SPECIFICATIONS

FOR

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION

BOROUGH OF HAMBURG

SUSSEX COUNTY, NEW JERSEY

This project is funded by New Jersey Office of Emergency Management (NJOEM) request for funding of the Hazard Mitigation Grant Program (HMGP) project number 4725-0005 for the Borough of Hamburg Generator for Critical Infrastructures Water/Sewer Pump Stations Project and the Borough of Hamburg.

BOSWELL, INC.
330 Phillips Avenue
South Hackensack, NJ 07606
N.J. Certificate of Authorization No. 24GA27958000

26HG104

Bruce M. Rockwell, P.E.
Professional Engineer
New Jersey License No. 24GE03479800
November 6, 2026

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DEFINITION OF TERMS

Owner	Borough of Hamburg Sussex County, New Jersey
Engineer	Kevin J. Boswell, P.E. Boswell, Inc. 330 Phillips Avenue South Hackensack, N.J. 07606
Contractor	Party to whom the contract is awarded acting directly or through authorized representatives or employees.
Plans and Specifications	All engineering plans and specifications prepared by Boswell, Inc., and as directed herein, shall govern in the execution of the work.
Owner's Attorney	Richard J. Clemack, Esq. 55 Skyline Drive Ringwood NJ 07456

NOTICE TO BIDDERS
BOROUGH OF HAMBURG
SUSSEX COUNTY, NEW JERSEY

Sealed bids will be received by the Borough of Hamburg, 16 Wallkill Avenue, Hamburg, NJ 07419 in the County of Sussex and State of New Jersey on December 17, 2026 at 10:00 a.m. prevailing time, and then publicly opened and read aloud for:

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION
BOROUGH OF HAMBURG
SUSSEX COUNTY, NEW JERSEY

The work to be performed under this contract includes the following: Base Bid – Manual Transfer Switch Installations, including inspection, start up and operational testing of mobile diesel engine generator and mobile load bank for the deployment at Borough of Hamburg water/wastewater stations. The Borough of Hamburg will procure and furnish the following to the installing contractor to facilitate installation, deployment, testing and commissioning a mobile generator system at each facility: One (1) diesel engine mobile generator, one (1) mobile load bank, one lot of portable quick connect cables consisting of ten (10) 4/0 50 ft DLO type cables and seven (7) manual transfer switches equipped with integral generator side circuit breakers. The following is the list of facility locations where the work will be performed:

- Booster Station
- Well House # 3
- Gingerbread Castle Station
- Heritage Lane Station
- Limekiln Road Station
- Michael Court Station
- Quarry Road Station

Principal items of work in the project include:

1. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Booster Station.

2. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Well House # 3 Station.

3. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Gingerbread Castle Station.

4. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Heritage Lane Station.

5. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Limekiln Road Station.

6. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Michael Court Station.

7. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Quarry Road Station.

8. Coordination with Hamburg Borough and generator / MTS manufacturer(s) for receiving and inspection of equipment, start up, testing and commissioning of all new equipment and supporting the deployment for final system functional testing at each specific location inclusive of furnishing contractor independent field test report(s) verifying successful system functionality at each location.

9. General conditions, mobilization and demobilization.

The work contemplated under this Contract shall be completed by November 1, 2027.

A copy of the plans, specification, and contract documents will be on file for public inspection at the office of Boswell, Inc., 180 Main Street, Chester, New Jersey, as well as at Boswell Inc., 330 Phillips Avenue, South Hackensack, New Jersey 07606, between the hours of 9:00 a.m. and 4:00 p.m. prevailing time, Monday through Friday, excluding legal holidays. A digital copy, provided on a USB flash drive, may be obtained for a non-refundable fee of $10.00 per USB flash drive. Printed copies of the plans, specification, and contract documents may be obtained upon request, in accordance with Boswell's applicable printing fees at the time of request.

Each bid must be made upon the prescribed forms, furnished with the Contract Drawings and Specifications, including the non-collusion affidavit and ownership statement compliance form and must be accompanied by a Consent of Surety and a certified check, cashier's check, or Bid Bond of not less than ten (10%) percent of the amount bid and, not to exceed $20,000.00. Such checks and Bonds shall be made payable to the Owner and will be held as a Guarantee that in the event the Bid is accepted and a Contract awarded to the bidder, the Contract shall be duly executed and its performance properly secured. The successful bidder shall furnish and deliver to the Owner a performance and payment bond in the amount of 100 percent of the accepted bid amount as security for the faithful performance and payment of the Contract. Further, the successful bidder must furnish the policies or Certificates of Insurance required by the Contract. In default thereof, said checks and the amount represented thereby will be forfeited to the aforesaid Owner as liquidated damages. Bids must be accompanied, in the case of corporations not chartered in New Jersey, by proper certificate that such corporation is authorized to do business in the State of New Jersey.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 regarding equal employment opportunity, as amended. All corporations and partnerships and limited liability companies must comply with N.J.S.A. 52:25-24.2, regarding disclosure of partners and stockholders. Each bid must be enclosed in a sealed envelope bearing the name and address of the bidder, addressed to the Owner and labeled for the HAMBURG MANUAL TRANSFER SWITCH INSTALLATION.

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

Unless otherwise permitted by N.J.S.A. 40A:11-23.3, all bids shall be irrevocable, not subject to withdrawal and shall stand available for a period of sixty (60) days in accordance with N.J.S.A. 40A:11-24. The Owner and Bidder may agree to hold bids for consideration for a longer period of time, in accordance with N.J.S.A. 40A:11-24.

The Owner reserves the right to reject bids pursuant to N.J.S.A. 40A:11-13.2, N.J.A.C. 7:22-9.10, or other applicable law; to waive minor informalities or non-material exceptions in the bids received and to accept the bid from the lowest responsible bidder, as per N.J.S.A. 40A: 11-1, et seq.

BOROUGH OF HAMBURG

Beth Martin, Acting Municipal Clerk

INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

1. Contract Documents

A copy of the Contract Documents will be supplied to prospective bidders upon payment of the amount that is specified in the Notice to Bidders, none of which is refundable, for each set, payable in cash or check, at Boswell Inc., 330 Phillips Avenue, South Hackensack, New Jersey 07606.

The Owner, pursuant to N.J.S.A. 40A:11-25, may require from any person proposing to bid hereon a statement showing their experience in performing public work before furnishing them with the Contract Documents and, if not satisfied with the sufficiency of the statement, may refuse to furnish the Contract Documents to them.

2. Proposal Forms

The proposal forms are a complementary part of the Contract Documents and shall be used by the bidder in their submission. All blank spaces for unit prices, extended totals, summation, and lump sums must be completed in ink or preferably machine-printed. All erasures or other physical changes in the bid shall be signed or initialed by the bidder. Any omission in the Proposal shall be just cause for rejection.

3. Submission of Bid

Bidders must use the proposal forms provided. The Proposal shall be enclosed in a sealed opaque envelope and the outside of the envelope shall bear the name and address of the bidder as well as designation of the project.

Bids will be received by the Owner at the time and place designated in the Notice to Bidders.

4. Bid Bond

Accompanying each bid shall be a certified check, cashier's check or bid bond, in an amount not less than ten percent (10%) of the amount of the bid but not more than $20,000.00.

Such bid security shall be returned to all but the three lowest bidders unless otherwise requested by the bidder within ten working days after the date of bid opening and shall be considered as withdrawn. The bid securities of the remaining unsuccessful bidders will be returned within three (3) working days after the contract has been executed. If no Contract has been executed within sixty (60) days after the date of the bid opening, the Owner agrees to return the bid securities upon demand. No interest will be allowed upon any bid security.

5. Consent of Surety

In addition to the bid security, each bidder must file with their bid a letter from a surety company which states, in the event said bidder is awarded the Contract, that the surety company will furnish a performance bond and payment bond in the amount of one hundred percent (100%) of the amount of the Contract.

6. Performance Bond

The successful bidder shall furnish and deliver to the Owner, along with the executed contract, a bond in the amount of one hundred percent (100%) of the contract price as security for the faithful performance of the contract, and guaranteeing 100 percent of the work performed. The performance

bond must be executed by a responsible surety company acceptable to the Owner with a rating of "A" or better as determined by Best Rating System and authorized to transact business in the State of New Jersey. The performance bond shall be in accordance with N.J.S.A. 2A:44-143 to 147. This bond may be in the form of a single performance and payment bond in the total amount of one hundred percent (100%) of the amount of the contract price.

7. Payment Bond

The Contractor or Contractors to whom the Contract is awarded shall give a bond for one hundred percent (100%) of the full amount of the contract price in satisfactory legal form of a surety company or companies with a rating of "A" or better as determined by Best Rating System authorized to do business by and operating in accordance with the laws of the State of New Jersey and to be approved by the said Owner for the protection of all persons furnishing materials or labor for the construction of this contract to the Contractor or any subcontractors, said material and labor bond to be in the form required by Chapter 2A:44-143 to 147, N.J.S.A. and amendments thereto and supplements thereto, said bond not be returned and cancelled until all liability to any and all persons protected by the condition of said bond shall have been met by the Contractor or persons primarily liable for the payment thereof, or by the surety on said bond. This bond may be in the form of a single performance and payment bond in the total amount of one hundred percent (100%) of the amount of the contract price.

The surety company issuing the payment bond shall have the minimum surplus and capital stock or net cash assets required by N.J.S.A. 17:17-6 or N.J.S.A. 17:17-7, whichever is appropriate, at the time the invitation to bid is issued. Furthermore, the surety company, with respect to the issuance of the payment bond, must expressly comply with all of the provisions contained in N.J.S.A. 2A:44-143(b), with respect to the requirements concerning the holding of a current Certificate of Authority, issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. Sec. 9305, that is valid in the State of New Jersey as listed annually in the United States Treasury Circular 570.

Moreover, with respect to the issuance of the payment bond, the surety company must submit the statutorily required Surety Disclosure Statement and Certification, required by N.J.S.A. 2A:44-143(d.), a copy of which document is included in these specifications, and furthermore, must meet all of the requirements of the Commissioner of Insurance of the State of New Jersey with respect to issuance of payment bonds for construction projects involving public funds.

8. Errors in Bid

In the event there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In case there is an error in the summation of the extended totals, the extended totals shall govern and the computed summation by the Engineer shall be accepted as the amount bid.
In the event there is a discrepancy between the item unit bid prices written in numbers and the item unit bid prices written in words, the item unit bid prices written in words shall govern, except as otherwise provided by law.

9. Estimated Quantities

The quantities as listed in the proposal are approximate only, and are given as a basis for the comparison of bids. The Owner reserves the right to increase or decrease any item to any amount.

Any such change in quantity shall not be regarded as sufficient grounds to renegotiate the unit price bid for that item unless such item is considered a Major Pay Item and is increased or reduced by more than twenty percent (20%).

10. Condition of Job Site

Each bidder shall make a careful investigation of the job site and inform themself fully of the conditions relating to the construction and labor under which the work will be performed. Failure to do so will not relieve the successful bidder of their obligation to perform the work as set forth in the Contract Documents.

Bidders are hereby notified that it will be their responsibility to obtain information which they may require as to subsurface conditions and the location of underground utilities.

Each bidder by submission of their bid represents that them has apprised themself of all conditions, and the kind, quality, and quantity of work to be performed.

11. Addenda and Interpretations

No interpretations of the meaning of the Contract Documents will be made orally by the Engineer to any prospective bidder.

Notice of revisions or addenda to the Contract Documents shall be no later than seven (7) days, Saturdays, Sundays and holidays excepted, prior to the date for acceptance of bids be published in a legal newspaper and be made available by notification in writing by certified mail to any person who has submitted a bid or who received a bid package.

12. Failure to Enter Into Contract

Should the successful bidder fail to execute and deliver the Contract, Certificate of Insurance, Payment and Performance Bonds within ten working days after the receipt of written notification by the Owner that the Contract is ready for execution, the bidder forfeits to the Owner as liquidated damages the security deposited with their bid.

13. Rejection of Bids

The Owner reserves the right to reject bids pursuant to N.J.S.A. 40A:11-13.2, N.J.A.C. 7:22-9.10, or other applicable law; to waive minor informalities or non-material exceptions in the bids received and to accept the bid from the lowest responsible bidder, as per N.J.S.A. 40A: 11-1, et seq.

14. Pay Item Amounts

The amount bid for each pay Item in the bid shall reflect the actual cost the bidder reasonable anticipates that performance of that pay Item will entail, together with a proportional share of the cost to perform Work for which no separate pay Item is provided and a proportional share of the bidder's anticipated overhead and profit. Bids that are, in the sole discretion of the Owner, materially unbalanced, will be considered unresponsive. Materially unbalanced means that the bid is structured on the basis of nominal prices for some items and inflated prices for other items creating, in the sole judgment of the Owner, reasonably exercised, the possibility that: 1) progress payments for items completed early may result in the unpaid project balance being insufficient to complete the Work and/or 2) award to the bidder will not result in the lowest ultimate cost to the Owner, taking into consideration the reasonable potential for adjustment of quantities.

15. Utilities

Bidders are hereby notified that it will be the Contractor's responsibility to notify respective utility companies of any damages caused by the Contractor to their lines and see that the same will be repaired immediately at no cost to the Owner.

16. Work Scheduling

Prior to beginning of construction, the Contractor is required to submit in writing work schedules, which shall have the approval of the Engineer. The Contractor is also required to submit in writing prior to beginning of construction the methods of construction to be used in performance of this project.

17. Tied Bids

On a bid for any contract, the Owner reserves the right to hold a hearing to determine who is the most qualified bidder based on experience, ability to perform the work, financial ability, and work previously performed by the bidder in the particular area for which they have bid. All bidders agree that the decision of the Owner shall be final and not appealable unless such decision is made in bad faith. The Owner reserves the right to determine between two (2) tied bidders who shall receive the contract by drawing lots. In the event that the Owner makes such a decision, the names of each of the tie bidders shall be placed in a suitable receptacle and deposited in a closed container which shall be vigorously shook and a representative of the Owner or the Engineer shall draw the name of the successful bidder from the receptacle. All contractors, by submitting a bid, agree to the foregoing terms in determining a tie between two (2) bidders.

18. Discrimination, Affirmative Action Program and Equal Employment Opportunity (EEO)

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27, and with all regulations promulgated thereunder. The Contractor also agrees to submit a copy of the Monthly Project Work Form AA-202 once a month thereafter for the duration of the contract to the Division of Public Contract's Equal Employment Opportunity, compliance of the Department of Treasury of the State of New Jersey and to the Owner's compliance officer.

19. Beneficial Ownership In Bidder

Pursuant to N.J.S.A. 52:25-24.2, all bidders shall set forth, in an appropriate statement, the names and addresses of all stockholders in the corporation, partners in a partnership or other persons in a business entity who have a ten (10%) percent or more interest or any individual who has a ten (10%) percent or more interest in the business entity which may bid on the aforesaid contract.

20. Certification of Non-Debarment for Federal Government Contracts

All bidders must provide written certification through the form provided, attesting to their non-debarment from contracting with federal government agencies. Pursuant to state law any natural person, company, firm, association, corporation, or other entity prohibited, or “debarred,” from contracting with the federal government agencies, shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity. The law considers an entity to be in control of another entity if it owns, directly or indirectly, more than 50% of the ownership interest in that entity.

21. Requirements Before Contract

The Owner requires the submission of the Performance Bond and Payment Bond, Certificate of Insurance, Affirmative Action Affidavit, and Initial Project Workforce Report (Form AA-201) before contracts are issued.

GENERAL CONDITIONS OF THE CONTRACT

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GENERAL CONDITIONS OF THE CONTRACT

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GENERAL CONDITIONS OF THE CONTRACT

ART. 1 DEFINITIONS

Certain terms are used from time to time in the Contract Documents and shall be construed as follows:

Contract Documents - consist of the Notice to Bidders, Information for Bidders, Proposal, Agreement, General Conditions of the Contract, General Specifications, Supplemental Specifications, Plans, addenda, responses to requests for information, change orders, other amendments, and all exhibits, appendices and documents attached to or referenced in any of the foregoing materials.

Owner - shall mean the specific body as indicated in the Agreement.

Engineer - shall mean the individual or their agent so designated by the Owner.

Contractor - shall mean the successful bidder who is the party of the second part of the Agreement. For convenience throughout the Contract Documents, the Contractor shall be referred to as an individual.

Subcontractor - shall mean those having a direct contract with the Contractor to furnish materials worked to a special design according to the Contract Documents of this work.

Work - shall mean all labor, materials, supplies, tools and equipment, insurance, bonds, and other facilities necessary to complete the Contract.

Surety - shall mean the corporate body which is bound with and for the Contractor and which engages to be responsible for their payment of all debts pertaining to and for their acceptable performance of the work for which they have contracted.

Drawings - shall mean all sketches, blueprints, plans, and reproductions of drawings pertaining to the construction of the structures and appurtenances.

Specifications - shall mean the directions, provisions and requirements, contained herein, together with all written agreements made to the method and manner of performing the work or the quantities and qualities of materials to be furnished under the Contract.

Extra work - shall mean any work required by the Owner, which in the judgment of the Engineer, involves changes in or additions to that work required by the Contract Documents.

Written Notice - shall mean notice which has been duly served when delivered to or at last known business address of the person, firm or corporation for whom intended or when enclosed in a prepaid postage wrapper or envelope addressed to such person, firm, or corporation at the last known business address and deposited in a United States mail box. All notices sent by mail shall be certified, and the time of receipt shall be used for the determination of any waiting period for action to be taken as called for in the Contract Documents.

ART. 2 INTENT OF CONTRACT DOCUMENTS

The Contract Documents are complementary, and what is required or called for by any one of them shall be as binding as if mentioned by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work in a good and workmanlike manner. In the performance of the work, the Contractor shall also bear all costs of insurance; obtain and pay for any necessary permits; royalties; conform to all federal, state, county,

and municipal legislation pertinent to this project; and protect the work during construction. The Contractor shall also provide to the Owner any and all equipment warranties which are standard and transferable.

ART. 3 ORDER OF COMPLETION

The Contractor shall submit a schedule which will show the order in which the proposed work will be performed and the dates when each part will be started and completed. The order of work shall be approved by the Engineer.

ART. 4 OWNERSHIP OF DRAWINGS

All furnished Drawings, with the exception of the Contract set, are the property of the Engineer, and shall be returned to them at the completion of work.

