring Points, and Excavation Support Monitoring Points and take baseline readings.
- F. Perform optical level surveys, instrument readings, and report data. Personnel responsible for this work shall be qualified by a minimum of 3 years of experience with similar work.
- G. Factory Calibration: A factory calibration shall be conducted on all seismographs prior to shipment. Certification shall be provided to indicate that the test equipment used for this purpose is calibrated and maintained in accordance with the test equipment manufacturer's calibration requirements and that, where applicable, calibrations are traceable to the U.S. National Institute of Standards and Technology.
- H. Vibration monitoring shall be conducted by persons trained in the use of a seismograph and records shall be analyzed and results reported by persons familiar with analyzing and reporting the frequency content of a seismograph record.
- I. Persons responsible for pre-construction surveys shall be professional engineers, licensed in the state of New Jersey, and shall have had a minimum of 5 years of professional experience in structural evaluation and conditions surveys.

1.08 TOLERANCES

- A. Survey measurements for initial location of each of the instrumentation elements shall consist of determining the elevation and horizontal position with respect to benchmark(s) approved by the Engineer.
- B. Monitoring Points (SMPs, DMPs, UMPs and ESMPs)
 - 1. Elevations of all instrumentation shall be determined to an accuracy of plus/minus 0.01 feet.
 - 2. The horizontal position of surface monitoring points shall be determined to an accuracy of plus/minus 0.1 foot.
 - 3. The horizontal position of deformation monitoring points and excavation support monitoring points shall be determined to an accuracy of plus/minus 0.01 foot.
- C. Should actual field conditions prohibit installation at the location and elevations specified in this Section, obtain prior acceptance from the Engineer for new instrument location and elevation.

1.09 DESIGN AND PROJECT REQUIREMENTS

A. Project Requirements

- 1. Install Geotechnical Instrumentation as required herein and as necessary to monitor ground conditions, ground response, and facilities to achieve specified project requirements, and prevent damage to facilities potentially affected.
- 2. Install the instrumentation in accordance with the approved Instrumentation Schedule.
- 3. The Engineer's monitoring of the installed instruments does not relieve the Contractor of the obligation to complete the project within the requirements specified herein and the Contractor shall take additional measurements as may be necessary.

B. Pre-Construction Survey

- 1. Prior to start of excavation work, installation of excavation support and dewatering work, engage the services of an independent professional engineer, licensed in the State of New Jersey, to conduct a pre-construction survey of existing structures and conditions within 100 feet of the anticipated demolition, excavation, installation of excavation support and dewatering work.
 - a. Coordinate activities, issue notices, obtain clearances and provide photographic and secretarial assistance necessary to accomplish the survey.
 - b. Give notice in writing, to the property owner and any representative of local authorities required to be present at such survey. Notify in writing the dates on which surveys are planned so that representatives are present during the examination. Provide copies of notices to the Owner and Engineer.
- 2. Record observations of the existing conditions for residences, buildings and other structures, which are affected.

- a. Provide the survey consisting of a description of interior and exterior conditions. Locate cracks, damage or other defects existing and include information to make it possible to determine the effect, if any, of the construction operations on the defect. Where significant cracks or damage exists, or for defects too complicated to describe in words, photographs shall be taken and made part of the record.
 - b. The records of each property examined must be signed by the representatives present and, if practicable, by the property owner, whether or not they are present at the examinations.
3. Record of the pre-construction survey shall consist of written documentation, video and photographs of the conditions identified. At the completion of the survey, submit copies of the documentation to the Owner.
4. Upon completion of all excavation work, installation of excavation support and dewatering work, complete a similar examination of properties and structures where complaints of damage have been received or damage claims have been filed. Give notice to interested parties so that they may be present during the final examinations. Records of the final examination shall be signed and distributed as the original pre-construction survey.
5. Retain records in the Contractor's file for at least 3 years after completion of the Contract. In the event of damage claims, a report shall be prepared by the Contractor on the particular structures as requested by the Engineer from those notes and photographs and submitted to the Owner. Repair damage attributed to the Contractor's activity promptly and completely to the property owner's satisfaction to restore the conditions of the property to that existing prior to work.
- C. Secure all required permits prior to the installation or removal of observation wells.
- D. Provide and facilitate safe access to the instruments at all times. The Engineer may perform additional monitoring in a manner that will minimize unnecessary work delays. Allow and facilitate instrument monitoring as required by the Engineer. No claim for lost production time due to this activity will be allowed.
- E. Maintain all instrumentation. Replace all damaged instruments within 24 hours. Report all damaged or non-functional instrumentation to the Engineer within 24 hours.
- F. Availability of Data
 1. Interpretations developed by the Engineer will be available to Contractor. Contractor may observe readings at any time or take their own supplementary readings.
 2. Monitoring data is the property of the Owner and is not to be disclosed or published to third parties without the owner's written permission.
 3. Contractor is expected to make their own interpretations for their own purposes at no additional cost to the Owner.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: All instruments and materials, including readout units, remain the property of the Contractor following completion of the Contract.
- B. Furnish all installation tools, materials, and miscellaneous instrumentation components.
- C. Surface protection for all instruments provided shall be flush with the surface in paved or other ground surface areas, at the time that the work is completed.
- D. The minimum quantity of instruments to be furnished is as follows:

<u>Instrument</u>	<u>Minimum No. of Units</u>	<u>Approximate Installed Depth</u>
Observation Wells	3	10 ft below bottom of excavation
Seismographs	2	N/A
Surface Monitoring Points	15	N/A
Deformation Monitoring Points	6	N/A
Utility Monitoring Points	3	N/A
Excavation Support Monitoring Points	As needed	N/A

- E. Locations of instruments shall be determined by the Contractor and approved by the Engineer.

2.02 GROUNDWATER OBSERVATION WELLS

- A. Observation wells will be used to monitor the groundwater levels outside the excavation.
- B. Pipe shall consist of 1-inch minimum inside diameter Schedule 40 PVC pipe.
- C. Maximum screen size shall be 0.020-in unless otherwise approved by the Engineer.