ART. 5 CONTRACTOR'S UNDERSTANDING

It is understood and agreed that the Contractor has satisfied themself as to the nature and location of the work; the character, quality and quantity of the necessary material; the character of equipment and facilities needed to perform the work; the general and local surface and subsurface conditions; all federal, state, county and municipal ordinances which may affect the work to be performed under this Contract.

ART. 6 CONTRACTOR'S RESPONSIBILITY

The Contractor shall be responsible for all parts of the work, temporary and permanent, until the project is accepted by the Owner. The Contractor shall also bear all losses resulting from any unforeseen difficulties which may be encountered; or delays of work resulting from the breaking, leaking or relocation of any underground utilities; or from delays required for any related or adjoining contract and shall save the Owner harmless from all claims of any kind arising from the performance of this Contract.

The Contractor shall be responsible for any and all damage caused by or due to flooding during construction, which damages either personal and/or real property, and it will be their responsibility to take adequate steps during the course of construction to prevent such damage.

The Contractor is solely responsible for compliance with all applicable safety regulations regarding safety and confined space entry including, but not limited to, those of the Occupational Safety and Health Administration (OSHA), National Safety Council, State of New Jersey, Department of Labor and Industry, etc.

The Contractor shall comply with the changed conditions contract provisions set forth in N.J.S.A.40A:11-16.7, which are incorporated herein by reference.

ART. 7 OWNER'S RESPONSIBILITY

The Owner shall be responsible for the ownership of lands, easements, or slope rights upon which the proposed work is to constructed. The Owner shall not be responsible for lands used for storage of the Contractor's equipment. If the Contractor desires temporary use of other land during construction, he will secure written permission from the owner and shall file a duplicate copy of such permission with the Owner.

ART. 8 SUBCONTRACTORS

The Contractor, prior to engaging any subcontractor, shall furnish the Engineer, in writing, with the name and address of the subcontractor; and the nature and extent of the work to be performed. A list of five completed similar projects by the subcontractor and the name, address and phone number of the Engineer in-charge shall also be furnished. The Contractor shall not award any subcontract until the proposed subcontractor has been approved by the Engineer and evidence has been presented to the Owner that the employees of the subcontractor are protected by compensation insurance. The Contractor shall require the Subcontractors to comply with any and all rules, regulations, laws, statutes and contract requirements set forth herein that apply to the Contractor.

The Contractor agrees that they are fully responsible to the Owner for acts or omissions of their subcontractor and of persons either directly or indirectly employed by them.

The Owner reserves the right to require the Contractor to construct, with their own employees, not less than forty percent of the total value of the Contract; such percentage to be calculated on the basis of the original bid proposal.

Nothing contained in the Contract Documents, shall create any contractual relation between any subcontractor and the Owner.

ART. 9 SUPERINTENDENTS

The Contractor shall keep on the work site at all times during its progress, a competent superintendent who shall be satisfactory to the Engineer. The superintendent shall not be changed except with the consent of the Engineer, unless the superintendent ceases to be in the Contractor's employ. The superintendent shall represent and have full authority to act for the Contractor. Any directions so given shall be confirmed in writing by the Engineer upon written request of the Contractor.

The Contractor shall also furnish to the Owner the telephone numbers of their superintendent and assistants for any emergency arising outside the normal work day schedule as a result of the Contract. If such an emergency does arise, and the Owner cannot contact the Contractor or their agents, or the Contractor or their agent does not arrive on the job site within two hours of such notification, the Owner reserves the right to correct the situation. Any costs incurred by the Owner shall be reported, in writing, to the Contractor for immediate payment. No additional estimates for work under this Contract shall be paid to the Contractor until the Owner is in receipt of payment for such emergency work.

ART. 10 PROTECTION OF WORK AND PROPERTY

The Contractor shall continuously maintain adequate protection of all their work, the Owner's property and operations, existing utility facilities, and adjacent property from injury or loss arising in connection with this Contract. They shall be responsible for such damage, loss or injury except if caused by agents or employees of the Owner.

In the event of emergency affecting the safety of life or of the work or of adjoining property, the Contractor shall act to prevent such threatened loss of property without authorization by the Owner, and they shall act, without appeal, if instructed by the Owner. Any compensation due to the Contractor by reason of such action shall be determined by agreement prior to the submittal of the next monthly estimate.

In the event of a discharge of sewage to surface or ground, the Contractor shall be responsible for following all applicable Federal, State and local rules and regulations relative to reporting and clean-up operations.

The Contractor shall provide clear video tapes taken before and after construction of those areas where contemplated construction activities are in close proximity to the private and other properties within the easements duly existing or obtained.

The cost of taking, developing and furnishing copies of these video tapes shall be borne by the Contractor.

The before construction video tapes must be submitted to the Engineer for their review prior to commencement of the actual construction work.

ART. 11 INSPECTION OF WORK

The Owner shall have the right to inspect all materials and work performed during any phase of construction and the Contractor shall provide all reasonable facilities for the safe and convenient means of such inspection. The Contractor shall notify the Engineer of any work requiring inspection 72 hours prior to commencing work. Unless otherwise authorized, work shall be done only in the presence of the Engineer or an authorized representative. Any work done without proper inspection will be subject to rejections and not approved for payment. Inspection of the work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

No work shall be closed or covered until it has been duly inspected and approved. Should un-approved work be covered, the Contractor shall, if requested by the Engineer, uncover all work for inspection. The cost of uncovering the work and replacement shall be borne by the Contractor.

The cost of inspection shall be borne by the Owner during the normal work week. The wages and overhead for inspection services on Saturdays, Sundays, legal holidays, or on week days outside the hours of 8:00 A.M. to 4:30 P.M. inclusive shall be borne by the Contractor.

ART. 12 CHANGES IN THE WORK

The Owner may order extra work or make changes by altering, adding or deducting from the work without invalidating the Contract. All such work shall be executed under the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, no extra work or change shall be made unless said order is written, except in an emergency endangering life and property. (See ART. 10) Prior to the execution of any written change order the value of such extra work shall be determined in writing in one of the following ways.

(A) By estimate or acceptance in a lump sum.

(B) By unit prices named in the Contract or subsequently agreed upon.

(C) By cost and percentage or by cost and a fixed fee.

It is understood that the Owner reserves the right to have any extra work done by any person, persons, or corporation other than the Contractor if an agreement upon the prices to be paid for such extra work cannot be promptly reached between the Owner and the Contractor. The Contractor agrees to make no claim for damages or for any privileges or rights other than that provided in the Contract by reason of such work by others.

Any extra work done by the Contractor shall be included in the monthly estimates.

ART. 13 TIME OF COMPLETION

The work contemplated under this Contract shall be completed within 300 calendar days. The Contractor shall commence the work not later than 20 calendar days after the execution of the Contract. The completion time shall include, but not be limited to, the time necessary to prepare shop drawings, to order, process, and deliver all equipment and materials, to obtain necessary permits and approvals, to perform the proper installation contemplated under this contract and all else necessary and incidental in connection with the performance of this Contract.

If the Contractor fails to complete the work within the specified time plus extensions, the Contractor shall be responsible to the Owner as liquidated damages for the sum of $1,500.00 per day (Saturdays, Sundays, and legal holidays excepted) for every day thereafter until the completion and acceptance of work. Such liquidated damages shall not be considered as a penalty. The Owner shall deduct and retain out of any money due or to become due hereunder the amount of the liquidated damages.

ART. 14 MONTHLY ESTIMATES

Upon receipt of an invoice from the Contractor with supporting documentation as required, the Engineer shall prepare a monthly estimate for partial payment to the Contractor not later than the third day of each month. No later than the last day of the month, the Owner will attempt to make partial payment to the Contractor on the basis of the Engineer's estimate. All such payments shall be considered tentative only, subject to correction in any subsequent estimate, and need not be based on accurate measurement. These payments are to be made purely to allow the Contractor to meet their current bills and for no other purpose. The Owner will retain ten percent of the amount of each partial payment for contracts up to $100,000 and two percent for contracts in excess of $100,000, until substantial completion. All payments shall be in accordance with the Prompt Payment Act N.J.S.A. 2A:30A-1 et seq.

In the preparation of the monthly estimates, no allowance will be made for materials until said materials have been incorporated in the work.

ART. 15 WITHHOLDING OF PAYMENT

The Owner may withhold payment for the following:

(A) Defective work not corrected.

(B) Claims filed or responsible evidence indicating probability of filing claims.

(C) Failure of the Contractor to make proper payments to subcontractor or for material or labor.

(D) Unpaid damages by the Contractor to subcontractors, the Owner or any other agency or person.

(E) Failure of the Contractor to submit certified payroll records.

ART. 16 FINAL ESTIMATE AND FINAL PAYMENT

Upon completion of all work, except maintenance, the Engineer shall file with the Owner a final estimate stating, from actual measurements or observation, the entire amount of work performed and compensation earned by the Contractor. Final payment will not be released until the maintenance bond or cash is submitted and approved by the Owner and the Contractor agrees to the final estimate and affixes their signature thereto. The Owner reserves the right to disregard claims for

compensation submitted by the Contractor after the date of the final estimate. The date of final acceptance of the work shall be the date when the final payment is ordered paid by the Owner.

The acceptance of the final payment by the Contractor shall be and operate as a release for all things done or furnished in connection with this work and for every act of the Owner. This payment shall not operate to release the Contractor or their Sureties from any obligation under this Contract.

ART. 17 MAINTENANCE

Before final payment is made, the Contractor shall furnish a Surety Corporation Maintenance Bond to the Owner in a sum equal to 15 percent of the final contract amount and such Bond shall remain in full force and effect for a period of two years from the date of acceptance of the work. The Bond shall provide that the Contractor guarantees to replace, during the two year period, any defective material or damage of the work to the satisfaction of the Engineer without cost to the Owner.

If during the two year period, any work should be found to be defective, the Owner shall order, in writing, the repair of such work. The repairs shall be undertaken within twenty four hours of the written notice and work shall be continuous, during regular working hours, until the replacement or repair is completed. If the Contractor fails to perform or fails to continue to perform the necessary repair the Owner may cause such work to be corrected and the cost thereof shall be paid by the Contractor or their Surety before the Bond will be released.

The Contractor is not obligated to repair any work that they may prove, to the satisfaction of the Engineer, has resulted from abuse of the work by parties other than the Contractor.

If the Owner puts to use any portion of the work prior to the final payment, the maintenance period for such portion of the work shall still be considered from the date of acceptance.

ART. 18 DEFECTIVE WORK

The Contractor, without compensation, shall promptly remove from the site, all materials condemned by the Engineer, and shall promptly replace and re-execute any work found to be defective by the Engineer prior to the final payment. The Contractor shall not be relieved of their obligation to remove unsuitable materials or correct defective work even though such work and materials have been previously inspected or estimated for monthly payment.

If the Contractor shall fail or neglect to replace any defective work or to discard condemned materials within ten working days after written notice, the Owner may cause such defective work to be replaced or the condemned materials to be discarded, and acceptable materials provided, and the expense thereof shall be deducted from the amount to be paid to the Contractor. An itemized list of expenses incurred by the Owner shall be submitted to the Contractor with the next monthly payment.

The Contractor is responsible to correct all defective work regardless of whether payment has been made and/or accepted by the Engineer.

ART. 19 CLAIMS FOR EXTRA COST

If the Contractor claims that any instructions, be they drawings or otherwise, involve extra cost under this Contract, they shall give written notification to the Engineer within forty-eight hours after the receipt of such instructions. In any event, before proceeding to execute the work, the Contractor shall meet with the Engineer to afford the opportunity to modify the design or construction procedure, to establish the validity and the value of the claim as provided in ART. 12, Changes in the Work.

If the Contractor claims compensation for any alleged damages sustained by reason of acts of the Owner, or its agents, the Contractor shall immediately notify the Engineer so that a proper appraisal can be made. Within five days thereafter, the Contractor shall submit to the Engineer a written statement as to the nature of the damage and an itemized statement of the amount claimed for such damage. No such claims shall be valid or entitled to payment unless as hereinbefore specified.

Work under this contract shall not be terminated or delayed during any discussions or negotiations related to claims for extra cost.

ART. 20 LINE AND GRADE

Unless otherwise stated in the specifications, the Contractor shall stake out such lines and grades as necessary in order to perform the work. The Contractor shall transfer the line and grade far enough in advance of the immediate work area to detect any errors or omissions that may exist. It shall remain the Contractor's responsibility to detect and report such errors or omissions to the Engineer immediately.

ART. 21 PUBLIC UTILITIES

Special utility provisions as well as a list of all corporations, companies, agencies or municipalities owning or controlling the utilities in the vicinity of the project site is given in Appendix A.

The Contractor shall contact in writing, all agencies which may have utilities located in the area of work prior to commencement of construction and a copy of such notification shall be forwarded to the Engineer. A meeting of all utility company officials with the Contractor and Engineer shall be arranged by the Engineer to eliminate any possible misunderstandings or confusion during construction.

Upon completion of the work, the Contractor shall obtain a written statement from the various utility companies stating that all manholes or valve boxes within any newly paved area under this contract are free of any foreign matter and can be readily opened.

ART. 22 CHATTEL MORTGAGES

No materials, equipment, or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that they have clear title to all materials and supplies used by them in the work.

ART. 23 INSURANCES

The Contractor shall maintain during the life of the contract, insurance policies of the type and with the minimum limits indicated below and in a form satisfactory to the Owner. The Contractor shall provide a certified copy of the policies and/or certificates of insurance satisfactory to the Owner prior to commencement of work.

A) Policy and Limit Guidelines as follows:

1) Workers Compensation insurance in accordance with laws of the State of New Jersey and other states where work is being performed. The Contractor shall also have and maintain Employers Liability Insurance as well as USL&H and Jones Act coverage where applicable.

2) Commercial General Liability insurance coverage, written on an occurrence basis, and must not be altered by any endorsements limiting coverage. Limits of liability shall not be less than the following:

$2,000,000	General Aggregate per location/per job
$2,000,000	Products/Completed Operations
$1,000,000	Personal Injury and Advertising Injury Limit
$1,000,000	Each Occurrence Combined Single Limit for Bodily Injury and Property Damage

The coverage shall include:

a) Premises/Operations

b) Independent Contractors

c) Contractual liability covering liability assumed under the indemnification provision contained in this Agreement and deleting any third-party beneficiary exclusion.

d) Broad form property damage liability including completed operations.

e) Coverage for liability arising from explosion, collapse and underground damage, if blasting or excavation is to be done.

f) Personal injury coverage, including coverage for liability arising from false arrest, malicious prosecution, willful detention, libel, slander, defamation of character, invasion of privacy and wrongful egress or entry.

g) Products and completed operations for a period of two (2) years from substantial completion.

h) Limited Pollution Cleanup at a limit of $100,000 for construction projects over $500,000.

i) Environmental Liability at a limit of $1,000,000.

3) Comprehensive Automobile Liability insurance covering the use of all owned, non-owned, hired or leased automobiles with limits of liability not less than $1,000,000 combined single limit for bodily injury and property damage. Coverage should include uninsured and underinsured motorist at limits no less than the minimum statutory limits.

4) Owners Protective Liability policy (OCP) with minimum limits of $1 million. The policy "Named Insured" would be the municipality as Owner. The policy would also show the Contractor as "Designated Contractor". This policy will protect the Named Insured (the Owner) for the negligent acts of the Designated Contractor (Contractor).

5) Umbrella Liability insurance policy written on an occurrence basis with a minimum combined single limit of "see below" as "Follow Form" excess of the Contractor's Employer's Liability, Commercial General Liability and Comprehensive Automobile Liability insurance policies required herein. Coverage to include on site limited pollution. The OCP policy as required in Item #4 should be an underlying policy.

Project Cost	Umbrella Limit
$50,000 And Below	$1,000,000
Over $50,000 to $500,000	$3,000,000

Over $500,000 to $1,000,000	$5,000,000
Over $1,000,000	$10,000,000

B) Policy and Limit Guidelines as follows:

1) Certified copies of all insurance policies provided above or certificates thereof satisfactory to the Owner shall be furnished forthwith. Each such policy or certificate shall contain a provision that it is not subject to change or cancellation unless 30 days prior written via certified mail/return receipt shall have been given to the Owner by the Contractor's Insurer. These must be received 30 days prior to commencement of work.

2) The Contractor agrees that it will defend, indemnify and save harmless the Owner, its officers, agents, employees and engineer from and all liability, suits, actions, and demands and all damages, costs or fees on account of injuries to persons or property, including accidental death, arising out of or in connection with the work, or by reason of the operations under this agreement.

3) All insurance purchased and maintained by the Contractor shall designate the Owner, their officers, officials, agents, employees, Engineers, consultants as additional insureds.

4) Except as modified by the Owner in writing, the insurance requirements herein shall also apply to Subcontractors and to the Sub-Subcontractors and the Contractor will be responsible for supervision of the filing of certified copies of the insurance policies and/or insurance certificates prior to any Subcontractor commencing work on the project.

5) The Owner shall maintain Property insurance upon the entire work at the site. The insurance shall insure against the perils as provided by its general insurance carrier and its excess insurer.

6) The Owner and Contractor waive all rights against (1) each other and the Subcontractors, Sub-Subcontractors agents and employees each of the other, and (2) the architect and separate Contractors, if any, and their Subcontractors, Sub-Subcontractors, agents and employees for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to Paragraph 5 or any other property insurance applicable to the work except such rights as they may have to the proceeds or such insurance held by the Owner. The Owner or the Contractor, as appropriate, shall require the architect, separate Contractors, Subcontractors, and Sub-Subcontractors by appropriate agreements, written where legal required for validity, similar waivers, each in favor of all parties enumerated in the Subparagraph 6.

7) All insurance coverage evidenced by the Contractor in accordance with this contract shall be from A.M. Best's rated A-X or better Insurance Company licensed to do business in the State of New Jersey.

8) All proof of insurance submitted to the municipality shall clearly set forth all exclusions and deductible clauses. The Owner will allow certain deductible clauses which are not considered excessive, overly broad, or harmful to the interest of the Owner. Standard exclusions will be allowed of any additional exclusions. This will be at the discretion of the Owner. Regardless of the allowance of exclusions or deductions by the Owner, the Contractor shall be responsible for the deductible limit

of this policy and all exclusions consistent with the risks they assume under this contract and as imposed by law.

In the event that the Contractor provides evidence of insurance in the form of certificates of insurance, valid for a period of time less than the period during which the Contractor is required by the terms of this contract to maintain insurance, said certificates are acceptable, but the Contractor shall be obligated to renew its insurance policies as necessary and to provide new certificates of insurance so that the Owner is continuously in possession of evidence of the Contractor's insurance in accordance with the foregoing provisions.

In the event the Contractor fails or refuses to renew its insurance policy, or the policy is cancelled, terminated or modified so that the insurances do not meet the requirements of this subsection, the Owner may refuse to make payment of any further moneys due under this contract or refuse to make payment of moneys due or coming due under other contracts between the Contractor's insurance for the periods and amounts referred to above. Alternately, the Owner may default the Contractor and direct the surety to complete the project. During any period when the required insurance is not in effect, the Owner may suspend performance of the contract. If the contract is so suspended, additional compensation or extension of contract time is not due on account thereof.

ART. 24 WORK BY OTHERS

The Owner reserves the right to do any work which may connect with, become part of or be adjacent to the work embraced in this contract, at any time, by contract or otherwise.

The Contractor shall not interfere in any way with such other Contractor or person or persons which the Owner may employ and shall suspend such part, or all of their work, or shall prosecute the same in a manner, as may be ordered, to afford all reasonable facilities for doing such other work. Where the Contractor cannot agree as to who has precedence in any location, the decision shall rest with the Engineer, whose determination shall be final and conclusive. Any time lost, due to the work by others, shall not be just cause for additional compensation by the Contractor.

ART. 25 RIGHT OF OWNER TO DECLARE CONTRACTOR IN DEFAULT

The Owner has the right to declare the Contractor in default under the following circumstances:

(A) If the Contractor fails to begin the work within the required time.

(B) If the work to be done under this Contract is abandoned.

(C) If the Contractor is adjudged bankrupt or makes an assignment for the benefit of creditors.

(D) If the Contractor fails to or refuses to regard laws, ordinances, regulations, and such orders as given by the Owner or Engineer with respect to the work.

(E) If the Contractor, after notice from the Engineer, refuses or fails to supply enough properly skilled workmen or proper materials or equipment.

(F) If the Contractor violates any of the provisions of this Contract or shall not perform the same in good faith.

(G) If the Contractor refuses or fails to prosecute the work or any part thereof with such diligence as will insure the work's completion within the specified period (or any duly authorized extension) or fails to complete the work within the prescribed period.

(H) If the Contractor fails to make prompt payment to person supplying labor or materials for the work.

(I) If the Contractor assigns or sublets the work otherwise than as specified.

(J) If the Engineer is of the opinion, and certifies in writing, that the work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor is not complying with the orders of the Engineer, or that sufficient workmen, materials, plant, tools, supplies, safety standards, or other means of carrying on the work are not provided to carry out all the requirements of the Contract.

(K) Failure of the Contractor or Subcontractor to pay required wage rates.

The Owner shall serve written notice to the Contractor ordering the Contractor not to begin, or not to resume, or to discontinue all work under this Contract for any of the above stated reasons.

The Owner may then enter upon and take possession of the work, or any part thereof, and by purchase of necessary materials and equipment, by and/or direct employment of labor complete the work; or the Owner may cause the work to be completed by other persons by contract without advertising; or the Owner may re-advertise and re-let the uncompleted portions of the work and all expenses or financial loss to the Owner by reason of any of the above methods for completing the unfinished work shall be deducted out of monies then due, or to become due to Contractor under this Contract.

In case such expense shall exceed the amount which would have been payable under this contract if the same had been completed by the Contractor, the Contractor or their sureties shall pay the amount of such excess to the Owner.

Should such expense be less than the amount payable under this Contract, had the same been completed by the Contractor, they shall receive the difference after deducting the amount retained as herein before or hereinafter specified.

All the work undertaken by the Owner, by contract or otherwise, shall be certified by the Engineer as to the amount of work done, the cost and amount of excess cost, if any. Such certification shall be binding and conclusive upon the Contractor, their sureties, successors, assigns or liens.

In case this Contract, or any alterations or modifications thereof be thus terminated, the decision of the Owner shall be conclusive, and said Contractor shall not be allowed to claim or receive any compensation or damages for not being allowed to proceed with the work.

ART. 26 REMOVAL OF EQUIPMENT

In case of termination of work, from any cause whatever, prior to completion, the Contractor shall promptly remove any part or all of their equipment and supplies from the work. If such removal is not completed within five working days after written notification by the Owner, the Owner shall have the right to remove such equipment and supplies at the expense of the Contractor.

ART. 27 CONTRACTOR'S RIGHT TO TERMINATE WORK

If the work shall be stopped by order of the court or any other public authority for a period of three months without act or fault of the Contractor or of any of their agents, servants, employees, or subcontractors, the Contractor may, upon ten days notice to the Owner, discontinue performance of the work and/or terminate the Contract, in which event the liability of the Owner to the Contractor shall be determined as provided hereinbefore except that the Contractor shall not be obliged to pay to the Owner an excess of the expense of completing the work over the unpaid balance of the compensation to be paid the Contractor.

ART. 28 SUSPENSION OF WORK

The Owner, on account of public necessity, adverse weather conditions, or other reasons, may order all or any part of the work suspended, and thereupon, the Contractor shall neatly pile up all materials, provide and maintain walks and crossings and take other means to properly protect the work. In case of stoppage of work, the time allowed for the completion of the work shall be extended in an amount equal to that lost by the Contractor in such manner, but the Contractor shall be entitled to no claims for damages. Under no circumstances shall the materials be used which have been affected by the weather.

The contracting unit shall provide written notice to the contractor in advance of any suspension of work lasting more than 10 calendar days of the performance of all or any portion of the work of the contract.

If the performance of all or any portion of the work of the contract is suspended by the contracting unit for more than 10 calendar days due to no fault of the contractor or as a consequence of an occurrence beyond the contracting unit's control, the contractor shall be entitled to compensation for any resultant delay to the project completion or additional contractor expenses, and to an extension of time, provided that, to the extent feasible, the contractor, within 10 calendar days following the conclusion of the suspension, notifies the contracting unit, in writing, of the nature and extent of the suspension of work. The notice shall include available supporting information, which information may thereafter be supplemented by the contractor as needed and as may be reasonably requested by the contracting unit. Whenever a work suspension exceeds 60 days, upon seven days' written notice, the contractor shall have the option to terminate the contract for cause and to be fairly and equitably compensated therefor.

Upon receipt of the contractor's suspension of work notice in accordance with the above paragraph, the contracting unit shall promptly evaluate the contractor's notice and promptly advise the contractor of its determination on how to proceed in writing. If the contracting unit determines that the contractor is entitled to additional compensation or time, the contracting unit shall make a fair and equitable upward adjustment to the contract price and contract completion date. If the contracting unit determines that the contractor is not entitled to additional compensation or time, the contractor shall proceed with the performance of the contract work, and shall be entitled to pursue a suspension of work claim against the contracting unit for additional compensation or time attributable to the suspension.

Failure of the contractor to provide timely notice of a suspension of work shall result in a waiver of a claim if the contracting unit can prove by clear and convincing evidence that the lack of notice or delayed notice by the contractor actually prejudiced the contracting unit's ability to adequately investigate and defend against the claim.

ART. 29 POWERS OF THE ENGINEER

The Engineer or its designee shall make all necessary explanations as to the meaning and intent of the Contract Documents, shall give all orders and directions contemplated under the Contract. The Engineer or its designee shall determine in all cases the quantity, quality, and acceptability of the several kinds of work and materials and shall determine all questions in relation to the work and construction thereof.

In case there is any inconsistency or ambiguity in the Contract Documents brought to their attention by the Contractor, the Engineer shall base their decision upon the premise that the more stringent interpretation was made by the Contractor in the submission of their bid. The Engineer shall decide any difference or conflicts which may arise between the Contractor and other contractors of the Owner in regard to their work.

Should the Contractor take exception to any determination made by the Engineer relating to this Contract, the Contractor shall within ten calendar days after receiving notification of such decision, file with the Owner a written notice appeal together with a full statement of facts as they believe them to be true. A copy of said notice and statement of facts shall be furnished to the Engineer.

ART. 30 DISPUTES

In accordance with N.J.S.A. 40A:11-50 (PL 1997 c371) no disputes, as defined in the said statute shall be submitted to a Court for adjudication unless the dispute has first been submitted to non-binding mediation. This provision shall not apply to disputes concerning the bid solicitation or award process, or to the formation or subcontracts to be entered into pursuant to PL 1971 c198 (C40A:11-1 et seq.) nor shall this provision prevent the contracting unit from seeking injunctive or declaratory relief in Court at anytime.

ART. 31 UNAUTHORIZED WORK

Work done without lines and grade being given, work done beyond the lines and grades shown on the drawings or as given, or any extra work done without a written authorization will be considered unauthorized. Such work will be at the expense of the Contractor and will not be paid for by the Owner. Work so done, may be ordered removed and/or replaced by the Engineer at the Contractor's expense.

ART. 32 MAINTENANCE OF TRAFFIC

The Contractor shall provide for and maintain local vehicular traffic during construction operations wherever feasible. At no time shall they close off any street by barricading or other methods without the prior consent of the Owner. If and when it becomes necessary to close the street to the normal flow of traffic, the Contractor shall notify the Police Department, Fire Department and the Engineer, and shall at all times provide ingress and egress for emergency services as provided by the aforesaid departments.

All traffic control measures must conform with the latest edition of the Manual of Uniform Traffic Control Devices.

Detour routes, if approved by the Engineer, must be adequately and fully marked by the Contractor for the entire length of the detour.

ART. 33 EROSION AND SEDIMENTATION CONTROL

The Contractor shall schedule and conduct the work exercising such precautions as necessary to prevent and/or reasonably minimize the pollution or contamination of stream and other waters with sediment or other harmful materials. Wherever construction exposes work which is subject to erosion, the extent of such exposures in advance of subsequent construction shall be subject to the approval of the Engineer. Erosion control features or other work to be completed within such areas shall follow as soon after exposure as practicable.

Construction of drainage facilities as well as performance of other contract work which will contribute to the control of siltation shall be carried out in conjunction with earthwork operations, including borrow pit operations, or as soon thereafter as is practicable.

During construction, the Contractor shall shape the top of earthwork so as to effect the drainage of rainwater and to prevent the flow of runoff over the slopes except at locations selected or approved by the Engineer. If and where the Engineer so directs, temporary slope drains shall be constructed to carry the runoff.

The erosion control measures described herein shall be continued until the grass on seeded slopes is sufficiently established to be an effective erosion deterrent.

Unless otherwise approved in writing by the Engineer, construction operations in rivers, streams and impoundments should be restricted to those areas where channel changes are shown on the plans and to those areas which must be entered for the construction of temporary or permanent structures. Rivers, streams and impoundments shall be promptly cleared of all falsework, piling, debris, or other obstructions placed therein or caused by the construction operations.

Excavation from the roadway, channel changes, cofferdams, etc., shall not be deposited in or so near to rivers, streams or impoundments so that it will be washed away by high water or runoff.

Each 5,000 square feet of cut face of earth excavation and/or fill for roadway slopes will be treated to establish a temporary vegetative cover as described in the "Standards for Soil Erosion and Sedimentation Control in New Jersey" immediately after the completion of excavation and/or embankment operations in the same area. All work must also be in accordance with the local Soil Conservation District. The Contractor shall notify the District in writing at least 48 hours in advance of any land disturbance activity.

Unless otherwise stated in the technical specifications, no separate payment will be made to the Contractor for soil erosion and sedimentation control measures and the cost for soil erosion and sediment control measures will be included in the bid price of various items in the Proposal.

ART. 34 FINAL CLEAN UP

Before final acceptance of the work, the Contractor shall remove all equipment, temporary work, unused and useless materials, rubbish; shall leave the ground and adjacent property in a neat and satisfactory condition; shall remove all obstructions from waterways caused by their operations; and shall clean all new and existing storm water drains within and adjacent to the work which have been obstructed by the Contractor.

ART. 35 LIENS

The Contractor agrees that they will furnish the Owner with satisfactory evidence that all persons who have done work or furnished materials under this agreement and are entitled to a lien, therefore, have been fully paid off and are no longer entitled to such lien. The Owner may withhold payment in the event claims are filed or it has reasonable evidence indicating the probability of claims being filed.

ART. 36 COMPLIANCE WITH LABOR STATUTES AND RULES

The Contractor agrees to comply with all the laws of the State of New Jersey regarding labor and compensation with all labor statutes, rules, regulations, and ordinances applicable and having the force of the law. The Contractor in matters of non-discrimination 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 or 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 their behalf shall, in any manner, discriminate against or intimidate any employees 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 provision of the Contract.

(D) This Contract may be cancelled 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 of the Contractor from the contracting public agency of any prior violation of the section of the Contract.

(E) The Contractor agrees to comply with all State statutes, rules and regulations dealing with minimum wage rates and failure to do so shall subject the Contractor to forfeiture of the contract or other penalties imposed by law.

(F) Contractors are responsible for subcontractor compliance.

(G) The Contractor shall instruct their personnel to follow all safety regulations of the Occupational Safety and Health Administration (OSHA) and officials of the State of New Jersey Department of Labor and Industry. The Contractor is forewarned that the regulatory agencies could impose a work stoppage if their representatives inspect the Contract work and discover that safety precautions mandated by the agencies have been violated.

(H) In the case of projects with contracts exceeding $50,000 that are part of the project, the Contractor shall have an Affirmative Action Plan. The form AA-201B and/or others as it may be required by the Affirmative Action Office shall be completed by the Contractor and furnished to the Owner and the Affirmative Action Office no later than three (3) days after the Contractor signs the Contract.

ART. 37 AMERICAN GOODS AND PRODUCTS

The Contractor shall comply with any and all "Buy American" requirements of Federal and State law, including N.J.S.A. 40A:11-18 which provides that only manufactured products of the United States, wherever available, be used.

ART. 38 PUBLIC WORKS CONTRACTOR REGISTRATION ACT

The Contractor shall comply with the requirements of the Public Works Contractor and Registration Act for the State of New Jersey known as the P.L. 1999.c238 (NJSA 34:11-56.48). In accordance with the requirements of this Act, the Contractor shall submit with the bid a copy of its Public Works Contractor Registration Certificate as well as a copy of the certificates for its named subcontractors.

ART. 39 DOCUMENTATION RETENTION

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.

ART. 40 DIFFERING SITE CONDITIONS

If the contractor encounters differing site conditions during the progress of the work of the contract, the contractor shall promptly notify the contracting unit in writing of the specific differing site conditions encountered before the site is further disturbed and before any additional work is performed in the impacted area. Upon receipt of a differing site conditions notice, or upon the

contracting unit otherwise learning of differing site conditions, the contracting unit shall promptly undertake an investigation to determine whether differing site conditions are present. If the contracting unit determines different site conditions that may result in additional costs or delays exist, the contracting unit shall provide prompt written notice to the contractor containing directions on how to proceed.

If the contracting unit's investigation and directions increase the contractor's costs or time of performance, the contracting unit shall make a fair and equitable upward adjustment to the contract price and contract completion date. If both parties agree that the contracting unit's investigation and directions decrease the contractor's costs or time of performance, the contracting unit shall be entitled to a fair and equitable downward adjustment of the contract price or time of performance. If the contracting unit determines that there are no differing site conditions present that would result in additional costs or delays, the contracting unit shall so advise the contractor, in writing, and the contractor shall resume performance of the contract, and shall be entitled to pursue a differing-site-conditions claim against the contracting unit for additional compensation or time attributable to the alleged differing site condition.

Execution of the contract by the contractor shall constitute a representation that the contractor has visited the site and has become generally familiar with the local conditions under which the work is to be performed. As used in this subsection, "differing site conditions" mean physical conditions at the contract work site that are subsurface or otherwise concealed and which differ materially from those indicated in the contract documents or are of such an unusual nature that the conditions differ materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the contract.

SCOPE OF WORK

SCOPE OF WORK
HAMBURG MANUAL TRANSFER SWITCH INSTALLATION
BOROUGH OF HAMBURG
SUSSEX COUNTY, NEW JERSEY

The work to be performed under this contract includes the following: Base Bid – Manual Transfer Switch Installations, including inspection, start up and operational testing of mobile diesel engine generator and mobile load bank for the deployment at Borough of Hamburg water/wastewater stations. The Borough of Hamburg will procure and furnish the following to the installing contractor to facilitate installation, deployment, testing and commissioning a mobile generator system at each facility: One (1) diesel engine mobile generator, one (1) mobile load bank, one lot of portable quick connect cables consisting of ten (10) 4/0 50 ft DLO type cables and seven (7) manual transfer switches equipped with integral generator side circuit breakers. The following is the list of facility locations where the work will be performed:

- Booster Station
- Well House # 3
- Gingerbread Castle Station
- Heritage Lane Station
- Limekiln Road Station
- Michael Court Station
- Quarry Road Station

Principal items of work in the project include:

1. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Booster Station.

2. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Well House # 3 Station.

3. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Gingerbread Castle Station.

4. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Heritage Lane Station.

5. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Limekiln Road Station.

6. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding

and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Michael Court Station.

7. All modifications of the existing power system required for installing a new manual transfer switch (MTS); including equipment mounting, foundations and/or housekeeping pads, conduit, wiring, boxes, grounding and fittings required to make complete provisions for deploying a mobile diesel engine generator set and mobile load bank for the Quarry Road Station.

8. Coordination with Hamburg Borough and generator / MTS manufacturer(s) for receiving and inspection of equipment, start up, testing and commissioning of all new equipment and supporting the deployment for final system functional testing at each specific location inclusive of furnishing contractor independent field test report(s) verifying successful system functionality at each location.

9. General conditions, mobilization and demobilization.

The work contemplated under this Contract shall be completed by November 1, 2027.

Unless otherwise specifically noted, all work is to be in compliance with the New Jersey Department of Transportation, 2019 Standard Specifications for Road and Bridge Construction, as amended.

All work is to be inspected, by a representative of the Engineer. Quantity tickets will be collected by a representative of the Engineer, at the time of delivery of the specific load only. No tickets will be accepted, for any quantities of materials at any other time. Volume items will be measured within the prescribed pay limits indicated on the Contract Drawings.

Milled material, if directed, shall be designated for recycling and transported to an approved recycling center. Tonnage of milled material shall be certified to the Owner and the Owner's recycling coordinator.

The Contractor shall be responsible for the construction stakeout/layout. **The construction stakeout/layout shall be performed by a qualified New Jersey licensed professional land surveyor.**

The Contractor is hereby alerted of the escrow deposit required for the payment of police traffic directors in accordance with these specifications.