2.03 MONITORING POINTS

- A. Establish system of control points and monitor in accordance with the requirements herein.
 - 1. Surface Monitoring Points (SMPs)
 - a. SMPs will be used to monitor vertical deformation at or near the ground surface. Clearly identified all points with permanent easily readable letters and numbers as approved by the Engineer.
 - b. Provide SMPs in paved areas consisting of a 2-inch-long masonry nail, manufactured from hardened zinc-plated steel. Drive the masonry nail into an asphalt covered surface. Identify each nail individually with an identification tag or surface marking.
 - c. Provide SMPs in non-paved areas consisting of a 3 ft. long, 3/4-inch diameter steel rod. Drive the rod into the ground or set in concrete in the ground such that no more than 3 inches of the rod is exposed above the ground surface. Round the top of the rod and punch-mark it at its center. Identify each rod with a surface marking.
 - d. Provide SMPs on utility manholes consisting of an observable cross mark or welded bead on the top horizontal surface of utility manhole rims. Clean the surface within 3

inches of the point and mark it to permit easy identification of the exact point. Clearly identify the point shall using fluorescent spray paint adjacent to the point.

2. Deformation Monitoring Points (DMPs)
 - a. DMPs will be used to monitor vertical and horizontal movement of adjacent utilities and structures.
 - b. DMPs shall consist of nails, screws, reinforcing bars, bolts and similar materials with well-defined measurement points as approved by the Engineer. DMP's shall be firmly attached and shall be protected from damage and vandalism. Remove or cover with a protective box or cap as approved by the Engineer all elements of DMP's protruding more than 0.25-in. Clearly identify all DMP's with permanent easily readable letters and numbers as approved by the Engineer.
3. Utility Monitoring Points (UMPs)
 - a. Utility monitoring points (UMPs) will be used to monitor vertical and horizontal deformation of selected utilities and underground structures as specified herein.
 - b. UMP shall include, at a minimum, the following:
 - 1) 3-1/2 inch extra strong steel pipe sleeve and 1-inch extra strong steel riser pipe, threaded and coupled, ASTM A 53/A 53M Grade B;
 - 2) PVC centralizers, consist of a schedule 40 PVC pipe conforming to ASTM D1785, sized to provide a tight fit on the riser pipe, and spring-formed to a larger diameter to provide a loose fit in the sleeve pipe
 - c. UMPs shall be installed to top of utility or underground structure by vacuum excavation method. The monitoring rod with centralizers shall set on top of the utility or underground structure and extending to within 1 foot of the ground surface. The utility monitoring point shall be installed with a flush mount roadbox casing at grade and shall be clearly identified by surface marking
4. Excavation Support Monitoring Points (ESMPs)
 - a. ESMPs shall be fixed markers on the vertical elements of the excavation support system and shall be used to monitor horizontal deformation of excavation support system designed by the Contractor. Clearly identify all points with permanent easily readable letters and numbers as approved by the Engineer. Surface within 3 inches of each point shall be cleaned and clearly identified using fluorescent spray paint adjacent to the point.

B. Non-Shrink Cement Grout shall be suitable for intended application.

2.04 SEISMOGRAPHS

- A. Provide portable seismographs for monitoring the velocities of ground vibrations resulting from construction activities as specified herein. Provide for full-time use on the project during vibration causing construction activities. Provide two (minimum) seismographs which have been calibrated within the previous six months to a standard that is traceable to the National Institute of Standards and Technology. Required characteristics of seismographs are listed below:
 1. Measure the three mutually perpendicular components of particle velocity in directions vertical, radial, and perpendicular to the vibration source.

2. Measure and display the maximum peak particle velocity continuously during vibration-generating activities.
3. Have a low frequency omnidirectional transducer for measuring air blast overpressure with a flat frequency response within the limits of 2 Hz to 250 Hz with a tolerance equal to or better than plus or minus 10 percent.
4. Seismic range: 0.01 to 4 inches per second with an accuracy of plus or minus 5 percent of the measured peak particle velocity or better at frequencies between 10 Hertz and 100 Hertz, and with a resolution of 0.01 inches per second or less.
5. Acoustic range: 110 to 140 dB (referenced to 20 micro-Pascals) with an accuracy and resolution of plus or minus 1 dB.
6. Frequency response (plus or minus 3 dB points): 2 to 200 Hertz.
7. Two power sources: internal rechargeable battery and charger and 115 volts AC. Battery must be capable of supplying power to monitor vibrations continuously for up to 24 hours.
8. Self-triggering wave form capture mode that provides the following information: plot of wave forms, peak particle velocities, peak overpressure, frequencies of peaks.
9. Continuous monitoring mode must be capable of recording single-component peak particle velocities, and frequency of peaks with an interval of 1 minute or less.

PART 3 EXECUTION

3.01 PREPARATION

- A. Prior to commencing any installation of excavation support, concrete excavation and dewatering work, furnish components of instrumentation that are to be installed during construction and conduct pre-construction surveys.
- B. Install instruments.
- C. Protect from damage and maintain instruments installed by the Contractor.
- D. Repair or replace damaged instruments furnished by the Contractor.
- E. Collect, reduce, process, plot and report monitoring data obtained by survey, seismograph data, groundwater levels, and submit to the Engineer.
- F. Coordinate with the Engineer to verify consistency of collected data.
- G. Implement remedial measures based on interpretations of monitoring data program.

3.02 GENERAL REQUIREMENTS

- A. Perform a pre-construction survey prior to any dewatering, excavation or installation of excavation support.

- B. Install instruments at locations selected by the Contractor and approved by the Engineer in accordance with the approved installation procedures. The Engineer may modify instrument locations depending on field conditions and monitoring objectives. Install all instrumentation in accordance with the approved installation schedule. Instruments shall be installed and baseline data, acceptable to the Engineer, shall be obtained before construction starts.
- C. Provide the Engineer with access to instrument locations and assistance required in obtaining monitoring data.
- D. Existing Conditions: Locate conduits and underground utilities in all areas where wells are to be drilled and installed. Conduct utility clearance and contact utility companies prior to any drilling. Instrument locations shall be modified, as approved by the Engineer, to avoid interference with the existing conduits and utilities. Repair damage to existing utilities resulting from instrument installations at no additional cost to the Owner.
- E. All instruments shall be clearly marked, labeled, and protected to avoid being obstructed or otherwise damaged by construction operations or the general public. Immediately following installation, the location of the top of all instruments shall be surveyed to provide horizontal and vertical coordinates. Resurveying shall be done as required by the Engineer if there is a question regarding the instrumentation location.
- F. A unique instrument identification number shall be assigned to each instrument and each point. The instrument identification number shall be clearly marked on each instrument in a non-destructible manner.
- G. Drilling from the Ground Surface: Obtain necessary permits for each such instrument and conform to the permit requirements during drilling and installation.
- H. Initial Reading: Immediately following instrument installation, the Contractor, in the presence of the Engineer, shall take two sets of initial readings to provide baseline readings and to demonstrate the adequacy of the completed installation.
- I. Factory Calibration: A factory calibration shall be conducted on all instruments at the manufacturer's facility prior to shipment. Each factory calibration shall include a calibration curve with data points clearly indicated, and a tabulation of the data. Each instrument shall be marked with a unique identification number.
- J. The instrumentation and monitoring specified here is considered the minimum required. The Contractor shall obtain additional data from the instrumentation and /or furnish, install, and monitor additional instrumentation as necessary to adequately monitor construction performance and safety aspects of the work.

3.03 MONITORING POINTS

- A. Monitoring Points shall include but not be limited to SMPs, DMPs, UMPs and ESMPs. Monitor these control points using surveying methods.
- B. Install SMPs, UMPs and DMPs as described below near excavations. Additional SMPs, UMPs, and DMPs may be required by the Engineer.

- C. SMPs shall also be installed in the pavement or ground surface, within 10 feet of structures. The SMPs shall be installed at spacing not more than 50 feet. Locations may be modified to meet site constraints with the approval of the Engineer.
- D. SMPs shall also be installed on the rim of manhole covers of utilities located within 30 ft of open excavations].
- E. DMPs:
 - 1. DMPs shall be installed on the exterior walls of buildings or structures located within 30 ft of open excavations. As much as practical, DMPs shall be installed on supporting walls or columns. Avoid installation in brick unless absolutely necessary.
 - 2. As a minimum, DMPs shall be installed on the exterior wall corners of buildings, structures, or property boundary walls at not more than 50 feet spacing. The Engineer may require additional DMPs be installed to monitor building movement at other locations.
 - 3. Install DMPs in cooperation with property Owners so that installations are inconspicuous and acceptable to the property Owners. Existing features of building foundations that are permanent and can be repeatedly surveyed may substituted for DMPs, if approved by the Engineer.
- F. UMPs shall be installed on existing utility over 36 inch in diameter and located within 15 feet from excavation. UMPs shall be located at a spacing of not more than 50 feet.
- G. ESMPs shall be installed on excavation support systems other than trench box along support walls at spacing not more than 16 feet. ESMPs shall include monitoring of the permanent soldier pile retaining wall.
- H. Install and obtain SMP, UMP, and DMP monitoring point readings prior to installing excavation support, beginning excavation or operation of groundwater control system at the site. Install ESMPs prior to excavation within the exaction support system. The Contractor shall obtain two sets of measurements for each monitoring point to establish the baseline data within three days of installation. These measurements shall be made at least 24 hours apart but not more than 48 hours apart. Monitoring points with initial surveyed elevations (or offsets as appropriate) differing by more than 0.01 feet shall be checked for secure installation and resurveyed.
- I. The reading schedule of all SMPs, UMPs and DMPs surveyed shall be daily during excavation, dewatering, filling and backfilling, and excavation support installation by all methods within 50 feet of the work and then at least twice a week until all excavation, dewatering and backfill has been completed.
- J. The reading schedule of ESMPs shall be at least daily during associated excavation and twice a week until permanent retaining wall construction, where applicable, and backfill to final grades is completed.

3.04 VIBRATION MONITORING

- A. Seismograph readings shall be taken during concrete excavation and excavation support installation or other activities causing ground vibrations within 50 feet of existing structures to document that peak particle velocities do not exceed the limit criteria as described below.
- B. Seismographs shall be installed by the Contractor near existing structures when vibratory or impact hammers are used for the installation of shoring within 50 feet of existing structures, and as directed by the Engineer.

3.05 GROUNDWATER OBSERVATION WELLS

- A. Existing wells may be used if appropriate and approved by the Engineer.
- B. The screened interval of each well shall be set to monitor groundwater levels.
- C. Using approved drilling methods, drill 4-in minimum diameter holes for observation wells of the size and depth required, and case with temporary casing. Bentonite drilling mud shall not be used in drilling holes for the observation wells.
- D. Flush all cased holes with clean water through an approved bit. Flush until the discharge water is free of soil particles.
- E. Construct observation well with 10 feet of slotted PVC well screen, filter sand, bentonite seal, couplings, a pipe cap, and a locking cover.
 - 1. Place two feet of filter sand in the bottom of the drilled hole; then place the well screen and surround it with filter sand, as the temporary casing is carefully withdrawn.
 - 2. Insert solid PVC casing and cap and fill the annular space with bentonite pellets then non-shrink cement grout.
 - 3. Protect the observation wells at ground surface by providing a roadway box or outer protective casing with lockable top and padlock. Design the surface protection to prevent damage by vandalism or construction operations and to prevent surface water from infiltrating.
 - a. Provide two keys for each padlock to the Engineer for access to each well.
 - b. Observation wells shall be developed so as to provide a reliable indication of groundwater levels. Wells shall be re-developed if well clogging is observed, in the event of apparent erroneous readings, or as directed by the Engineer.
 - c. Submit observation well installation logs, top of casing elevation, and well locations to the Engineer within 24 hours of completion of well installation.
- F. Observation Well Maintenance
 - 1. The Contractor shall maintain each observation well until adjacent excavations are completed and backfilled. Clean out or replace any observation well which ceases to be operable before adjacent work is completed.

2. It is the Contractor's obligation to maintain observation wells and repair or replace them at no additional cost to the Owner, whether or not the observation wells are damaged by the Contractor's operations or by third parties.