The Contractor shall remove and replace all signs, including street names signs, as determined by the RE in the field. Use mixed case lettering for street name signs in accordance with the current edition of the Manual on Uniform Traffic Control (MUTCD) and the Standard Construction Details located in the Appendices of these Specifications. Provide shop drawings of all signs for review and approval prior to ordering. All street name signs shall be extruded aluminum and in accordance with Subsection 911.01 of the Specifications and paid for under the item "Regulatory and Warning Sign."

The Contractor shall construct all sidewalks, curb ramps and pedestrian facilities within the public right-of-way or easements in full compliance with latest version of the “Proposed Accessibility Guidelines for Pedestrian Facilities in the Public “Right-of-Way” located at https://www.access-board.gov/prowag and the Manual on Uniform Traffic Control Devices (MUTCD). Workmanship and materials shall be in conformance with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction

as amended and supplemented by County and/or Municipal requirements. The Contractor is notified that improperly constructed ramps and facilities, as determined by the Municipality and/or County, will require replacement with compliant ramps and facilities at the sole cost and expense of the Contractor.

AGREEMENT

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION AGREEMENT

This Agreement made on the _____ day of _____ by and between the Borough of Hamburg in the County of Sussex, in the State of New Jersey, party of the first part, hereinafter called the Owner and _____ party of the second part, hereinafter called the Contractor.

Witnesseth: That the Contractor, for and in consideration of the sum or sums hereinafter mentioned to be paid, as hereinafter expressed by the Owner, does hereby covenant, promise and agree, and for the Contractor's heirs, personal representative, successors, and assigns does promise and agree, to and with the Owner as follows:

1. That the Contractor will agree to furnish and deliver all materials to do and perform all the work and labor required in and about said project as indicated in the accompanying proposal, all in accordance with the Contract Documents, specifications, and affirmative action requirements which are annexed hereto and deemed to a part of this Agreement and further, that the Contractor will perform said work as and then ordered by the engineer and prosecute the same diligently to conclusion and complete the same within the time specified in the General Conditions of the Contract. The Contractor will commence the work not later than 20 calendar days after the execution of the contract.

2. And it is further agreed by and between the parties hereto, that if the Contractor shall omit, fail, neglect or refuse to commence, prosecute or to complete said work as aforesaid, or in case further time be granted for the commencement and completion of said work, and the said Contractor shall omit, fail, neglect or refuse to commence, prosecute or complete said work within the time granted, or if the Contractor shall cease operations under this Contract at any time, for the space of ten (10) calendar days without the approval of the Engineer, that then, in any such event, the Governing Body of the Owner, or the Engineer in its behalf, shall have the full privilege, authority and power, if the Governing Body shall so elect, to cause the said work to be done and completed without interference, opposition, or hindrance of or by the Contractor; provided, the Governing Body shall give to the Contractor or its sureties notice in writing of the intention to do so, by mailing such notice in an envelope, with postage prepaid, addressed to the Contractor, under, in and by this Contract, shall cease and be void, and the Contractor shall receive no further benefit, pay or remuneration thereunder; and the Contractor and/or its sureties shall be liable for any and all sums of money which the Owner shall or may pay or expend for fully completing and maintaining said work, over and above the amount which the Contractor would have been entitled to receive, had the Contractor completed and maintained the work under the Contract according to its terms and conditions, and all loss or damage may result to the Owner by reason of the omission, failure, or refusal of said Contractor to commence, prosecute and maintain said work as aforesaid.

3. And it is further agreed by and between the parties hereto, that whenever damages are imposed by the terms of this Contract for failure, neglect or default of the Contractor in the performance of this contract, this amount thereof when incurred by the Owner, may be deducted and withheld from any money to become due upon this Contract, and when so deducted and withheld shall be deemed and taken as payment by the Contractor to that extent.

4. And it is further agreed by and between the parties hereto, that the time is of the essence of this contract, and that if the contract work is not fully completed within the time limit for its completion in accordance with ART. 13 of the General Conditions of the Contract, the Contractor shall pay to the Owner for each day, Saturdays, Sundays and Holidays excepted and such time as the prosecution of the work is stopped by written direction of the Governing Body or its authorized agent that shall or may elapse after the time so limited for its completion, until its final and full completion and acceptance by the Owner the sum of $1,500.00 per day, Saturdays, Sundays and Holidays excepted, as liquidated damages.

5. The Contractor agrees to carry adequate policy or policies of insurance in accordance with ART. 23 of the General Conditions of the Contract, as will indemnify them and the Owner and the Engineer from any liability imposed by law as a result of any act or omission of the Contractor, their agents, servants

or employees from the time of the commencement of the work hereunder; such policy or policies of insurance shall be subject to inspection by the properly authorized agent, servant or employee of the Owner.

6. The Contractor further agrees that prior to the payment to them by the Owner of the Contract Sum hereinafter set forth, the Contractor will furnish to the properly authorized agent, servant or employee of the Owner satisfactory evidence of the payment by the Contractor of all obligations incurred by the Contractor, resulting from the order or purchase of materials by the Contractor, charges for labor or obligations upon any subcontractor or contract which the Contractor may list.

The Contractor agrees to indemnify and save harmless the Owner from any claims, demands, actions, or causes of action which may be presented to or asserted against the Owner as a result of any act or omission by the Contractor in the performance of the work hereunder, or in violation by the Contractor of any duty imposed upon the Contractor by law.

It is hereby mutually agreed that the Owner is to pay and the Contractor is to receive as full compensation for furnishing all materials and labor in building, constructing and testing, and in all respects completing the work herein described and appurtenances thereto in the manner and under the conditions herein specified, the various unit prices stipulated in the Proposal hereto annexed.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement this day and year as first above written.

BOROUGH OF HAMBURG

By_____

(SEAL)

ATTEST:

By_____

_____

_____

_____

Contractor

ATTEST/WITNESS:

By_____ By_____

Bond No_____

PERFORMANCE/LABOR MATERIAL BOND

KNOW ALL MEN BY THESE PRESENTS THAT we, the undersigned as Principal, and the _____, a corporation organized and existing under the laws of the State of New Jersey and duly authorized to do business in the State of _____, as Surety, are held and firmly bound unto_____ as Obligee in the penal sum _____($_____) 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.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above-named Principal did on the _____ day of _____, 20____, enter into a contract with _____ which contract is made part of this bond the same as though set forth herein:

NOW, if the said_____ shall well and faithfully do and perform the things agreed by them to be done and performed according to the terms of said Contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S.A. 2A:44-143 for labor performed or materials, provisions, provender or other supplies or teams, fuel, oils, implements, or machinery furnished, used or consumed in the carrying forward, performing or completing of said Contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S.A. 2A:44-143 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; 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 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.

This bond is given in compliance with the requirement of the statutes of the State of New Jersey in respect to bonds or contracts on public works. Revised Statutes of the State of New Jersey, N.J.S.A. 2A:44-143 to 2A:44-147, both inclusive, and liability hereunder is limited as in said statutes provided.

SIGNED, SEALED AND DATED this _____ day of _____20_____

Witness:_____ _____
(If Individual) (Principal)

Attest:_____ _____
(If Corporation)

Attest:_____ By_____

STATE OF NEW JERSEY

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

Official Use Only

Assignment

Code

FORM AA-201
Revised 11/11

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

For instructions on completing the form, go to: https://www.nj.gov/treasury/contract_compliance/documents/pdf/forms/aa201ins.pdf

1. FID NUMBER	2. CONTRACTOR ID NUMBER	5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDING CONTRACT Name: Address: CONTRACT NUMBER DATE OF AWARD DOLLAR AMOUNT OF AWARD
3. NAME AND ADDRESS OF PRIME CONTRACTOR (Name) (Street Address) (City) (State) (Zip Code) 4. IS THIS COMPANY MINORITY OWNED [ ] OR WOMAN OWNED [ ]		6. NAME AND ADDRESS OF PROJECT Name: Address: COUNTY
		7. PROJECT NUMBER
		8. IS THIS PROJECT COVERED BY A PROJEC LABOR AGREEMENT (PLA)? YES

9. TRADE OR CRAFT	PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE - IN DATE	PROJECTED COMPLETION DATE
	MALE		FEMALE		MALE		FEMALE			
	J	AP	J	AP	J	AP	J	AP		
1. ASBESTOS WORKER										
2. BRICKLAYER OR MASON										
3. CARPENTER										
4. ELECTRICIAN										
5. GLAZIER										
6. HVAC MECHANIC										
7. IRONWORKER										
8. OPERATING ENGINEER										
9. PAINTER										
10. PLUMBER										
11. ROOFER										
12. SHEET METAL WORKER										
13. SPRINKLER FITTER										
14. STEAMFITTER										
15. SURVEYOR										
16. TILER										
17. TRUCK DRIVER										
18. LABORER										
19. OTHER										
20. OTHER										

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

(Signature)

10. (Please Print Your Name) (Title)

(Area Code) (Telephone Number) (Ext.) (Date)

Form AA302
Rev. 1/00

NEW JERSEY FACILITY

STATE OF NEW JERSEY

Division of Contract Compliance & Equal Employment Opportunity

EMPLOYEE INFORMATION REPORT

IMPORTANT- READ INSTRUCTIONS ON BACK OF FORM CAREFULLY BEFORE COMPLETING FORM. TYPE OR PRINT IN SHARP BALLPOINT PEN. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM MAY DELAY ISSUANCE OF YOUR CERTIFICATE. DO NOT SUBMIT EEO-1 REPORT FOR SECTION B, ITEM 11.

SECTION A – COMPANY IDENTIFICATION

1. FID. NO. OR SOCIAL SECURITY	2. TYPE OF BUSINESS ☐ 1. MFG ☐ 2. SERVICE ☐ 3. WHOLESALE ☐ 4. RETAIL ☐ 5. OTHER	3. TOTAL NO. EMPLOYEES IN THE ENTIRE COMPANY

4. COMPANY NAME

5. STREET CITY COUNTY STATE ZIP CODE

6. NAME OF PARENT OR AFFILIATED COMPANY (IF NONE, SO INDICATE) CITY STATE ZIP CODE

7. CHECK ONE: IS THE COMPANY: ☐ SINGLE-ESTABLISHMENT EMPLOYER ☐ MULTI-ESTABLISHMENT EMPLOYER

8. IF MULTI-ESTABLISHMENT EMPLOYER, STATE THE NUMBER OF ESTABLISHMENTS IN NJ

9. TOTAL NUMBER OF EMPLOYEES AT ESTABLISHMENT WHICH HAS BEEN AWARDED THE CONTRACT

10. PUBLIC AGENCY AWARDING CONTRACT CITY COUNTY STATE ZIP CODE

Official Use Only	DATE RECEIVED	INAUG.DATE	ASSIGNED CERTIFICATION NUMBER

SECTION B – EMPLOYMENT DATA

11. Report all permanent, temporary and part-time employees ON YOUR OWN PAYROLL. Enter the appropriate figures on all lines and in all columns. Where there are no employees in a particular category, enter a zero. Include ALL employees, not just those in minority/non-minority categories, in columns 1, 2, & 3. *DO NOT SUBMIT AN EEO-1 REPORT.*

JOB CATEGORIES	ALL EMPLOYEES			PERMANENT MINORITY/NON-MINORITY EMPLOYEE BREAKDOWN									
				MALE					FEMALE				
	COL. 1 TOTAL (Cols.2 &3)	COL. 2 MALE	COL. 3 FEMALE	BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.
Officials/ Managers													
Professionals													
Technicians													
Sales Workers													
Office & Clerical													
Craftworkers (Skilled)													
Operatives (Semi-skilled)													
Laborers (Unskilled)													
Service Workers													
TOTAL													
Total employment From previous Report (if any)													
Temporary & Part-Time Employees	The data below shall NOT be included in the figures for the appropriate categories above.												

12. HOW WAS INFORMATION AS TO RACE OR ETHNIC GROUP IN SECTION B OBTAINED?
☐ 1. Visual Survey ☐ 2. Employment Record ☐ 3. Other (Specify)

13. DATES OF PAYROLL PERIOD USED
From: To:

14. IS THIS THE FIRST Employee Information Report Submitted?
1. YES ☐ 2. NO ☐

15. IF NO, DATE LAST REPORT SUBMITTED
MO. DAY YEAR

SECTION C – SIGNATURE AND IDENTIFICATION

16. NAME OF PERSON COMPLETING FORM (Print or Type)	SIGNATURE	TITLE	DATE MO DAY YEAR

17. ADDRESS NO. & STREET CITY COUNTY STATE ZIP CODE PHONE (AREA CODE, NO.,EXTENSION)

WHITE – DIV. OF CONTRACT COMPLIANCE; CANARY – DIV. OF CONTRACT COMPLIANCE DP; PINK – PUBLIC AGENCY; GOLD - VENDOR

EMPLOYEE INFORMATION REPORT

FORM AA-202
REVISED 9/01

State Of New Jersey

Division Of Contract Compliance And
Equal Employment Opportunity In Public Contracts

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION

READ INSTRUCTIONS ON BACK CAREFULLY BEFORE COMPLETING THIS FORM. PLEASE TYPE OR PRINT IN BLACK OR BLUE INK.

3. F ID or SS Number

1.Name and address of Prime Contractor

2. Contractor ID Number

4. Reporting Period

(NAME)

5. Public Agency Awarding Contract

Date of Award

(ADDRESS)

6. Name and Location of Project

County

7. Project ID Number

(CITY) (STATE) (ZIP CODE)

8. CONTRACTOR NAME (LIST PRIME CONTRACTOR WITH SUBS FOLLOWING)	9. PERCENT OF WORK COMPLETED	10. TRADE OR CRAFT	CLASSIFICATION (SEE REVERSE)	11. NUMBER OF EMPLOYEES A. TOTAL	B. BLACK	C. HISPANIC	D. AMERICAN INDIAN	E. ASIAN	F. FEMALES	12. TOTAL NO. OF MIN. EMP.	13. WORK HOURS TOTAL WORK HOURS	A. MIN. W/H	B. FEMALE W/H	14. % OF WORK HRS A. % OF MIN. W/H	B. % OF FEMALE W/H	15. CUM. WORK HRS TOTAL WORK HOURS	A. MIN. HOURS	B. FEMALE HOURS	16. CUM. % OF W/H A. % OF MIN. W/H	B. % OF FEM. W/H
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	

17. COMPLETED BY (PRINT OR TYPE)

(NAME) (SIGNATURE) (TITLE)

(AREA CODE) (TELEPHONE NUMBER) (EXT.) (DATE)

DIVISION OF CONTRACT COMPLIANCE / EEO OFFICE

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION

PROPOSAL FORMS

BID DOCUMENT SUBMISSION CHECKLIST

All forms/certifications must be completed in full and initialed by the prospective bidder indicating inclusion of completed form with the bid documents. Failure to include any of the following will be a basis for disqualification of the bid.

	Initial
Bid Document Submission Checklist	_____
Bid Proposal Form	_____
Schedule of Prices	_____
Consent of Surety	_____
Acknowledgement of Receipt of Addenda	_____
Affirmative Action Compliance Notice	_____
Acknowledgement of Mandatory Equal Employment Opportunity Language and Mandatory Americans with Disabilities Act of 1990	_____
Statement of Ownership Disclosure	_____
Certification of Non-Debarment for Federal Government Contracts	_____
Business Registration Certificates	_____
Prevailing Wage Compliance Declaration	_____
Lowest Bidder Prevailing Wage Certification	_____
Public Works Contractor Registration (including named Sub-Contractors) (Copy of Public Works Contractor Registration Certificates)	_____
Non-Collusion Affidavit	_____
Equipment Certification	_____
Bidder's Affidavit	_____
Bid Bond	_____
Bidder's Safety Acknowledgement	_____
Bidder's Qualification Form	_____
Plant and Equipment Questionnaire (4 pages)	_____
Naming of Subcontractors Form	_____
Disclosure of Investment Activities in Iran	_____
Certification Prohibited Activities in Russia or Belarus	_____

BID PROPOSAL FORM

TO: Borough of Hamburg

FOR: Hamburg Manual Transfer Switch Installation

The undersigned hereby declares that the only person or persons interested in the Proposal as principal or principals, is or are named below, and that no other person than herein below named has any interest in the Proposal. This Proposal is made without any connection with any other person or persons making a Proposal for the same purpose. The Proposal is in all respects fair and without collusion or fraud and that no officer or employee of the Owner is, shall be, or will become directly or indirectly, interested as a contracting party, partner, stockholder, surety or otherwise in the performance of the contract, or in the supplies, work, or business to which it relates.

It is further declared that the site of the work and the Contract Documents have been examined and it is also agreed that the work will be carried out and completed, if this Proposal is accepted, as specified and the undersigned will provide all the Superintendents, Labor, Material, Tools and Equipment, and all else necessary therefore, and incidental thereto for the items in the Proposal, complete in place, at the price per unit of measure for each scheduled item of work stated in the Schedule of Prices following.

It is understood that the quantities stated in this Schedule of Prices for the various items are estimates only and the Owner reserves the right to increase or decrease the items specified in the Contract Documents. It is further understood that the total price stated by the undersigned in the Schedule of Prices is based on the estimated quantities and it will control in the awarding of the Contract, and that payments will be made for the actual measurements of the authorized work as constructed in accordance with the unit price stated hereafter in the Schedule of Prices.

Accompanying this Proposal is a Consent of Surety and a certified check, cashier's check, or bid bond for a minimum of ten (10%) percent of the amount bid but not greater than $20,000 payable to the Owner, which is agreed by the undersigned to be forfeited as liquidated damages, and not as a penalty, if the Contract is awarded to the undersigned, and the undersigned shall fail to execute the Contract for the work within the stipulated time. Otherwise, the bid security shall be returned to the undersigned as specified in the Contract Documents.

Company Name	Federal I.D.# or Social Security #
Address	
Signature of Authorized Agent	Type of Print Name
Title	
Telephone Number	Date
Fax Number	E-mail Address

SCHEDULE OF PRICES
HAMBURG MANUAL TRANSFER SWITCH INSTALLATION
BOROUGH OF HAMBURG
SUSSEX COUNTY, NEW JERSEY

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION AND UNIT PRICES	UNIT PRICE	COMPUTED TOTALS
1.	L.S.	Booster Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
2.	L.S.	Gingerbread Castle Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
3.	L.S.	Heritage Lane Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
4.	L.S.	Lime Kiln Road Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
5.	L.S.	Michael Court Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
6.	L.S.	Quarry Road Station Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____
7.	L.S.	Well House No. 3 Power System		
		_____ Dollars		
		_____ Cents	Lump Sum	$_____

8.	L.S.	Coordination, Inspection, Start Up, Adjustment and System Functional Testing – All Sites			
		_____ Dollars			
		_____ Cents	Lump Sum	$_____	
9.	L.S.	General Conditions, Mobilization and Demobilization			
		_____ Dollars			
		_____ Cents	Lump Sum	$_____	
		TOTAL ITEMS 1 - 9 IN WORDS AND FIGURES			
		_____ Dollars	$_____		

CONSENT OF SURETY

A performance bond will be required from the successful contractor on this project, and consequently, all bidders shall submit, with their bid, a consent of surety in substantially the following form:

To: Borough of Hamburg
(Owner)

Re: _____
(Contractor)

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION
(Project Description)

This is to certify that the _____
(Surety Company)

will provide to Borough of Hamburg a performance bond in
(Owner)
the full amount of awarded contract, which shall meet any and all requirements under N.J.S.A. 2A:44-143 through N.J.S.A. 2A:44-147, in the event that said contractor is awarded a contract for the above project.