G. Monitoring and Reporting of Observation Well Data

1. The Contractor shall begin daily monitoring of groundwater levels in work areas prior to initial operation of drainage and dewatering system. Daily monitoring in areas where groundwater control is in operation shall continue until the time that adjacent excavations are completed and backfilled and until the time that groundwater control systems are turned off.
 2. The Contractor is responsible for processing and reporting observation well data to the Engineer on a daily basis. Data is to be provided to the Engineer on a form, which should include the following information: observation well number, depth to groundwater, top of casing elevation, groundwater level elevation and date and time of reading.
- H. Following construction, abandon new observation wells as directed by the Engineer. Abandon observation wells by removing all material within the original borehole, including the casing, filter, and grout seal in accordance with all applicable permits. Using approved tremie methods completely fill the hole and all voids with non-shrink cement grout prior to removal of the drill casing such that formation materials do not move into the hole prior to grouting. Restore the ground surface to its original condition. Abandon wells within paved areas by removing the vaults and well caps to the pavement subgrade. Remove wells with as discussed above and repair or patch pavement with the same surface type.

3.06 INSTRUMENT PROTECTION, MAINTENANCE AND REPAIR

- A. Protect the instruments from damage. The Contractor shall immediately replace, within 72 hours of damage, any instrument that becomes damaged or is destroyed for whatever reason at no additional cost to the Owner. If necessary, the contractor will suspend work in the areas being monitored by the damaged instrument and take remedial action.
- B. Maintain the instruments by draining water and flushing debris from under protective covers and keeping covers locked and sealed at all times.

3.07 MONITORING

- A. The Contractor shall collect, tabulate, plot and interpret the survey monitoring data and provide the Engineer with the tabulated and plotted data. Report the status of excavation, bracing, groundwater levels, and backfilling at the time of data collection with each report.
- B. Monitoring frequency may be modified as directed and approved by the Engineer.
- C. Provide data from readings of all monitoring points to the Engineer within 24 hours of reading. Communicate verbally with the Engineer immediately after visual observations or data collection if excessive movements or other anomalies are indicated.
- D. For seismograph data, a summary report with event summary of peak particle velocity and frequency shall be provided. A strip chart indicates the time and magnitude of maximum single-component peak particle velocity measured during each 5-minute interval of the

monitoring period shall be submitted. A summary of vibration producing activities for that week shall be listed along with any specific events which caused anomalous readings.

- E. The Contractor shall make visual observations of ground conditions and building conditions in the vicinity of the site and communicate immediately with the Engineer if signs of ground or building movements are observed.
- F. The Engineer may take independent instrumentation measurements. Cooperate with the Engineer during instrumentation monitoring by providing access to the instrumentation locations in a timely manner and by providing and maintaining safe means of access to all instrumentation locations for data collection. Data acquired by the Engineer will be made available to the Contractor in a timely manner.
- G. The Contractor may make his/her own interpretations of monitoring data for his/her own purposes. Data or interpretations shall not be published or disclosed to other parties without advance written permission of the Owner.
- H. If the Contractor collects data from an instrument that has been installed to replace a damaged instrument, the formal initial reading for the damaged instrument shall be used as an initial reading for the replacement instrument so that data are plotted continuously, without an offset at the time of damage. The time of damage and replacement shall be noted on the plot.

3.08 INTERPRETATION AND RESPONSE VALUES

- A. The Contractor shall make its own interpretations of the data resulting from monitoring programs.

- B. Threshold and Limiting Values for instruments:

<u>Instrument</u>	<u>Threshold Value</u>	<u>Limiting Value</u>
Seismographs	1.0 in/sec over 40 Hz	2.0 in/sec over 40 Hz
	0.75 in/sec at 30- 40 Hz	1.5 in/sec at 30- 40 Hz
	0.5 in/sec at 20-30 Hz	1.0 in/sec at 20-30 Hz
	0.25 in/sec under 20 Hz	0.5 in/sec under 20 Hz
Surface Monitoring Points	0.5 inch	1.0 inch
Deformation Monitoring Points	0.25 inch	0.5 inch
Utility Monitoring Points	0.25 inch	0.5 inch
Excavation Support Monitoring Points	1.0 inch	2 inches
Observation Wells	2 ft below bottom of excavation	at bottom of excavation

- C. These values are subject to adjustment by the Engineer as indicated by prevailing conditions and/or circumstances.
- D. If a Threshold Value is reached:

1. Engineer and Contractor shall meet to discuss remedial measures.
 2. Contractor shall increase the instrument monitoring frequency as directed by the Engineer.
 3. Contractor shall install and monitor additional instruments as directed.
 4. Contractor shall implement the remedial measures in the event the Threshold Value is reached, so the Limiting Value is not reached.
- E. Contractor to take all necessary steps so that the Limiting Value is not exceeded. Contractor may be directed to suspend activities in the affected area with the exception of those actions necessary to avoid exceeding the Limiting Value.

3.09 DISPOSITION OF INSTRUMENTS

- A. Monitoring Points: All monitoring points shall be removed during the cleanup and restoration work, unless directed otherwise by the Engineer.
- B. Observation Wells and Utility Monitoring Points: When required by the Engineer, abandon and remove protective housings and caps in accordance with the required permits. All surfaces affected by installation of instruments shall be restored to their original condition prior to completion of work.
1. Leave in place any casings located within the plan limits of structures or pipelines or within the zone below 1H:1V planes extending downward and out from the edges of foundation elements or from the downward vertical footprint of the pipe, or where removal would otherwise result in ground movements causing adverse settlement to adjacent ground surface, utilities or existing structures.
 2. Where casings are pulled, holes shall be filled with sand. Where left in place, casings should be filled with non-shrink cement grout and cut off a minimum of 3-ft below finished ground level or 1-ft below foundation level so as not to interfere with finished structures or pipelines.
 3. Following backfilling, remove precast boxes or vaults and reconstruct pavement in paved areas. Restore surface to the conditions existing prior to installation of the instruments.
- C. Seismographs: Units shall be returned to the Contractor following completion of the installation of excavation support and excavation.