_____
(CONTRACTOR)

_____
(Authorized Agent of Surety Company)

Date: _____

CONSENT OF SURETY MUST BE SIGNED AND SEALED BY AN AUTHORIZED AGENT OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE INDIVIDUAL OR COMPANY REPRESENTATIVE SUBMITTING THE BID.

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

BOROUGH OF HAMBURG

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the Contract Documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid. If no addendum was received, please initial in the "NONE RECEIVED" space below.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

Acknowledge by bidder: **NONE RECEIVED:** _____

Name of Bidder: _____

By Authorized Representative: _____

Signature: _____

Print Name and Title: _____

Date: _____

AFFIRMATIVE ACTION COMPLIANCE NOTICE
N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 et seq.
GOODS AND SERVICES CONTRACTS
(INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful Bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.
The successful Bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the bidder is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the bidder in accordance with N.J.A.C. 17:27-4.

The successful bidder may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful bidder(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the bidder copy is retained by the bidder.

The undersigned bidder certifies that they are aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.1 et seq. and agrees to furnish the required forms of evidence.

The undersigned bidder further understands that their bid shall be rejected as non-responsive if said bidder fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The undersigned agrees to comply with all laws relating to Affirmative Action, whether state, local or federal, for the entire period of the contract.

COMPANY: _____ SIGNATURE: _____
PRINT NAME:_____ TITLE: _____
DATE:_____

ACKNOWLEDGEMENT OF MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE AND MANDATORY AMERICANS WITH DISABILITIES ACT OF 1990

I Hereby Certify That _____

Name of Bidder

Has Submitted a Bid For _____

Project Name

On This _____ Day of _____, 20 _____, And

In Compliance with Public Law 1975, Chapter 127 (NJAC 17:27), As

Described in Exhibit A and B within these bid specifications.

_____

Authorized Signature

_____

Title

Subscribed and Sworn Before Me

On _____, 20 _____.

_____

Notary Public

(Please note: The Bidder must fill in and execute this page and submit it as part of the sealed bid.)

Exhibit A

(Known as Exhibit B in Goods and Services Bid Specifications: A Guide for New Jersey Local Public Agencies – Section C)

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 ET SEQ., N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

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 con-tractor 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 bar-gaining 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. l7:27-7.2; 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 pre-scribed 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 subcon-tractor 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 sub-contractor 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 sub-contractor 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 contactor or subcontractor shall interview the referred minority or women worker.

(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 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.

(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 (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 re-quired 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.

Exhibit B

(Known as Appendix A *in Goods and Services Bid Specifications: A Guide for New Jersey Local Public Agencies – Section C)*

AMERICANS WITH DISABILITIES ACT OF 1990

Equal Opportunity for Individuals with Disability

The contractor and the Borough of Hamburg, (hereafter "owner") do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") *(42 U.S.C. S121 01* 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 there unto, 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, of 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's 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 proceeding 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 of 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's obligations assumed in this Agreement, nor shall they be construed to relieve 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.

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	Address

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

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

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	Address

Part IV 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 ***<name of contracting unit>*** 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 ***<type of contracting unit>*** to notify the ***<type of contracting unit>*** 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 ***<type of contracting unit>*** to declare any contract(s) resulting from this certification void and unenforceable.

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

CERTIFICATION OF NON-DEBARMENT FOR FEDERAL GOVERNMENT CONTRACTS

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

This certification shall be completed, certified to, and submitted to the contracting unit prior to contract award, except for emergency contracts where submission is required prior to payment.

PART I: VENDOR INFORMATION	
Individual or Organization Name	
Physical Address of Individual or Organization	
Unique Entity ID (if applicable)	
CAGE/NCAGE Code (if applicable)	
Check the box that represents the type of business organization:	

☐Sole Proprietorship (skip Parts III and IV) ☐Non-Profit Corporation (skip Parts III and IV)

☐For-Profit Corporation (any type) ☐Limited Liability Company (LLC) ☐Partnership

☐Limited Partnership ☐Limited Liability Partnership (LLP)

☐Other (be specific): _____

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization			
I hereby certify that the **individual or organization listed above in Part I** is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the ***<name of contracting unit>*** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by ***<type of contracting unit>*** to notify the ***<type of contracting unit>*** 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 ***<type of contracting unit>***, permitting the ***<type of contracting unit>*** to declare any contract(s) resulting from this certification void and unenforceable.			
Full Name (Print):		Title:	
Signature:		Date:	

PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization	
Section A (Check the Box that applies)	
	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.
Name of Individual or Organization	
Physical Address	
OR	
	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.
Section B (Skip if no Business entity is listed in Section A above)	
	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be.
Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity	
Physical Address	
OR	
	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.
Section C – Part III Certification	

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of **<name of organization>**. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the ***<name of contracting unit>*** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award ***<type of contracting unit>*** to notify the ***<type of contracting unit>*** 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 ***<type of contracting unit>***, permitting the ***<type of contracting unit>*** to declare any contract(s) resulting from this certification void and unenforceable.

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

Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities		
Section A		
	Below is the name and address of the corporation(s) in which the **Organization listed in Part I** owns more than 50 percent of voting stock, or of the partnership(s) in which the **Organization listed in Part I** owns more than 50 percent interest therein, or of the limited liability company or companies in which the **Organization listed above in Part I** owns more than 50 percent interest therein, as the case may be.	
Name of Business Entity		**Physical Address**
Add additional sheets if necessary		
OR		
	The **Organization listed above in Part I** does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.	

Section B (skip if no business entities are listed in Section A of Part IV)	
	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).
Name of Business Entity Controlled by Entity Listed in Section A of Part IV	**Physical Address**
Add additional Sheets if necessary	
OR	
	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.

Section C – Part IV Certification

I hereby certify that the **Organization listed above in Part I** does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the *<name of contracting unit>* is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by *<type of contracting unit>* to notify the *<type of contracting unit>* 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 *<type of contracting unit>*, permitting the *<type of contracting unit>* to declare any contract(s) resulting from this certification void and unenforceable.

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

BUSINESS REGISTRATION CERTIFICATE

Pursuant to N.J.S.A. 52:32-44, the Owner ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

(1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
(2) the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.
(3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of $25 for each day of violation, not to exceed $50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

PREVAILING WAGE COMPLIANCE DECLARATION

I, the undersigned, being the duly authorized and acting legal representative of the Bidder, do hereby certify and agree as follows:

The contractor hereby agrees to comply in all respect with the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., as amended. The contractor agrees that incorporated herein are the Department of Labor and Workforce Development prevailing wage determinations for the locality and crafts that will be employed in the performance of work under the Contract Documents. It is hereby stipulated that each individual who performs work hereunder shall be paid not less than the prevailing wage rate to which that worker is entitled under the Act, as reflected in the appropriate Department of Labor and Workforce Development prevailing wage determination, which is located on its website at:

https://www.nj.gov/labor/wageandhour/prevailing-rates/public-works/currentprevailingwage.shtml.

In the event it is found that any worker employed by the contractor or any subcontractor covered by the contract herein has been paid a rate of wages less than the prevailing wage rate required to be paid by this contract, the public body, the lessee to whom the public body is leasing a property or premises or the lessor from whom the public body is leasing or will be leasing a property or premises or the lessor from whom the public body is leasing or will be leasing a property or premises 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 their sureties shall be liable to the public body, any lessee to whom the public body is leasing a property or premises, or to any lessor from whom the public body is leasing or will be leasing a property or premises for any excess costs occasioned by the termination of 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.

_____

SIGNATURE

_____

NAME OF ORGANIZATION

_____

NAME AND TITLE

_____

DATE

(Must be signed and submitted with Bid Proposal)

LOWEST BIDDER PREVAILING WAGE CERTIFICATION

REQUIRED WHEN NOTIFIED BY THE OWNER THAT THE CONTRACTOR'S BID IS 10% OR MORE LOWER THAN THE NEXT LOWEST BID.

In the matter of an award of a contract for public work for the project known as HAMBURG MANUAL TRANSFER SWITCH INSTALLATION.

_____, of full age and under oath, duly provides the following sworn statement:

(1). I am the owner and/or highest-ranking official or officer of a company or firm named _____, which holds a currently valid public works contractor registration pursuant to the New Jersey Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq., certificate number _____.

(2). I submitted a bid for a contract award in the above identified project and the public body has informed me that I am the lowest bidder by 10 percent or more as compared to the next lowest bid submitted.

(3). The amount of my bid does include paying the prevailing wage rate to all workers who perform work on the project at rates of pay, including both base wage and fringe benefits, set forth in applicable Wage Determinations, (1) for the appropriate locality, (2) for the appropriate work classification (e.g., carpenter, electrician, mason, plumber), and (3) for the appropriate job title (e.g., Apprentice, Journeyman, Forman), published by the New Jersey Department of Labor and Workforce Development (NJDOL) pursuant to the New Jersey Prevailing Wage Act (NJPWA), N.J.S.A. 34:11-56.25 et seq., and corresponding NJDOL rules, N.J.A.C. 12:60.

I certify under penalty of perjury that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are false, I am subject to punishment. See N.J.S.A. 2C:28-1 et seq., specifically, N.J.S.A. 2C:28-3, within the New Jersey Code of Criminal Justice.

Date:_____ Signature:_____

Title:_____

PUBLIC WORKS CONTRACTOR REGISTRATION

The Public Works Contractor Registration Act (PWCRA) requires that all contractors, including named subcontractors, to register with the Department of Labor prior to submitting price proposals or engaging on certain public works contracts that exceed the prevailing wage threshold. The prevailing wage threshold is $16,263 for municipalities and $2,000 for all non-municipal entities, such as boards of education, authorities, fire districts, counties, etc. The municipality reserves the right to maintain the application of prevailing wage rates for projects under the threshold.

Under the law a *contractor* is 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 [N.J.S.A. 34:11-56.25 et seq.]. It applies to contractors based in New Jersey or in another state.

The PWCRA defines "public works projects" as contracts for "public works" as defined in the Prevailing Wage Act [N.J.S.A. 34:11-56.26(5)]. The term means:

- "Construction, reconstruction, demolition, alteration, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program.

- "Public work" shall also mean construction, reconstruction, demolition, alteration, or repair work, done on any property or premises, whether or not the work is paid for from public funds,..."

- "Maintenance work" means the repair of existing facilities when the size, type or extent of such facilities is not hereby changed or increased. While "maintenance" includes painting and decorating and is covered under the law, it does not include work such as routine landscape maintenance or janitorial services.

NON - COLLUSION AFFIDAVIT

State of New Jersey:
County of _____ ss:

I, _____residing in
(name of affiant)

_____in the County of _____ and the State of _____ of
(name of municipality)

full age, being duly sworn according to the law on my oath depose and say that:

I am _____ of the firm of _____
(title or position) (name of firm)

the bidder making this Proposal for the bid entitled HAMBURG MANUAL TRANSFER SWITCH INSTALLATION, and that I executed the
(title of bid proposal)
said proposal with full authority to do so 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 above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the __Borough of Hamburg __relies upon the truth of the statements contained in said
(name of contracting unit)
Proposal and in the statements contained in this affidavit in awarding the contract for said project.

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 bond fide established commercial or selling agencies maintained by _____.

Subscribed and sworn to

_____
Signature of Affiant

before me this day

_____, 20____ _____
(Type or print name of affiant under signature)

_____
Notary Public of

My commission expires _____

(Seal)

EQUIPMENT CERTIFICATION

The undersigned Bidder hereby certifies as follows:

The bidder owns or controls all the necessary equipment required to accomplish the work described in the specifications.

Name of Bidder: _____

By:_____
(Signature)

Name of above:_____
(Print)

Title:_____

Date:_____

BIDDER'S AFFIDAVIT

STATE OF _____

COUNTY OF _____

_____ being duly sworn, deposes and says that they

reside at _____

_____

and that they are the _____
(Give Title)

of _____
(Name of Organization)

who signed the above Proposal of Bid, that they were duly authorized to sign, that the Bid is the true offer of the Bidder, that the seal attached is the seal of the Bidder and that all declarations and statements contained in the Bid are true to the best of their knowledge and belief.

They further depose that they have submitted herewith a list of names and addresses of all stockholders and/or partners owning a 10 percent or greater interest in compliance with P.L. 1977, Chapter 33, effective March 8, 1977.

_____
Affiant

Subscribed and Sworn before me
this day of , 20 .

_____ (Seal)
(Notary Public)

_____
(Commission expiration date)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the Borough of Hamburg in the penal sum of not less than ten percent of the bid amount to a maximum of $20,000.00 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 Borough of Hamburg a certain Bid, attached hereto, and made a part of hereof, to enter into a contract in writing for ___

_____

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 to be prepared by the Borough of Hamburg Attorney (properly completed in accordance with said Bid) and shall furnish a bond for their faithful performance of said Contract, and shall in all other respects perform the agreement created by the acceptance of the said Bid,

Then, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood that 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 the 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 Surety have set their hands and seals, and such of them as are corporations having their corporate seals to be hereto affixed and these presents to be signed by their proper corporate officers, the day and year first set forth above.

Principal: _____ (L.S.)

Surety: _____ By: _____

BIDDER'S SAFETY ACKNOWLEDGMENT

The undersigned hereby states that as a principal of the firm submitting this proposal, they are fully aware that all safety regulations of the Occupational Safety and Health Administration (OSHA) and the requirements of the State of New Jersey Department of Labor and Industry shall be adhered to on this project and that they shall instruct their personnel to follow these regulations. These regulations include, but not limited to, the regulations concerning Trench Excavation, Competent Persons and Confined Space Regulations.

If it is observed by an official representative of the municipality that these safety regulations are not being followed and there exists a potential serious safety deficiency that could result in accident, I acknowledge that this municipal representative may stop the project until the safety deficiency is corrected without any claim for additional compensation by this firm.

_____	_____
WITNESS OR ATTESTED BY	SIGNATURE
_____	_____
DATE	NAME OF ORGANIZATION
	_____
	_____
	PRINT NAME AND TITLE OF PERSON SIGNING

(Must be signed and submitted with Bid Proposal)

BIDDER'S QUALIFICATION FORM

(This form is part of the Proposal)

On the form provided, indicate at least five (5) jobs performed within the last three (3) years of a similar nature and contract amount:

1. Name of Job:_____

   Major Construction Items:_____

   _____

Engineer Name, Address, & Telephone Number:_____

_____

2. Name of Job:_____

   Major Construction Items:_____

   _____

Engineer Name, Address, & Telephone Number:_____

_____

3. Name of Job:_____

   Major Construction Items:_____

   _____

Engineer Name, Address, & Telephone Number:_____

_____

4. Name of Job:_____

   Major Construction Items:_____

   _____

Engineer Name, Address, & Telephone Number:_____

_____

5. Name of Job:_____

   Major Construction Items:_____

   _____

Engineer Name, Address, & Telephone Number:_____

_____

PLANT AND EQUIPMENT QUESTIONNAIRE

Submitted to _____

By _____ A Corporation / A Co-partnership / An Individual

Principal Office _____

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.

1. In what manner have you inspected the proposed work? Explain in detail.

_____

_____

_____

2. Explain your plan or layout for performing the proposed work.

_____

_____

_____

3. The work, if awarded to you, will have the personal supervision of whom?

_____

4. Do you intend to do the proposed work with your own forces?_____

STATUS OF CONTRACTS ON HAND

5. Give full information about all of your contracts, whether private or government contracts, whether prime or sub-contracts; whether in progress or awarded but not yet begun; or where you are low bidder pending formal award of contract.

Owner	Location	Description	Adjusted Contract Amount	Amount Completed and Billed	Additional Earned Since Last Estimate	Balance To Be Completed	Estimated Date of Completion
		Totals					

6. What equipment do you own that is available for and intended to be used on the proposed project?

TABLE 1

Quantity	Item	Description, Size Capacity, Etc.	Condition	Years of Service	Present Location

7. What equipment do you intend to purchase or lease for use on the proposed work, should the contract be awarded to you?

TABLE 2

Quantity	Item	Description, Size Capacity, Etc.	Approximate Purchase	Cost Lease

8. Have you made contracts or received firm offers for all materials within prices used in preparing your proposal? Do not give name of dealers or manufacturers.

_____Yes _____No

The Undersigned hereby declare(s) that the items of equipment in Table 1 are owned by _____, and are available for and intended to be used on the Project, if _____ is awarded the Contract, and that (he) (she) (they) propose(s) to purchase or lease for the Project the additional items of equipment stated in Table 2.

If awarded the Contract, the Undersigned will furnish certificates from the owners of leased equipment to the effect that, in case of default of contract, as set forth in Article 25 the Governing Body has the right to take over the leased equipment for use in completing the work.

Dated at_____ this _____

day of _____, 20 _____.

_____

Name of Organization

By_____

_____

Title or Person Signing

STATE OF_____

COUNTY OF_____

_____, Being duly sworn, deposes and says that he

is _____ of the above _____

Name of Organization

and that the answers to the foregoing questions and all statements therein contained are true and correct.

Sworn to before me this_____

day of_____, 20_____

_____

My Commission Expires_____ Notary Public

NAMING OF SUBCONTRACTORS FORM

ALL CONTRACTORS MUST COMPLETE THE FOLLOWING:

N.J.S.A. 40A:11-16 requires that where all the work and materials required to complete the construction project are to be included in a single overall contract, bidders that propose using subcontractors for any of the four specialized "sub-prime" categories (i.e. Plumbing and gas fitting and all kindred work; Steam and hot water heating, ventilating apparatus, steam power plants and kindred work (HVAC); Electrical work; and Structural steel and ornamental iron work) must submit a certificate with their bids listing each subcontractor named in the bid for that category.