END OF SECTION

SECTION 31 10 00
SITE PREPARATION

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required and perform all site preparation, complete as shown on the Drawings and as specified herein. The work includes, but not limited to, excavation and removal of rubble, demolition of remaining structure, backfilling of material excavated and stockpiled, and location of piles, as shown on the Drawings and as specified
- B. Obtain all permits required for site preparation work prior to proceeding with the work.
- C. Unless otherwise shown on the Drawings or directed by the Engineer, the areas to be cleared, grubbed and stripped shall generally consist of the entire project site, with the exception of those areas specifically designated to remain in an undisturbed, natural condition.

1.02 RELATED WORK

- A. Environmental Protection Procedures is included in Section 01110.
- B. Demolition is included in Section 02 41 00.
- C. Earthwork is included in Section 31 23 00.
- D. Erosion and Sedimentation Control is included in Section 31 25 00.
- E. Loaming and Seeding is included in Section 32 92 19.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, copies of all permits required prior to clearing, grubbing, and stripping work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 CLEARING

- A. Cut and remove all timber, trees, stumps, brush, shrubs, roots, grass, weeds, rubbish and any other objectionable material resting on or protruding through the surface of the ground.
- B. Preserve and protect trees and other vegetation outside the area of excavation as designated on the Drawings or directed by the Engineer to remain as specified below.

3.02 STRIPPING

- A. Strip topsoil from all areas to be occupied by buildings, structures, and roadways and all areas to be excavated or filled.

- B. Topsoil shall be free from brush, trash, large stones and other extraneous material. Avoid mixing topsoil with subsoil.
- C. Stockpile and protect topsoil until it is used in landscaping, loaming and seeding operations. Dispose of surplus topsoil after all work is completed.

3.03 DISPOSAL

- A. Dispose of material and debris from site preparation operations by hauling such materials and debris to an approved offsite disposal area. No rubbish or debris of any kind shall be buried on the site.
- B. Burning of cleared and grubbed materials or other fires for any reason will not be permitted.

3.04 PROTECTION

- A. Trees and other vegetation designated on the Drawings or directed by the Engineer to remain shall be protected from damage by all construction operations by erecting suitable barriers, guards and enclosures, or by other approved means. Conduct clearing operations in a manner to prevent falling trees from damaging trees and vegetation designated to remain and to the work being constructed and so as to provide for the safety of employees and others.
- B. Maintain protection until all work in the vicinity of the work being protected has been completed.
- C. Do not operate heavy equipment or stockpile materials within the branch spread of existing trees.
- D. Immediately repair any damage to existing tree crowns, trunks, or root systems. Roots exposed and/or damaged during the work shall immediately be cut off cleanly inside the exposed or damaged area.
- E. When work is completed, remove all dead and downed trees. Live trees shall be trimmed of all dead and diseased limbs and branches. All cuts shall be cleanly made at their juncture with the trunk or preceding branch without injury to the trunk or remaining branches.
- F. Restrict construction activities to those areas within the limits of construction designated on the Drawings, within public rights-of-way, and within easements provided by the Owner. Adjacent properties and improvements thereon, public or private, which become damaged by construction operations shall be promptly restored to their original condition, to the full satisfaction of the property owner.

END OF SECTION

SECTION 31 23 00
EARTHWORK

PART 1 GENERAL

1.01 STATUTORY REQUIREMENTS

- A. All excavation, trenching, sheeting, bracing, etc. shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926.650 Subpart P) and to State and local requirements. Where conflict between OSHA, State and local regulations exists, the most stringent requirements shall apply.

1.02 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and perform all excavation work and grading; place and compact backfill and fill; and dispose of unsuitable, waste and surplus materials as shown on the Drawings and as specified herein.
- B. Provide the services of a licensed professional engineer registered in the State of New Jersey to prepare temporary excavation support system designs and submittals.
- C. Furnish and install temporary excavation support systems, including sheeting, shoring and bracing, to insure the safety of personnel and protect adjacent structures, piping, etc., in accordance with Federal, State and local laws, regulations and requirements.

1.03 RELATED WORK

- A. Demolition is included in Section 02 41 00.
- B. Site Preparation is included in Section 31 10 00.
- C. Dewatering and Drainage are included in Section 31 23 19.
- D. Granular Materials are included in Section 31 23 23.
- E. Permanent Soldier Pile Retaining Wall is included in Section 31 37 17.
- F. Excavation Support and Protection is included in Section 31 75 01.
- G. Geotechnical Instrumentation is included in Section 31 09 00.

1.04 REFERENCE STANDARDS

- A. ASTM International
 - 1. ASTM D1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. Prior to and during the placement of backfill and fill coordinate with the soils testing laboratory to perform in-place soil density tests to verify that the backfill/fill material has been compacted in accordance with the compaction requirements specified elsewhere. The Engineer may designate areas to be tested.

1.06 DEFINITIONS

- A. Where the phrase "in-the-dry" is used in this Section, it shall be defined as an excavation subgrade where the groundwater level has been lowered to at least 1-ft below the lowest level of the excavation, is stable with no ponded water, mud, or muck, is able to support construction equipment without rutting or disturbance, is suitable for the placement and compaction of fill material and can allow surveying of existing pile foundations.
- B. Where used in this Section "structures" refers to all buildings, retaining walls, manholes, and below grade vaults, stormwater structures and duct.

PART 2 PRODUCTS

2.01 GENERAL

- A. Materials designated for use in this Section are specified in Section 02230.

PART 3 EXECUTION

3.01 PREPARATION

- A. Test Pits
 1. Perform exploratory excavation work (test pits) for the purpose of verifying the location of underground utilities and structures and to check for unknown utilities and structures, prior to commencing excavation work.
 2. Test pits shall be backfilled as soon as the desired information has been obtained. Backfilled surfaces shall be stabilized in accordance with approved erosion and sedimentation control plans.
- B. Dewatering and Drainage Systems
 1. Temporary dewatering and drainage systems shall be in place and operational prior to beginning excavation work.

3.02 EXCAVATION SUPPORT

- A. Furnish, install, monitor and maintain excavation support (e.g., shoring, sheeting, bracing, trench boxes, etc.) in accordance with Section 02311, Excavation Support and Protection and Section 02495, Geotechnical Instrumentation.

3.03 GENERAL FILLING AND BACKFILLING PROCEDURES

- A. Fill and backfill materials shall be placed in lifts to suit the specified compaction requirements to the lines and grades required, making allowances for settlement and placement of cover materials (i.e., topsoil, sod, etc.). Soft spots or uncompacted areas shall be corrected.
- B. Fill and backfill materials shall not be placed on frozen surfaces, or surfaces covered by snow or ice. Fill and backfill material shall be free of snow, ice and frozen earth.
- C. Compaction in open areas may be accomplished by heavy vibratory rollers. Compaction in confined areas (including areas within a 45 degree angle extending upward and outward from the base of a wall) and in areas where the use of large equipment is impractical, shall be accomplished by hand operated vibratory equipment or mechanical tampers. Lift thickness shall not exceed 6-in (measured before compaction) when hand operated equipment is used.
- D. Fill and backfill shall not be placed and compacted when the materials are too wet to properly compact (i.e., the in-place moisture content of the soil at that time is no more than three percentage points above the optimum moisture content of that soil as determined by the laboratory test of the moisture-density relation appropriate to the specified level of compaction).

3.03 FILL AND BACKFILL PROCEDURES

- A. Fill within 2 feet of final grade shall be structural fill. Place and compact structural fill in even lifts having a maximum thickness (measured before compaction) of 8-in.
- B. Fill beneath 2 feet of final grade shall be Common fill. Common fill shall be placed in even lifts having a maximum thickness (measured before compaction) of 12-in.

3.04 COMPACTION REQUIREMENTS

- A. Compact each layer of fill to a minimum of 95 percent modified proctor (ASTM D1557) at or near its optimum moisture content (minus 2 to plus 3 percent).

3.05 DISPOSAL OF UNSUITABLE, WASTE AND/OR SURPLUS EXCAVATED MATERIAL

- A. Unsuitable, waste and surplus excavated material shall be removed and disposed of off-site. Materials may be temporarily stockpiled in an area within the limits of construction that does not disrupt construction activities, create any nuisances or safety hazards, or otherwise restrict access to the work site.

3.06 GRADING

- A. Grading shall be performed to the lines and grades shown on the Drawings. All objectionable material encountered within the limits indicated shall be removed and disposed of. Subgrades shall be completely and continuously drained and dewatered throughout the grading process. Install temporary drains, drainage ditches, etc., to intercept or divert surface water which may affect the execution or condition of grading work.

- B. If at the time of grading it is not possible to place any material in its proper section of the Work, it shall be stockpiled in approved areas for later use. No extra payment will be made for the stockpiling or double handling of excavated material.
- C. In cut areas, all loose or protruding rocks in slopes shall be removed to line or finished grade of the slope. All cut and fill slopes shall be uniformly dressed to the slope, cross-section and alignment shown on the Drawings unless otherwise directed by the Engineer.

END OF SECTION

SECTION 31 23 19
DEWATERING AND DRAINAGE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Design, furnish, install, operate, monitor, maintain and remove a temporary dewatering system as required to lower and control water levels at least 2-ft below subgrades of excavations and to permit demolition to proceed in-the-dry.
- B. Furnish, operate, maintain and remove temporary surface water control measures adequate to drain and remove surface water entering excavations.
- C. Retain the services of a professional engineer registered in the State of New Jersey to prepare dewatering and drainage system designs and submittals described herein.
- D. Work shall include the design, equipment, materials, installation, protection, and monitoring of geotechnical instrumentation required to monitor the performance of the dewatering and drainage system as required herein.
- E. Collect and properly dispose of all discharge water from the dewatering and drainage systems in accordance with the provisions of Section 01110 and as required herein. Water can be discharged to the Influent Channel of the Primary Clarifiers after silt has been removed.
- F. Disposal of silt and debris which accumulates during construction shall be performed in strict accordance with Local, State, and Federal requirement.
- G. Obtain all permits required for dewatering and dewatering disposal systems.
- H. Repair damage caused by dewatering and drainage system operations.
- I. Remove temporary dewatering and drainage systems when no longer needed. Restore all disturbed areas.

1.02 RELATED WORK

- A. Environmental Protection Procedures is included in Section 01110.
- B. Earthwork is included in Section 31 23 00.
- C. Erosion and Sedimentation Control is included in Section 31 25 00.
- D. Permanent Soldier Pile Retaining Wall is included in Section 31 37 17.
- E. Excavation Support and Protection is included in Section 31 75 01.
- F. Geotechnical Instrumentation is included in Section 31 09 00.

1.03 SUBMITTALS

- A. Dewatering and drainage system designs shall be prepared by a licensed professional engineer registered in the State of New Jersey and retained by the Contractor. The Contractor shall submit an original and three copies of the licensed professional engineer's certification as specified in Section 01300. The Contractor shall also submit qualifications as required herein.
- B. The Contractor shall submit a dewatering and drainage system design plan. The plan shall include:
 - 1. Plans indicating the proposed locations of all dewatering and drainage system designs.
 - 2. Overall sequence of installation of the dewatering and drainage system.
 - 3. Locations marked on the drawings of existing utilities, foundations or other obstructions in relation to the proposed locations of the dewatering and drainage systems.
 - 4. The proposed procedure by which Contractor will monitor the groundwater including locations of observation wells.
 - 5. Location and method of discharge, treatment methods prior to discharge and anticipated quantities of discharge for the dewatering and drainage systems. Include methods for discharging to the Influent Primary Clarifiers, if applicable, and method for sediment removal.
 - 6. Dewatering calculations.
- C. The plan shall identify the anticipated area influenced by the dewatering system and address impacts to adjacent existing and proposed structures.
- D. Coordinate dewatering and drainage submittals with the excavation and support of excavation submittals. The submittal shall show the areas and depths of excavation to be dewatered.
- E. Do not proceed with any excavation or dewatering activities until the dewatering submittals has been reviewed and accepted by the Engineer.

1.04 QUALITY ASSURANCE

- A. Regulations: Perform all work in accordance with current applicable regulations and codes of all Federal, State and local agencies.
- B. The Contractor shall have at least 5 years of experience with work compatible to the Work shown and specified, employing labor and supervisory personnel who are similarly experienced in this type of Work.
- C. The Contractor's design engineer shall be registered in the State of New Jersey and have a minimum of 5 years of professional experience in the design and construction of dewatering and drainage systems and shall have completed not less than 5 successful

dewatering and drainage projects of equal type, size, and complexity to that require for the work.