If _____ is successfully awarded this
(Name of Firm)
project, I, _____,
(Authorized Representative)
of the City of _____, in the County of _____ and State
of _____, certify pursuant to N.J.S.A. 40A:11-16 that I shall utilize the following subcontractors if this Bid is successfully awarded to my firm.

NAME OF SUBCONTRACTOR	SCOPE OF WORK

(Use additional sheet of paper if more space required)

_____
Signature of Bidder

_____
Name and Title (Print or Type)

SWORN TO AND SUBSCRIBED
BEFORE ME THIS ___ DAY
OF _____20__.

Disclosure of Investment Activities in Iran	
Person or Entity	
Part 1: Certification	
COMPLETE PART 1 BY CHECKING **EITHER BOX.** Pursuant to Public Law 2012, c. 25, any person or entity that is a successful bidder or proposer, 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 parent entity, subsidiary, or affiliate is identified on the State Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The list is found on Treasury's website at www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf. The Chapter 25 list must be reviewed prior to completing the below certification. If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may provided by law, rule or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.	
☐	*I certify, pursuant to Public Law 2012, c. 25, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate thereof is 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.*
OR	
☐	*I am unable to certify as above because the person or entity and/or a parent entity, subsidiary, or affiliate thereof is listed on the N.J. Department of the Treasury's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below sign and complete the Certification below.*

Disclosure of Investment Activities in Iran	
Person or Entity	
Part 1: Certification	
COMPLETE PART 1 BY CHECKING **EITHER BOX.** Pursuant to Public Law 2012, c. 25, any person or entity that is a successful bidder or proposer, 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 parent entity, subsidiary, or affiliate is identified on the State Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The list is found on Treasury's website at www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf. The Chapter 25 list must be reviewed prior to completing the below certification. If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may provided by law, rule or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.	
☐	*I certify, pursuant to Public Law 2012, c. 25, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate thereof is 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.*
OR	
☐	*I am unable to certify as above because the person or entity and/or a parent entity, subsidiary, or affiliate thereof is listed on the N.J. Department of the Treasury's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below sign and complete the Certification below.*

Part 2: Additional Information

PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN.

You must provide a detailed, accurate and precise description of the activities of the person or entity, or a parent entity, subsidiary, or affiliate thereof engaging in investment activates in Iran below and, if more space is needed, on additional sheets provided by you.

Part 3: Certification of True and Complete Information

I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments there 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 **Name of Contracting Unit** *is 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* ***Reference to Contracting Unit*** *to notify the* ***Reference to Contracting Unit*** *in writing of any changes to the answers of information contained herein.*

I acknowledge 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 recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the ***Name of Contracting Unit*** *and that the* ***Reference to Contracting Unit*** *at its option may declare any contract(s) resulting from this certification void and unenforceable.*

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

CERTIFICATION OF NON-INVOLVEMENT IN PROHIBITED ACTIVITIES IN RUSSIA OR BELARUS

Pursuant to N.J.S.A. 52:32-60.1, et seq. (L. 2022, c. 3) any person or entity (hereinafter "Vendor[i]") that seeks to enter into or renew a contract with a State agency for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: https://sanctionssearch.ofac.treas.gov/. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any 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 debarment or suspension of the party.

I, the undersigned, certify that I have read the definition of "Vendor" below, and have reviewed the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, and having done so certify:

(Check the Appropriate Box)

☐ A. That the Vendor is not identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

☐ B. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

☐ C. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list. However, the Vendor is engaged in activity related to Russia and/or Belarus consistent with federal law, regulation, license or exemption. A detailed description of how the Vendor's activity related to Russia and/or Belarus is consistent with federal law is set forth below.

_____

_____

_____

_____

_____

_____

(Attach Additional Sheets If Necessary.)

Signature of Vendor's Authorized Representative	Date
Print Name and Title of Vendor's Authorized Representative	Vendor's FEIN
Vendor's Name	Vendor's Phone Number
Vendor's Address (Street Address)	Vendor's Fax Number
Vendor's Address (City/State/Zip Code)	Vendor's Email Address

[i] Vendor means: (1) A natural person, corporation, company, limited partnership, limited liability partnership, limited liability company, business association, sole proprietorship, joint venture, partnership, society, trust, or any other nongovernmental entity, organization, or group; (2) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in Section 1701(c)(3) of the International Financial Institutions Act, 22 U.S.C. 262r(c)(3); or (3) Any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity described in paragraph (1) or (2).

NJ Rev. 1.22.2024

SUPPLEMENTARY TECHNICAL SPECIFICATIONS

Edition 2019

SUPPLEMENTARY SPECIFICATIONS
FOR STATE AID PROJECTS

FOR

HAMBURG MANUAL TRANSFER SWITCH INSTALLATION

IN THE BOROUGH OF HAMBURG

COUNTY OF SUSSEX

AUTHORIZATION OF CONTRACT

The contract for this project is authorized by the provisions of local public contracts law, NJSA 40A: 11-1 et seq.

SPECIFICATIONS TO BE USED

The 2019 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation and as amended herein, shall govern the construction of this project.

WAGE RATES

The contractor shall pay the minimum wage rates determined by the New Jersey Department of Labor.

State wage rates may be obtained from the New Jersey Department of Labor (Telephone: 609-292-2259) or by accessing the Department of Labor's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html. The State wage rates in effect at the time of award will be made a part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, *et seq.*).

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 contracting agency 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 contracting agency for any excess costs occasioned thereby.

GENERAL

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation. Prior to the start of construction the contractor must submit a Material Questionnaire (SA-11) listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of Transportation source will be considered non-participating. The contractor is also notified that the District Office, Division of Local Aid and Economic Development must be notified of the construction commencement date at least three (3) calendar days prior to the start of construction.

Award of contract and subletting will not be permitted to, materials will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, General Services Administration, CN-039, Trenton NJ 08625 (609-292-5400).

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "Measurement and Payment" section provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2019 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2019 Standard Specifications unless otherwise noted.

Henceforth in this supplementary specification whenever reference to the State, Department, ME, RE or Inspector is made, it is construed to mean the particular municipality or county executing this contract.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

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PART ONE – GENERAL

1.1 LOCATION OF WORK

The location of this work is in the Borough of Hamburg, Sussex County, New Jersey.

1.2 WORK INCLUDED

General

Under this Contract, the Contractor shall furnish, install, test and place into satisfactory operating condition all general construction work items required to complete the design and intent of the Contract Drawings and Specifications for the bid price for this Contract at the seven (7) locations specified..

In general, the principal items of work under this Contract include, but are not necessarily limited to, the following:

1) Mobilization shall conform to the N.J.A.C. 7:14-2.9.

2) Site preparation, within the boundaries shown on the Contract Drawings as specified herein.

3) At **Booster Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Booster Station as indicated in the Contract Drawings. This work shall include but not limited to the following:

   a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

   b. Installation of a Manual Transfer Switch (MTS).

   c. Installation of equipment support structures and pads, conduits, and wires as indicated in the Contract Drawing.

   d. Modification of site grading as indicated in the Contract Drawing.

   e. All other electrical work required as indicated in the Contract Drawing in order to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

4) At **Gingerbread Castle Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Gingerbread Castle Station as indicated in the Contract Drawings. This work shall include but not

limited to the following:

a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

b. Installation of a Manual Transfer Switch (MTS).

c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

d. Excavation and filling of conduit trenches as indicated on Contract Drawing.

e. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

5) At **Heritage Lane Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Heritage Lane Station as indicated in the Contract Drawings. This work shall include but not limited to the following:

a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

b. Installation of a Manual Transfer Switch (MTS).

c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

d. Excavation and filling of conduit trenches as indicated on Contract Drawing.

e. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

6) At **Lime Kiln Road Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Lime Kiln Road Station as indicated in the Contract Drawings. This work shall include but not limited to the following:

a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

b. Installation of a Manual Transfer Switch (MTS).

c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

d. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

7) At **Michael Court Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Michael Court Station as indicated in the Contract Drawings. This work shall include but not limited to the following:

   a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

   b. Installation of a Manual Transfer Switch (MTS).

   c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

   d. Excavation and filling of conduit trenches as indicated on Contract Drawing.

   e. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

8) At **Quarry Road Station**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Quarry Road Station as indicated in the Contract Drawings. This work shall include but not limited to the following:

   a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

   b. Installation of a Manual Transfer Switch (MTS).

   c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

   d. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

9) At **Well House No. 3**, work shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Well House No. 3 as indicated in the Contract Drawings. This work shall include but not limited to the following:

   a. Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

b. Installation of a Manual Transfer Switch (MTS).

c. Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.

d. All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit and mobile load bank unit as a backup source of power.

10) Owner-Furnished Equipment

a. The Owner (Borough of Hamburg) will purchase and provide the mobile diesel generator trailer unit and the mobile trailer load bank unit. Procurement of these mobile units is excluded from the Contractor's scope of work.

b. The Owner will supply flexible Cam-Lok extension cables with the mobile units as indicated on the Contract drawings. Contractor shall make all temporary cable hookups between the Owner's mobile generator, mobile load bank, and the facility MTS for full-load testing.

c. The Owner shall engage with the mobile diesel generator manufacturer to provide testing and commissioning of the mobile generator and mobile load bank for each of the seven (7) project sites as required to achieve complete, functional commissioning of each Manual Transfer Switch (MTS).

1.3 QUALITY ASSURANCE

1.3.1 The entire Contract work shall be completed in strict accordance with all applicable Federal, State and local regulations and ordinances and the best standards of practice.

1.4 PERMITS AND CERTIFICATION

1.4.1 General: The Contractor shall pay all costs and fees, as outlined in Articles of the General Conditions of the Contract and obtain all necessary permits and Certificates of approval and submit them to the Engineer before final acceptance of the work.

PART TWO - PRODUCTS - Not applicable.

PART THREE - EXECUTION - Not applicable.

END OF SECTION

PART ONE – GENERAL

1.1 CONSTRUCTION SCHEDULE

Construction schedule shall be in accordance with the requirements of the General Conditions of the Contract and Section 01 50 00, TEMPORARY FACILITIES AND CONTROLS.

1.2 ESTIMATES

The Contractor shall submit to the Engineer a breakdown statement of the lump sum bid items in accordance with the requirements of the General Conditions of the Contract.

1.3 MEASUREMENT AND PAYMENT

The price bid under this Contract shall include all costs of furnishing, installing, testing, and placing into satisfactory service all works as shown on the Contract Drawings and specified herein, complete with all appurtenances and accessories, as shown or required. An all-inclusive lump sum price shall be provided and an itemized price for each of the seven (7) locations.

1.4 DESCRIPTION OF WORK

1.4.1 WELL #5 ELECTRICAL IMPROVEMENTS

The lump sum price bid under this item shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within Well #5 as indicated in the Contract Drawings. Payment for this item shall include all labor, material, and equipment for the following:

- Demolition and modification of existing electrical equipment indicated in the Contract Drawings.
- A Manual Transfer Switch (MTS).
- A Variable Frequency Drive (VFD).
- Panelboards, transformers, utility meter socket, disconnect switches, misc. switches, equipment support structures and pads, conduits, and wires as indicated in the Contract Drawings; and,
- All other electrical work required within the Well #5 location as indicated in the Contract Drawings.
- Concrete Housekeeping pads.

The Well #5 electrical work shall conform to all the requirements of the latest National Electrical Code adopted by NJ DCA.

The Contractor shall submit a payment breakdown schedule for this item to be reviewed and approved by the Engineer.
Payment shall be made for the total price bid in the proposal, for which the price and payment shall be full compensation for all labor, materials and equipment and incidentals required to perform the work.

1.4.2 FRANKLIN AVENUE BOOSTER STATION ELECTRICAL IMPROVEMENTS

The lump sum price bid under this item shall include all costs for furnishing, installing, testing, and placing into satisfactory condition and operation for the proposed electrical work within the Franklin Avenue Booster Station as indicated in the Contract Drawings. Payment for this item shall include all labor, material, and equipment for the following:

- Modification of existing electrical equipment indicated in the Contract Drawings.
- A Manual Transfer Switch (MTS); and,
- All other electrical work required at the Franklin Ave. location indicated in the Contract Drawings.

The Franklin Avenue Booster Station electrical work shall conform to all the requirements of the latest National Electrical Code adopted by NJ DCA.

The Contractor shall submit a payment breakdown schedule for this item to be reviewed and approved by the Engineer.

Payment shall be made for the total price bid in the proposal, for which the price and payment shall be full compensation for all labor, materials, equipment and incidentals required to perform the work.

1.4.3 VALVE VAULT STRUCTURAL REPAIRS

The lump sum price bid under this item shall include all costs for furnishing and constructing various repairs to the existing Valve Vault as indicated in the Contract Drawings. Payment for this item shall include all labor, material, and equipment for the following:

- Demolition and disposal of existing valve vault roof and ladder
- Concrete roof slab.
- Reinforcing steel.
- Fixed ladder
- Retractable ladder extension grab bar
- Access hatch
- Removal of asphalt pavement, as necessary.
- Excavation, compaction, and backfilling.
- Asphalt cement waterproofing.

1.4.4 EQUIPMENT PLATFORM

The lump sum price bid under this item shall include all costs for furnishing and constructing the steel equipment platform as indicated in the Contract Drawings. Payment for this item shall include all labor, material, and equipment for the following:

- Concrete footings.
- Reinforcing steel.
- Structural steel framing
- Framing for equipment supports.
- Steel grating
- Excavation, compaction, and backfilling for footings.
- Coarse aggregate base course.

1.4.4 STEEL RAILING

The lump sum price bid under this item shall include all costs for furnishing and constructing the steel guard and handrails as indicated in the Contract Drawings. Payment for this item shall include all labor, material, and equipment for the following:

- Galvanized steel guards
- Galvanized guards/handrails
- Anchor bolts to existing concrete and/or masonry.

PART TWO - PRODUCTS - Not applicable

PART THREE - EXECUTION - Not applicable

END OF SECTION

PART ONE – GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

This section specifies the general methods and requirements of submissions applicable to the following work-related submittals: Shop Drawings, Product Data and Samples.

1.1 SHOP DRAWINGS, PROJECT DATA, SAMPLES

1.1.1 Shop Drawings

(1) Shop drawings as specified in individual work sections include, but are not necessarily limited to, data such as fabrication and drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, 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 preliminary checking. The Contractor shall be responsible for their submission at the proper time 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 Contract Drawings and Specifications. 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 clearly show the elevations of the various parts to the main members and lines of the structure and where correct fabrications of the work depend upon field measurements, such measurements shall be made and noted on the drawings before being submitted for approval.

1.1.2 Shop Drawing Schedule:

(1) Within fifteen (15) days after the Notice to Proceed, the Contractor shall prepare and submit six (6) copies of its schedule of shop drawing submissions to the Engineer for review and approval. The contractor shall be provide updates to the schedule throughout the contract, as necessary. No shop drawings will be reviewed until the schedule is approved.

(2) To maintain the construction schedule for this project, the Contractor shall submit all shop drawings within forty-five (45) days after the Notice to Proceed. The Contractor shall notify the Engineering of any shop drawings that require additional time.

(3) Shop drawings shall be submitted with adequate time to permit correction resubmission and final approval, as hereinafter specified, without causing any delay in the construction of any work. The Contractor may begin the preparation of shop drawings as soon as possible after signing of the Contract. Formal submission of shop drawings will begin after execution of the Contract.

1.1.3 Product Data

As specified in individual sections, these items 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, and manufacturer's printed statements of compliances and applicability, catalog cuts, product photographs, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommend spare parts listing, and printed product warranties, as applicable to the Work.

1.1.4 Samples

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, of pattern swatches and as applicable to the Work.

1.2 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall review shop drawings, product data, and samples 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.

Each shop drawing, working drawing, sample and catalog data submitted by the Contractor shall have affixed to it the following Certification Statement, signed by the Contractor: "Certification Statement: By this submittal, 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."

Notify the Owner in writing, at the time of submittal, of any deviations in the submittals from the requirements of the contract documents.

No portion of the work requiring a shop drawing, working drawing, sample or catalog 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.

Project work, materials, fabrication, and installation shall confirm with approved shop drawings, working drawings, applicable samples, and catalog data.

1.3 SUBMISSION REQUIREMENTS

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.

Number of submittals required:

1) Shop Drawings: Submit one (1) electronic copy.
2) Product Data: Submit one (1) electronic copy.
3) Samples: Submit the number stated in the respective Specification Sections.

Submittals shall contain:

(1) The date of submission and the dates of any previous submissions.
(2) The project title and number.
(3) Contractor identification.
(4) The names of:
    a. Contractor
    b. Supplier
    c. Manufacturer
(5) Identification of the product, with the specification section number.
(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) Identification of deviations from Contract Documents.
(10) Identification of revisions of resubmittals.
(11) An 8-inch x 3-inch blank space for Contractor and Engineer stamp.

1.4 RESUBMISSION REQUIREMENTS

Make any corrections or changes in the submittals required by the Engineer and resubmit until approved.

Shop drawings and Product Data:

(1) Revise initial drawings or data and resubmit as specified for the initial submittal.

(2) Indicate any changes which have been made other than those requested by the Engineer.

Samples: Submit new samples as required for initial submittal.

1.5 DISTRIBUTION

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. The quantity of copies specified by the Engineer shall be provided by the contractor but shall not exceed six (6).

1.6 GENERAL PROCEDURES FOR SUBMITTALS

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, fabricating, 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.

1.7 WORKMANSHIP BONDS

Where specific units of work require the issuance of a bond or similar provision, as a means of assuring the Owner that certain possible failures of the work to perform as represented will be rectified at someone else's expense, submit fully executed bond backed by a surety company acceptable to the Owner and in the principal amount indicated. Include information sheet for the Owner's maintenance/operating personnel outlining proper procedures in case of failure or other instances which might affect the validity of the bond, list names, addresses and telephone numbers for the Owner's emergency and follow-up in connection with the implementation of each bond.

PART TWO - PRODUCTS - Not applicable.

PART THREE - EXECUTION - Not applicable.

END OF SECTION

PART ONE - GENERAL

1.1 ACCEPTANCE

Operation of any system by the Owner shall not constitute acceptance of the work. The work shall be accepted only after the Contractor receives written notice from the Engineer that the work installed complies with and satisfies the intent of the Contract Documents.