1.05 DESIGN REQUIREMENTS

- A. The Contractor is responsible for the proper design and implementation of methods for controlling surface water and groundwater.
- B. The primary purpose of the groundwater control system is to preserve the natural undisturbed condition of the subgrade soils in the areas of the proposed excavations. Prior to excavation, the Contractor shall lower the groundwater to at least 1-ft below the lowest excavation subgrade elevation. Additional groundwater lowering may be necessary beyond the 2-ft requirement, depending on construction methods and equipment used, weather conditions, and the prevailing groundwater and soil conditions. The Contractor is responsible for lowering the groundwater as necessary to complete construction in accordance with the plans and specifications at no additional cost to the Owner.
- C. Design deep wells, well points and sumps, and all other groundwater control system components to prevent loss of fines from surrounding soils. Sand filters shall be used with all dewatering installations unless screens are properly sized by the Contractor's design engineer to prevent passage of fines from surrounding soils.
- D. The Contractor shall be responsible for damage to properties, buildings or structures, sewers and other utility installations, pavements and work that may result from dewatering or surface water control operations.
- E. Design review and field monitoring activities by the Owner or by the Engineer shall not relieve the Contractor of his/her responsibilities for the work.
- F. A Geotechnical Data Report is included in Appendix A of these specifications. Test borings have been drilled at locations indicated on the Drawings. The boring logs showing soil and groundwater conditions at the boring locations at the time of the explorations are included in the Geotechnical Data Report. Variations in subsurface conditions should be anticipated by the Contractor in planning and estimating the Work.
- G. The groundwater shall be discharged to the Influent Channel of the Primary Settling Tanks. Contractors proposed conveyance system shall not interfere or impede vehicle traffic around the facility, including the truck traffic to Sludge Unloading Facility. Contractor may use existing catch basins and stormwater collection piping as a conduit to route the groundwater conveyance piping to the Influent of the Channel of the Primary Settling Tanks.

1.06 DEFINITIONS

- A. Where the phrase "in-the-dry" is used in this Section, it shall be defined as an excavation subgrade where the groundwater level has been lowered to at least 1-ft below the lowest level of the excavation, is stable with no ponded water, mud, or muck, is able to support construction equipment without rutting or disturbance, is suitable for the placement and compaction of fill material and can allow surveying of existing pile foundations.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Piping, pumping equipment and all other materials required to provide dewatering of excavations shall be suitable for the intended purpose. Standby pumping units shall be maintained at the site to be used in case of failure of the normal pumping units.

PART 3 EXECUTION

3.01 GENERAL

- A. Control surface water and groundwater such that excavation to final grade is made in-the-dry, the natural undisturbed condition of the subgrade soils is maintained, and softening and/or instability or disturbance due to the presence or seepage of water does not occur. All construction and backfilling shall proceed in-the-dry.
- B. Install groundwater observation wells in accordance with Section 31 09 00 and do not place any fill until the readings obtained from the observation wells indicate that the groundwater has been lowered a minimum of 2-ft below the bottom of the final excavation within the excavation limits.
- C. Methods of groundwater control may include but are not limited to perimeter trenches and sump pumping, perimeter groundwater cutoff, well points, ejectors, deep wells and combinations thereof.
- D. Where groundwater levels are above the proposed bottom of excavation level, a pumped dewatering system will be required for pre-drainage of the soils prior to excavation, and for maintaining the lowered groundwater level until construction has been completed to such an extent that the fill has been placed.
- E. All work included in this Section shall be done in a manner which will protect adjacent structures and utilities and shall not cause loss of ground or disturbance to the pipe bearing soils or to soils which support overlying or adjacent structures.
- F. Locate groundwater control system components where they will not interfere with construction activities or groundwater monitoring adjacent to the work area. Excavations for sumps or drainage ditches shall not be made within or below 1H:1V slopes extending downward and out from the edges of existing or proposed foundation elements or from the downward vertical footprint of the pipe. The impact of anticipated subsurface soil/water conditions shall be considered when selecting methods of excavation, excavation support, and dewatering and drainage systems.
- G. The Contractor shall monitor structure and ground settlement as necessary to determine the effects caused by any groundwater control methods adopted. If damage to any facility occurs because of dewatering operations, take immediate measures to prevent further damage and revise methods or implement measures as necessary to prevent further damage to other facilities.

3.02 DEWATERING PERMIT REQUIREMENTS

- A. Contractor's dewatering design engineer shall estimate the flow rate of the dewatering system and obtain the appropriate permit from NJDEP.
- B. The maximum secondary treatment flow for the Owner's facility is 400 million gallons per day (MGD). This plant flow is only approached during storm events. The Owner reserves the right to direct the Contractor to stop their discharge to the Primary Tanks in the event that this maximum plant flow is approached.

3.03 SURFACE WATER CONTROL

- A. Construct surface water control measures, including dikes, ditches, sumps and other methods to prevent, as necessary, flow of surface water into excavations and to allow construction to proceed without delay.

3.04 EXCAVATION DEWATERING

- A. At all times during construction, provide and maintain proper equipment and facilities to promptly remove and properly dispose of all water entering excavations. Excavations shall be maintained in-the-dry. Groundwater levels shall be kept at least 2-ft below the lowest excavation level so as to obtain a satisfactory undisturbed subgrade foundation condition until the fill has been completed.
- B. Control groundwater seepage into excavations above the final subgrade level such that the seepage waters do not cause disturbance to the subgrade soils and do not adversely affect construction of the Work as specified. Seepage into the excavation, which allows migration of soil particles, is not allowed. If loss of ground results from seepage, then the work shall be stopped and the Contractor shall take whatever measures are necessary to cut off or control the groundwater such that further loss of ground is prevented.
- C. Excavation dewatering shall maintain the subgrade in a natural undisturbed condition and until the fill has been placed to final grade.
- D. Dewatering shall at all times be conducted in such a manner as to preserve the natural undisturbed condition of the subgrade soils at the proposed bottom of excavation.
- E. If the subgrade of the trench or excavation bottom becomes disturbed due to inadequate dewatering or drainage, excavate below normal grade as directed by the Engineer and refill in accordance with Section 31 23 00, Earthwork, as approved by the Engineer at the Contractor's expense.
- F. It is expected that the initial dewatering plan may have to be modified to suit the variable soil/water conditions to be encountered during construction. Dewater and excavate, at all times, in a manner which does not cause loss of ground or disturbance to the soil which supports overlying or adjacent structures or instability of the excavation conditions.
- G. Dewatering units used in the work shall be surrounded by suitable filter sand and no fines shall be removed by pumping. Pumping from the dewatering system shall be continuous until excavation is adequately backfilled. Stand-by pumps shall be provided.