1.2 CONDITIONS PRIOR TO CLOSEOUT

The Contractor shall fulfill all the requirements of the General Conditions of the Contract which apply and form a part of these specifications. These requirements shall include, but not be limited to the following:

(1) Clean-up
(2) Guarantee
(3) Bonds
(4) Affidavits
(5) Record drawings
(6) Final inspection requirements
(7) Manufacturer's certification of installation
(8) Inspection, Testing, Start Up and System Commissioning
(9) Restoration of damages
(10) Removal of Contractor-Owned items
(11) Manufacturer's equipment or product warrantee

Milled material, if directed, shall be designated for recycling and transported to an approved recycling center. Tonnage of milled material shall be certified to the Owner and the Owner's recycling coordinator.

All punch list items to be corrected within 14 calendar days of notification to avoid payment delays.

1.3 CLOSEOUT PROCEDURES

A. The Contractor shall perform all closeout procedures in the presence of the Engineer and a representative of the Owner.

B. The Contractor shall sequence closeout procedures properly so that work will not be endangered or damaged, and so that every required performance will be fully tested and demonstrated.

C. The Contractor shall check each item in each system to determine and confirm that they are set for proper operation. With the Engineer and the Owner's representative present, the Contractor shall demonstrate that the installed equipment and systems are professionally installed and functioning correctly during a test of appropriate duration..

D. Following the final test, the Contractor shall clean the entire work area thoroughly. Any remaining debris shall be removed from the premises and disposed of properly off-site by the Contractor.

1.4 CLOSEOUT SUBMITTALS

A. The Contractor shall provide a written guarantee of the work performed indicating the Contractor's responsibility to replace any defective material or damage of the work to the satisfaction of the Engineer at no cost to the Owner.

B. The Contractor shall furnish a Surety Corporation Maintenance Bond to the Engineer in a sum equal to 15 percent of the final contract amount and such Bond shall remain in full force and effect for a period of two (2) years from the date of acceptance of the work.

C. The Contractor shall furnish to the Engineer record information of the system in accordance with N.J.A.C. 7:14-2.2.

D. The Contractor shall submit copies of the manufacturer's certification of installation for all major items in the project.

E. The Contractor shall submit to the Engineer, all manufacturer's warranties.

F. Submit final applications for payment as follows:

1. The Contractor shall submit two (2) applications for payment upon completion of work.

a. The first application shall indicate 100% completion for all work under this Contract but shall not include any retainage.

b. The second application shall indicate an application for the retainage amount of the Contract.

PART TWO - PRODUCTS - Not applicable.

PART THREE - EXECUTION - Not applicable.

END OF SECTION

PART 1 – GENERAL

1.1. SCOPE

As a final completion of the Work required by the specifications, the Contractor is required to furnish various documentation and perform certain tasks as outlined below.

1.1. FINAL CLEANING

At the completion of the Work the Contractor shall leave the contract site in a neat and satisfactory condition.

1. All temporary utilities and construction facilities and structures shall be removed.
2. All remaining waste materials of all kinds shall be removed from the site and facility.
3. The site and adjacent property which may have been affected by the Work shall be left in a neat and satisfactory condition.
4. All silt or other foreign debris that may have been deposited in channels, storm drains, or other points of water discharge during construction shall be removed.

1.2. FINAL DOCUMENTATION

The Contractor shall submit the following documentation prior to or with the semi- final application for payment:

1. Certificate of satisfactory installation, tests, by manufacturer.
2. Warranty information and Certificates from the manufacturer for any special warranties as required.
3. Certificate of completion stating that Work of the Contract has been completed in accordance with the contract documents.
4. A Maintenance Bond as security that the contract will maintain the work during the warranty Period.

1.3. RECORD DRAWINGS

The Contractor shall mark up a set of the Engineer's paper drawings in red, depicting all "As-Built" conditions and provide said copy for the Engineer's review and acceptance. The information is to include but not be limited to all elevations, locations of work and detailed dimensions. The Engineer may require the Contractor to revise said drawings until they are acceptable to the Engineer.

END OF SECTION

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. See Division 31 Section "Earth Moving" for drainage fill under slabs-on-grade.

1.2 SUBMITTALS

A. All submittals shall be made in accordance with Section 01 33 00 Submittal Procedures.

B. Product Data: For each type of product indicated.

C. Design Mixtures: For each concrete mixture.

D. Shop Drawings: For steel reinforcement and formwork.

E. Material test reports and certificates.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specification for Structural Concrete."

2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

C. Preinstallation Conference: Conduct conference at Project site.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

1. Galvanized Reinforcing Bars: ASTM A 767/A 767M, zinc coated after fabrication and bending.

2. Epoxy-Coated Reinforcing Bars: ASTM A 775/A 775M, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

D. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from galvanized steel wire into flat sheets.

E. Epoxy-Coated Welded Wire Reinforcement: ASTM A 884/A 884M, Class A coated, Type 1, steel.

F. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150

a. Fly Ash: ASTM C 618.

b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

2. Blended Hydraulic Cement: ASTM C 595.

B. Normal-Weight Aggregates: ASTM C 33, graded, 3/4-inch nominal maximum coarse-aggregate size.

1. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.4 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film, or white burlap-polyethylene sheet.

D. Water: Potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.6 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork, or self-expanding cork.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned based on laboratory trial mixture or field test data, or both, according to ACI 301.

B. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.45.
3. Slump Limit: 3 inches plus or minus 1 inch or 6 inches plus or minus 2 inches when using admixture Type F or G.

4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.

2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116 and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR RETARDERS

A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 301.

3.7 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.

C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.8 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Contractor shall use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in 1 direction.

1. Apply scratch finish to surfaces to receive concrete floor toppings.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and re-straighten until surface is free of trowel marks and uniform in texture and appearance. Grind smoothly any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.

2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-foot-long straightedge resting on 2 high spots and placed anywhere on the surface does not exceed 1/8 inch.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

3.9 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb./sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

3.11 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

1. Testing Services: Tests shall be performed according to ACI 301.

END OF SECTION

PART 1 – GENERAL

1.1. APPLICATION

1.1.1. This Section applies to all sections of Division 26 of this project, except as specified otherwise in the individual sections.

1.2. SCOPE OF WORK

1.2.1. This specification and accompanying drawings are intended to illustrate the nature of work to be performed in a diagrammatic manner. All labor, material, and equipment necessary for a complete electrical installation shall be included by the Contractor in the submission of his bid.

1.2.2. Appliances, materials, or equipment, obviously a part of the system necessary for its satisfactory operation, although not specifically mentioned herein nor indicated on the drawings, shall be provided by this Contractor without extra cost to the Owner.

1.2.3. Material and equipment mentioned and described in this specification shall be supplied completely in all details. Contractors bidding on this project shall insure themselves that the quotations that they use for equipment have been quoted in accordance with the specifications and the drawings. Errors by manufacturers' representatives shall not relieve the Contractor, to provide the proper equipment of the obligation.

1.2.4. Without intending to limit or restrict the volume of work provided by this section of the contract documents, the work is to generally comprise of the following.

A. At Booster Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, conduits, and wires as indicated in the Contract Drawing.
- Modification of site grading as indicated in the Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

B. At Gingerbread Castle Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- Excavation and filling of conduit trenches as indicated on Contract Drawing.

- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

C. At Heritage Lane Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- Excavation and filling of conduit trenches as indicated on Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

D. At Lime Kiln Road Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

E. At Michael Court Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- Excavation and filling of conduit trenches as indicated on Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

F. At Quarry Road Station,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.
- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

G. At Well House No. 3,

- Demolition and modification of existing electrical equipment as indicated in the Contract Drawing.

- Installation of a Manual Transfer Switch (MTS).
- Installation of equipment support structures and pads, foundations, conduits, and wires as indicated in the Contract Drawing.
- All other electrical work required as indicated in the Contract Drawing to prepare site for deployment of mobile generator unit as a backup source of power.

1.3. LAWS, PERMITS, AND REGULATIONS

1.3.1. Obtain and pay for all licenses, certificates, and permits required by law, State, County, and all Authorities having jurisdiction. Comply with the rules and requirements of the National Board of Fire Underwriters and the current version of the National Electric Code adopted by the NJ DCA and with all governing laws, orders, regulations, and building codes. Any deviation shall be reported to the Owner or its representative in writing for approval.

1.3.2. Certificates of approval from the above authorities shall be delivered to the Owner before final payment may be made. This Contractor shall pay the necessary fees for all inspections and certificates.

1.4. CODES, LISTINGS AND STANDARDS:

1.4.1. All electrical work covered by the Contract Documents shall conform to the Requirements of the National Electrical Code, NFPA Fire Alarm Code.

1.4.2. All equipment and materials for which Underwriters' Laboratories, Inc. provides product listing service shall be Underwriter Laboratories approved and bear the U.L. Label.

1.4.3. Equipment and materials, wherever applicable, shall conform to the following standards:

A. Federal Specifications (Fed. Spec.).
B. Illuminating Engineering Society (IES).
C. National Electrical Manufacturers Association (NEMA).
D. Institute of Electrical and Electronics Engineers (IEEE).
E. American National Standards Institute (ANSI).
F. Insulated Cable Engineers Associations (ICEA).
G. International Building Code (IBC)

1.5. PROTECTION OF WORK AND MATERIALS

1.5.1. This Contractor shall be responsible for the proper care and protection of all portions of materials delivered and work prepared by him until completion and acceptance of the work and the issue of certificates in final payment.

1.6. MATERIALS AND WORKMANSHIP

1.6.1. All materials shall be new, recently manufactured, and of the best quality.

1.6.2. All work shall be performed in a first-class, neat, and workman-like manner by mechanics skilled in their trades.

1.6.3. Where the words "provide", “furnish” and "supply" are used in the specifications or on the drawings, they shall be understood to mean the complete work in connection therewith, that is, furnishing, installing, testing, connecting, and warrantees of the items specified.

1.7. SHOP DRAWINGS

1.7.1. After contract award, this Contractor shall submit all shop drawings for approval within two (2) weeks.

1.8. PERFORMANCE OF EQUIPMENT

1.8.1. All materials, equipment, and appurtenances of any kind shown on the drawings, hereinafter specified, or required for the completion of the work in accordance with the intent of these specifications, shall be completely satisfactory and acceptable as regards operation, performance, and capacity.

1.8.2. No acceptance, written or verbal, of any drawings, descriptive data or samples of such material, equipment, and/or appurtenances shall relieve the Contractor of his responsibility to turn over the complete heating, ventilating, and air conditioning installation to the Owner in perfect working order and in complete conformance with the drawings and specifications at the completion of the work.

1.8.3. Operation, capacity or performance of which does not comply with the requirements of the drawings or specifications, or which is damaged prior to acceptance by the Owner will be held to be defective material and shall be removed and replaced with proper and acceptable materials, equipment and/or appurtenances, or put in proper working order, satisfactory to the Engineer without additional cost to the Owner.

1.8.4. All moving parts of equipment and appurtenances shall be properly lubricated by the Contractor, and all equipment and systems shall be started up and tested by the contractor..

1.8.5. All equipment shall operate without objectionable noise or vibration as determined by the Engineer. If such objectionable noise or vibration should be produced and transmitted to occupied portions of the building by apparatus, piping, ducts, or other parts of the work, any necessary changes, as approved, shall be made without cost to the Owner.

1.9. DELIVERY AND STORAGE

1.9.1. Equipment and materials shall be properly stored, adequately protected, and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored, and protected in accordance with the manufacturer's recommendations and as approved by the Engineer. Electrical conduit shall be stored to provide protection from the weather and accidental

damage. Cables shall be sealed, stored, and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Outdoor storage of cable will not be permitted. Damaged or defective items, in the opinion of the Owner's representative, shall be replaced with new items at no additional cost to the Owner.

1.10. CATALOGED PRODUCTS

1.10.1. Materials and equipment shall be the cataloged products of manufacturers regularly engaged in production of such materials or equipment and shall be manufacturer's latest standard design that complies with the specification requirements.

1.11. MANUFACTURER'S RECOMMENDATION

1.11.1. Where installation procedures are specified to comply with the recommendations of the manufacturer of the material or equipment being installed, printed copies of these recommendations shall be furnished to the Owner prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

1.12. MECHANICAL REQUIREMENTS

1.12.1. Conduit and cables as indicated on the drawings/specifications for mechanical equipment, supplied by others, shall be included under this division.

1.13. COORDINATION

1.13.1. Electrical work shall be coordinated with the Owner's representative and other trades involved in the construction project. Electrical components of mechanical equipment, such as motors, motor starters, control or pushbutton stations, floats or pressure devices, and other devices functioning to control mechanical equipment that are not explicitly shown on the contract drawings but specified in the appropriate sections, shall be installed and wired under Division 26 work. All work shall be carefully laid out in advance, coordinating electrical features with architectural, structural, and mechanical features of construction.

1.14. COORDINATION WITH UTILITIES AND OWNER:

1.14.1. Contractor shall comply with all local Power Company requirements.

1.14.2. Contractor shall contact the local Telephone Company and arrange for the installation of a voice-grade line suitable for use with the remote alarm dialer.

1.15. ENCLOSURES

1.15.1. Furnish NEMA enclosures to suit location classification, unless otherwise shown on the drawings, or referenced in the specifications. The outdoor area shall be considered as requiring NEMA 3R-rated equipment unless otherwise noted or located in corrosive environments.

PART 2 - PRODUCTS

2.1. MATERIALS AND EQUIPMENT

2.1.1. All materials, equipment, and devices shall, as a minimum, meet the requirements of UL where UL Standards are established for those items, and the requirements of NFPA 70. All items shall be new unless specified or indicated otherwise.

2.2. CONDUITS AND FITTINGS

2.2.1. Rigid Steel Conduit, Elbows and Couplings:

A. All rigid galvanized conduit installed below grade or outdoors shall have all threads generously coated with Thomas & Betts "Kopr-Shield". In addition, all direct burial rigid galvanized conduit shall be thoroughly coated with Koppers bitumastic.

B. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads, and carefully reamed ends; 3/4-inch NPS minimum size.

C. Manufacturer: Provide rigid steel conduit and fittings of one of the following:

- Allied Tube and Conduit Corporation.
- Republic Steel Corporation.
- Triangle PWC Incorporated.
- Or equal.

2.2.2. PVC Coated Rigid Steel Conduit, Elbows and Couplings:

A. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads, carefully reamed ends, 3/4-inch NPS minimum size with a factory coating of 40 mil thick polyvinyl chloride.

B. Color: The color of the coating shall be the same on all conduit and fittings.

C. Manufacturer: Provide PVC-coated rigid steel conduit and fittings of one of the following:

- Robroy Industries.
- Republic Steel Corporation.
- Or equal.

2.2.3. Intermediate Metallic Conduit, Elbows and Couplings:

A. Material: Rigid type steel, work hardened, hot dip galvanized, smooth interior, tapered threads, and carefully reamed ends; 3/4-inch NPS minimum size.

B. Couplings: Same as for rigid steel conduit.

C. Elbows: Factory formed of the same material specification as for intermediate metallic conduit.
D. Manufacturers: Provide intermediate metallic conduit of one of the following:

- Allied Tube and Conduit Corporation.
- Republic Steel Corporation.
- Or equal.

2.2.4. Electric Metallic Tubing (EMT) Conduit, Elbows, and Couplings

A. Material: Conduit fittings shall be cast type of nonferrous metal thoroughly coated inside and outside with metallic zinc or cadmium after all machining has been completed. Covers shall be of the same material as the fittings to which they are attached and shall be screwed on with rubber or neoprene gaskets between the covers and fittings.

B. Manufacturer: Provide EMT conduit and fittings as manufactured by one of the following:

- Bethlehem Steel Corp.
- Youngstown Steel Corp.
- The U.S. Steel Corp.; Republic Steel Corp.
- Or equal.

2.2.5. PVC Conduit:

A. Material: Schedule 40 PVC plastic, NEMA Type EPC 40 PVD, 90 C rated, conforming to UL No. 651.

B. Manufacturer: Provide non-metallic conduit of one of the following:

- Amoco Chemicals Corporation.
- Carlon, Division of Indian Head, Incorporated.
- Or equal.

2.2.6. Non-metallic Fittings: Form elbows, bodies, terminations, expansions, and fasteners of the same material and manufacturer as the base conduit. Provide cement by same manufacturer as base conduit.

2.2.7. Metallic Conduit Fittings and Outlet Boxes:

A. Material and Construction: Cast gray iron alloy, cast malleable iron bodies, and covers. Outdoor units to be gasketed and watertight. Gaskets to be of an approved type designed for the purpose. Improvised gaskets are not acceptable. All units to be threaded type with five full threads. Material to conform to ANSI C80.4 and be listed by UL. Fittings and boxes on all PVC coated conduit runs shall have a factory applied coating of 40 mil thick polyvinyl chloride. The use of "LB" fittings shall be avoided and type "LBD" fittings applied wherever the use of fittings is unavoidable.

B. Manufacturer: Provide metallic conduit fittings and outlet boxes of one of the following:

- Crouse Hinds Company.
- Appleton Electric Company.
- Or equal.

2.3. OUTLET BOXES AND COVERS

2.3.1. Outlet boxes and covers shall be cadmium- or zinc-coated if of ferrous metal and shall conform to UL 514.

2.3.2. Cabinets, junction boxes, and pull boxes (with volume greater than 100 cubic inches) shall conform to UL 50. Cabinets, junction boxes, and pull boxes shall be hot-dip zinc-coated if of sheet steel.

2.4. WIRES AND CABLES

2.4.1. Wires and cables shall meet the applicable requirements of NFPA 70 and UL for the type of insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to the site shall not be used.

2.5. CONDUCTORS

2.5.1. All conductors shall be XHHW-2 Copper, THWN Copper, or THHN Copper, as indicated on the Contract Drawings.

2.6. EQUIPMENT MANUFACTURER REQUIREMENTS

2.6.1. Where Contractor provides equipment whose manufacturer requires copper conductors at the terminations or requires that only copper conductors be provided between components of equipment, it shall be the Contractor's responsibility to provide copper conductors, or all necessary splices, splice boxes, and other work required to satisfy the manufacturer's requirements.

2.7. MINIMUM CONDUCTOR SIZES

2.7.1. Minimum size for branch circuits shall be No. 12 AWG; for Class 1 remote control and signal circuits, No. 14 AWG; and for Class 2 low-energy remote control and signal circuits, No. 16 AWG.

2.7.2. Provide all service, feeder, branch, control, and signalizing circuit conductors. Color shall be green for grounding conductors. Neutrals of more than one system are installed in the same raceway or box; the other neutrals shall be white with a colored (not green) stripe. The color of the under-grounded conductors in different voltage systems shall be as follows:

3-phase systems	120/208 volts	277/480 volts	120/240 volts (high-leg)
Phase A:	black	yellow	black
Phase B:	red	brown	orange
Phase C:	blue	orange	blue
Neutral:	white	grey	white

1-phase systems	120/240 volts
Phase:	black
Phase:	red
Neutral	white

2.8. INSULATION

2.8.1. Unless specified or indicated otherwise, or required to be otherwise by NFPA 70, all power wires shall be 600-volt, type XHHW-2, except that grounding wire may be type TW.