- H. Water entering the excavation from precipitation or surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to a sump and pumped from the excavation to maintain a bottom free from standing water.
- I. Drainage shall be disposed of in accordance with the requirements of the New Jersey Department of Environmental Protection (NJDEP), the Hudson, Essex and Passaic Soil Conservation District, and the Passaic Valley Sewerage Commission.

3.05 REMOVAL OF SYSTEMS

- A. At the completion of the excavation and backfilling work, and when approved by the Engineer, all pipe, deep wells, wellpoints, pumps, generators, observation wells, other equipment and accessories used for the groundwater and surface water control systems shall be removed from the site. All materials and equipment shall become the property of the Contractor. All areas disturbed by the installation and removal of groundwater control systems and observation wells shall be restored to their original condition.
- B. Leave in place any casings for deep wells, wellpoints or observation wells located within the plan limits of structures or pipelines or within the zone below 1H:1V planes extending downward and out from the edges of foundation elements or from the downward vertical footprint of the pipe, or where removal would otherwise result in ground movements causing adverse settlement to adjacent ground surface, utilities or existing structures.
- C. Where casings are pulled, holes shall be filled with sand. Where left in place, casings shall be filled with cement grout and cut off a minimum of 5-ft below finished ground level.

END OF SECTION

SECTION 31 23 23
GRANULAR MATERIALS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and obtain materials for filling and backfilling, grading and miscellaneous sitework, for the uses shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Site Preparation is included in Section 31 10 00.
- B. Dewatering and Drainage is included in Section 31 23 19.
- C. Earthwork is included in Section 31 23 00.
- D. Erosion and Sedimentation Control is included in Section 31 25 00.
- E. Permanent Soldier Pile Retaining Wall is included in Section 31 37 17.
- F. Loaming and Hydroseeding is included in Section 32 92 19.

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01300, complete product data for materials specified in this Section.

1.04 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 2. ASTM D698 - Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.
- B. New Jersey Department of Transportation, Standard Specifications for Road and Bridge Construction.
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. Laboratory Testing
 - 1. Engage the soils testing laboratory to perform:

- a. Grain size analyses of the samples to determine their suitability for use as backfill or fill material in conformance to the materials requirements specified herein.
 - b. The appropriate Proctor analyses to determine the maximum dry densities required for compaction testing as specified elsewhere in the Contract Documents.
2. Test results and determinations of suitability shall be delivered to the resident project representative no later than 3 days prior to the placement of backfill or fill materials.
- B. Fill used as clean backfill materials shall conform to the requirements of the NJDEP Clean Fill Criteria N.J.A.C. 7:26E-1.8. Materials must meet the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and Impact to Groundwater (IGW) Criteria. The Contractor or any Owner selected material provider shall provide the name and location of the source of the certified clean fill and the geotechnical characteristics of the material to be used. A certification of the clean fill material shall be provided to the Engineer pursuant to N.J.A.C. 7:26-6.4(b)2/3.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Backfill and fill materials shall be suitable excavated materials, natural or processed mineral soils obtained from off-site sources, or graded crushed stone or gravel. Backfill and Fill materials shall be free of all organic material, trash, snow, ice, frozen soil, or other objectionable materials which may be compressible or which cannot be properly compacted. Soft, wet, plastic soils which may be expansive, clay soils having a natural, in-place water content in excess of 30 percent, soils containing more than 5 percent (by weight) fibrous organic materials, and soils having a plasticity index greater than 30 shall be considered unsuitable for use as backfill and fill. Backfill and fill materials shall have a maximum of 1 percent expansion when testing is performed on a sample remolded to 95 percent of maximum dry density (per ASTM D698) at 2 percent below optimum moisture content under a 100 lbs/sq ft surcharge.
- B. Structural Fill shall be gravel, sandy gravel, or gravelly sand. Material shall have a plasticity index of less than 15 and shall conform to the following gradation limits:

Sieve Size	Percent Finer By Weight
2-in	100
No. 4	20 to 70
No. 40	5 to 35
No. 200	0 to 7

- C. Common Fill shall not contain granite blocks, broken concrete, masonry rubble, asphalt pavement, or any material larger than 2-in in any dimension. Common Fill shall have a plasticity index of less than 15 and shall conform to the following gradation limits:

Sieve Size	Percent Finer By Weight
No. 40	75
No. 200	20

- D. Dense Graded Aggregate (DGA) shall be in accordance with NJDOT Standard Specification Division 901.10. The material shall conform to the following limits:

Sieve Size	Percent Finer By Weight
1 1/2"	100
3/4"	55 to 90
No. 4	25 to 50
No. 50	5 to 20
No. 200	3 to 10

- E. AASHTO NO. 8 Coarse Aggregate shall be in accordance with NJDOT Standard Specification Division 901.03. The material shall conform to the following limits:

Sieve Size	Percent Finer By Weight
1/2"	100
3/8"	85 to 100
No. 4	10 to 30
No. 8	0 to 10
No. 16	0 to 5

- F. Sand for concrete, grout, and masonry shall conform to ASTM C33 for fine aggregate. General purpose sand shall be Select Common Fill.
- G. Lean Concrete shall be ready-mix, cast-in-place concrete conforming to the requirements of Section 03 30 00. Minimum compressive strength shall be 2,000 psi after 7 days and 2,500 psi after 28 days.
- H. Class I Geotextile shall be in accordance with NJDOT Standard Specification Division 919.01.

PART 3 EXECUTION (NOT USED)

END OF SECTION

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