2.9. SPLICES AND TERMINATION COMPONENTS

2.9.1. Splices and termination components shall conform to UL 486A and UL 486B, as applicable for wire connectors, and UL 510 for insulating tapes. Connectors for wires No. 10 AWG and smaller shall be insulated pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

2.10. SWITCHES

2.10.1. Switches serving as motor-disconnect means shall be horsepower rated. Provide heavy duty type switches where indicated, where switches are rated higher than 208 volts, and for double throw switches. Fused switches shall utilize Class R fuse holders and fuses, unless indicated otherwise.

2.11. FUSES

2.11.1. Provide a complete set of fuses for each fusible switch. Time-current characteristics curves of fuses serving motors or connected in series with circuit breakers or other circuit protective devices shall be

coordinated for proper operation; submit coordination data for approval. Fuses shall have a voltage rating not less than the circuit voltage.

A. Fuses shall conform to UL 198C, Class J for 0 to 600 Amps and Class L for 601 to 6000 Amps.

2.12. MOTORS

2.12.1. Motors shall be NEMA MG1, except sealed (hermetic type) motor compressors shall meet UL 984. Determine specific motor characteristics to ensure provision of correctly sized starters and overload heaters. Motors shall be designed to operate at full capacity with a voltage variation of plus or minus 10 percent of the motor voltage rating. If connected to a VFD the motor must be Inverter Duty Rated.

2.13. PANELBOARDS

2.13.1. Panelboards for use as service disconnecting means shall additionally conform to UL 869. Panelboards shall be circuit breaker equipped. Design shall be such that any individual breaker can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as a means of obtaining clearances as required by UL. Where "spare" is indicated, make provisions for the future installation of a breaker sized as indicated. All panelboards' locks included in the project shall be keyed alike. Directories shall be typed to indicate load served by each circuit and mounted in a holder behind transparent protective covering.

2.14. PANELBOARD BUSES

2.14.1. Support bus bars on bases independent of the circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide an isolated neutral bus in each panel for the connection of circuit neutral conductors. Provide a separate ground bus marked with a green stripe along its front and bonded to the steel cabinet for connecting grounding conductors. Buses shall be copper.

2.15. CIRCUIT BREAKERS

2.15.1. Circuit breakers shall be ambient compensated thermal magnetic type with interrupting capacity as noted on drawings. Breaker terminals shall be UL-listed as suitable for the type of conductor provided. Plug-in circuit breakers are acceptable.

2.16. MULTIPOLE BREAKERS

2.16.1. Provide a common-trip type with a single operating handle. Breaker design shall be such that an overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that any three adjacent breaker poles are connected to Phases A, B, and C, respectively.

2.17. ATTIC STOCK

2.17.1. The contractor shall provide a minimum of 2 spare parts, such as switches, receptacles, breakers under 100A, and fuses, as shown on the contract drawing. If fuses are on a 3-phase circuit, a minimum of 6 spares must be supplied. All spare parts must be equivalent to the specified parts.

PART 3 – EXECUTION

3.1. GENERAL REQUIREMENTS

3.1.1. Electrical installation shall conform to the requirements of NFPA 70, State and Local Codes, and to the requirements specified herein.

3.2. WIRING METHODS

3.2.1. Wiring method shall be insulated conductors installed in conduit, except where specifically indicated or specified otherwise, or required by NFPA 70 to be installed otherwise. An insulated equipment grounding conductor shall be provided in all feeder and branch circuits, including lighting circuits.

3.3. CONDUIT INSTALLATION

3.3.1. Keep conduit at least 6 inches away from parallel runs of flues and steam or hot water pipes. Install conduit parallel with or at right angles to ceilings, walls, and structural members, where located above accessible ceilings and where conduit will be visible after completion of the project.

3.4. CONDUIT SUPPORT

3.4.1. Support conduit by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by wood screws to wood; by toggle bolts on hollow masonry units; by concrete inserts of expansion bolts on concrete or brick; by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-clamps may be used on rigid steel conduit only. Do not weld conduits or pipe straps to steel structures. The load applied to fasteners shall not exceed one-fourth of the proof test load. Fasteners attached to concrete ceiling shall be vibration and shock-resistant. Holes cut to a depth of more than 1-1/2-inches in reinforced concrete beams or to a depth of more than 3/4-inch in concrete joints shall not cut the main reinforcing bars. Fill holes that are not used.

3.4.2. Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with a hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of all observations.

3.4.3. Install pull wires in empty conduits in which wire is to be installed by others. The pull wire shall have not less than 200 pounds tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.

3.4.4. Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70. Where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least a single locknut and bushing. Locknuts shall be the type with sharp edges for digging into the wall of metal enclosures. Install bushings on the ends of conduits and provide insulating type where required by NFPA 70.

3.4.5. Flexible connections of short length shall be provided for equipment subject to vibration, noise transmission, or movement, and for all motors. Liquid-tight flexible conduit shall be used in wet locations. A separate ground conductor should be provided across flexible connections.

3.5. BOXES, OUTLETS, AND SUPPORTS

3.5.1. Provide boxes in the wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be of cast-metal hub type when located in normally wet locations, when surface mounted on outside of exterior surfaces or when exposed up to 7 feet above interior floors and walkways, and when installed in hazardous areas. Boxes in other locations shall be sheet steel. Each box shall have the volume required by NFPA 70 for the number of conductors enclosed in the box. Boxes for use in masonry block or tile walls shall be square-cornered tile-type, or standard boxes having square-cornered tile-type covers. Provide gaskets for cast-metal boxes installed in wet locations and boxes installed flush with the outside of exterior surfaces. Fasten boxes and supports with wood screws on wood, with bolts and expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel work. Threaded studs driven in by power charge and provided with lockwashers, and nuts or nail-type nylon anchors may be used in lieu of wood screws, expansion shield, or machine screws.

3.5.2. In open overhead spaces, cast boxes threaded to raceways need not be separately supported except, where used for fixture support. Support sheet metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceway on opposite sides of the box and support the raceway with any approved type fasteners not more than 24 inches from the box. When penetrating reinforced-concrete members, avoid cutting any reinforcing steel.

3.5.3. Construct of not less than the minimum size required by NFPA 70 of code-gauge aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified above, Furnish boxes with screw-fastened covers. Where several feeders pass through a pull box, tag the feeders to clearly indicate the electrical characteristics, circuit number, and panel designation.

3.6. CONDUCTOR IDENTIFICATION

3.6.1. Provide conductor identification within each enclosure where a tap, splice, or termination is made. For conductors No. 6 or smaller, color coding shall be by factory-applied color-impregnated insulation. For conductors No. 4 and larger, color coding may be accomplished with the use of colored electrical tapes or heat-shrink type sleeves listed for such use. Identify control circuit terminations with the name of the device or panel on the other end of the conductor.

3.6.2. Provide Labels and Identification in accordance with Specification Section 26 02 00, Labeling and Identification.

3.6.3. Complete and/or modify all panelboard circuit cards to accurately reflect the work done with printed or typed directories.

3.7. SPLICES

3.7.1. Make splices in accessible locations. Make splices in conductors No. 10 AWG and smaller with an insulated pressure type connector. Make splices in conductors No. 8 AWG and larger with a solderless connector and cover with an insulation material equivalent to the conductor's insulation.

3.8. COVERS AND DEVICE PLATES

3.8.1. Install with all four edges in continuous contract with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16-inch. The use of sectional-type device plates will not be permitted. Plates installed in wet locations shall be gasketed.

3.9. GROUNDING AND BONDING

3.9.1. Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductors in non-metallic raceways, and neutral conductors or wiring systems. Make a ground connection at the main service equipment and extend the grounding conductor to the point of entrance of the metallic water service. Make a connection to the water pipe by a suitable ground clamp or lug connection to a plugged Tee. If flanged pipes are encountered, make a connection with the lug bolted to the street side of the flanged connection. Supplement the metallic water service grounding system with an additional make electrode in compliance with NFPA 70. Where ground fault protection is employed, take care that the connection of ground and neutral does not interfere with the correct operation of the fault protection.

3.10. GROUNDING CONDUCTOR

3.10.1. Provide an insulated, green-colored equipment grounding conductor in all feeder and branch circuits. This conductor shall be separate from the electrical system neutral conductor.

3.11. REPAIR OF EXISTING WORK

3.11.1. Lay out the work carefully in advance. Where cutting, channeling, chasing, or drilling of floors, walls partitions, not ceilings, or other surfaces is necessary for the proper installation, support, or anchorage of the conduit, raceways, or other electrical work, do this work carefully. Repair any damage to buildings, piping, or equipment using mechanics of the trades involved.

3.12. INSPECTION, TESTING, START UP AND COMISSIONING

3.12.1. The Contractor shall provide all test equipment and personnel and conduct applicable tests according to the current adopted version of the ANSI/NETA Maintenance Testing Specifications standard and submit written copies of all test results.

3.12.2. Test all 600-Volt wiring to verify that no short circuits or accidental grounds exist. Perform insulation resistance tests on all wiring No. 6 AWG and larger using an instrument which applies a voltage of at least 1000 Volts to provide a direct reading of resistance; minimum resistance shall be 500,000 Ohms.

3.12.3. Test the grounding system to ensure continuity and that the resistance to ground is not excessive.

3.12.4. Tests as required for all component parts of the complete installation shall be performed by the contractor to demonstrate the satisfactory functioning of all electrically operated equipment and wiring and the adequacy of the entire electrical system.

3.12.5. Any equipment or materials furnished and/or installed under this contract which fails under tests shall be repaired or replaced and then retested until satisfactory results are obtained, entirely at the expense of the contractor. He shall assume full responsibility for the proper functioning and quality of all electrical installations to the extent that any breakdowns, deficiencies, or deteriorations caused by poor workmanship, inferior equipment furnished by the contractor, materials or method of installation shall be promptly remedy, replaced or repaired by the contractor.

3.12.6. The engineer shall be given a 7 day notice the proposed date and time of the test and shall be witnessed by a representative of the engineer. A certified report typed or printed of all tests shall be provided to the engineer for review and approval.

END OF SECTION

PART 1 – GENERAL

1.1. DESCRIPTION OF WORK:

1.1.1. Provide identification as specified herein for all indicated items.

1.1.2. Work Included:

A. Nameplates to identify transfer switches, circuit breakers, pull boxes, junction boxes.

B. Wire tags at each end of all feeders and control wiring indicating the source and load or description of the controlled device shall be provided at each termination. Feeder wires shall be identified in all junction and pull boxes.

C. Labels for exposed conduits and conduits containing feeders shall be provided identifying source and end point. Conduits shall be labeled at source, every 30ft and at end point.

D. "DANGER-HIGH-VOLTAGE" signs shall be securely mounted on the entry doors of all electrical rooms.

E. “WARNING” signs shall be securely mounted beneath beacon lights, verbiage and location as shown on plans.

F. Labels required by the National Electrical Code, specifically 110.16, 110.21 and all other applicable sections.

1.2. SUBMITTALS

1.2.1. In accordance with the General and Special Conditions, the Contractor shall submit:

A. Descriptive literature for materials specified.

PART 2 - PRODUCTS

2.1.1. MATERIALS:

2.1.2. Nameplates:

A. Nameplates shall be white core, black laminated plastic having engraved letters.

B. Letter size and nomenclature shall be as directed by the Owner.

2.1.3. Labels:

A. Labels on feeder conduits shall consist of 3/4-inch black letters on a white background. Painted Stencil or printed nylon cloth-backed adhesive labels are acceptable. Nomenclature shall list the source and load and be submitted for approval.

B. Labels on fire alarm conduits shall consist of "FA" stenciled in red letters on a white painted rectangular background. Adhesive backed nylon cloth-backed printed labels of the proper color are acceptable.

C. Communication conduits shall be identified with source and receiving equipment and the type of cabling.

2.1.4. Wire tags shall be of printed adhesive backed nylon cloth material with printed identifying numbers and letters. Tags shall list panel, circuit number at load, and description and location of load at panel.

2.1.5. Provide manufacturer's standard "DANGER" signs of baked enamel finish on 20 gage steel; of standard red, black, and white graphics; 14 inches by 10 inches size except where 10 inches by 7 inches is the largest size which can be applied where needed, and except where larger size is needed for adequate vision.

2.1.6. Provide manufacturers' standard "WARNING" signs of aluminum; of standard red, black, and white graphics; signs are to be 5 inches by 7 inches in size.

PART 3 – EXECUTION

3.1.1. PREPARATION

3.1.2. All surfaces to receive labels shall be carefully prepared in accordance with the manufacturer's instructions

3.2. APPLICATION:

3.2.1. Labels:

A. Labels shall be painted and stenciled on clean, dry surfaces.

B. All conduit systems require identification when exposed or concealed above accessible ceilings.

3.2.2. Nameplates:

A. Nameplates shall be secured to the painted surface with suitable oval-head stainless steel screws.
B. Nameplates shall be secured to unpainted surfaces with epoxy cement. Surfaces shall be properly cleaned before application.

3.2.3. Danger Signs:

A. Danger signs shall be secured with oval-head stainless steel screws.

3.2.4. Warning Signs:

A. Warning signs shall be secured with oval-head stainless steel screws.

END OF SECTION

PART 1 – GENERAL

1.1. APPLICABLE CODES AND REQUIREMENTS

1.1.1. Conformance:

A. All work, equipment and materials furnished shall conform with the existing rules, requirements and specifications of the Insurance Rating Organization having jurisdiction, the current version of National Electrical Code (NEC) adopted by the NJ DCA, the National Electric Manufacturers Association(NEMA), the Institute of Electrical Engineers (IEEE), the Insulated Cable Engineers Association (ICEA), the American Society of Testing Materials (ASTM), the American National Standards Institute (ANSI), the Illuminating Engineering Society(IES), the requirements of the Occupational Safety Hazards Act (OSHA) and all other applicable Federal, State and local laws and/or ordinances.

1.1.2. All material and equipment shall bear the UL inspection labels if the material and equipment is of the class inspected by said laboratories.

1.1.3. Non-Conformance

A. Any paragraph of requirements in these Specifications, or Drawings, deviating from the rules, requirements and specifications of the above organizations shall be invalid and their requirements shall hold precedent thereto. The CONTRACTOR shall be held responsible for adherence to all rules, requirements and specifications as set forth above. Any additional work or material necessary for adherence will not be allowed as an extra but shall be included in the bid price. Ignorance of any rule, requirement, or specification shall not be allowed as an excuse for nonconformity. Acceptance by the ENGINEER does not relieve the CONTRACTOR from the expense involved for the correction of any errors which may exist in the Drawings submitted or in the satisfactory operation of any equipment

1.1.4. Certification:

A. Upon completion of the work, the CONTRACTOR shall obtain certificates of inspection and approval from the National Board of Fire Underwriters or similar inspection organization having jurisdiction and shall deliver the same to the Owner's representative.

1.2. FEES

1.2.1. The cost of procuring all permits, inspection services, and fees for temporary electric services shall be included in the bid price.

END OF SECTION

SECTION 26 05 21
WIRES AND CABLES

PART 1 – GENERAL

1.1. WORK INCLUDED

1.1.1. Under this Section, the Contractor shall furnish and install all wires and cables for power and Local Area Networking (LAN) as required to complete the electrical installation.

1.1.2. Each coil or reel of insulated wire and cable furnished shall bear a tag, containing the UL approval stamp (providing cable is of the class inspected by the said laboratory), name of manufacturer, trade designation, month, and year of manufacturer; and in no case shall be more than six months old unless accepted by the Engineer. Cable "mil ends" shall be unacceptable for use on this project. Wire and cable shall not have been stored in the weather outdoors.

1.1.3. Conductors larger than No. 10 AWG shall be stranded and all conductors shall be copper, unless otherwise specified.

1.1.4. The following information for each size of wire and cable shall be submitted to the ENGINEER for acceptance:

A. Voltage rating
B. Name of cable manufacturer
C. Minimum insulation resistance in megohms, per 1,000 ft at 15.5 C
D. Number and size of strands in each conductor
E. Conductor insulation in mils
F. Sheath thickness in mils
G. Average OD of bare conductor
H. Average overall diameter of finished cable
I. Weight per 1,000 ft of finished cable
J. Application or intended use
K. Conductor type

1.1.5. Cable shall be shop tested in accordance with the latest standards and applicable test procedures of the Specifications of the ICEA and certified data shall be submitted in compliance with this requirement. Sample lengths of cable shall be submitted to the Engineer.

1.1.6. Each wire and cable shall be individually identified and tagged with a unique number using wire markers at each termination, splice point, and where passing through junction boxes or pull boxes (even when not spliced).

PART 2 - PRODUCTS

2.1. 600 VOLT AND BELOW POWER CABLES

2.1.1. Single Conductor Cable. These cables shall be composed of stranded tinned copper conductors insulated with a heat, flame, and moisture-resistant thermoplastic compound. Cables shall be rated not less than 600 volts and shall be for circuits operating in dry and wet locations at a maximum conductor temperature of 90 C. Cables shall be UL listed as type XHHW-2.

2.1.2. The conductors shall be stranded annealed copper, the individual strands of which shall, before stranding, be in accordance with ASTM B 3.

2.1.3. The stranded conductors shall conform to ASTM B 8, Class B.

2.1.4. The conductors shall be insulated with a properly vulcanized flame-retardant, insulating compound.

2.1.5. Conductor insulation or phase-coded tapes shall be color-coded as follows:

A. AC Power 460 Volt and Above

1) Phase A - YELLOW
2) Phase B - BROWN
3) Phase C - ORANGE
4) Neutral – GREY

B. 208/120 Volt System

1) Phase A - BLACK
2) Phase B - RED
3) Phase C - BLUE
4) Neutral – WHITE

C. 120/240 Volt, Delta High-Leg System

1) Phase A - BLACK
2) Phase B - ORANGE
3) Phase C - BLUE
4) Neutral – WHITE

D. DC Power

1) Positive Lead - RED
2) Negative Lead - BLACK
3) DC Control – BLUE

E. 120 Volt Control Wiring

F. Single conductor ac control wire shall be RED except a wire entering a Motor Control Center compartment or control panel which is an interlock, shall be color-coded YELLOW.

1) 24 Volt Control Wiring - ORANGE
2) Equipment Ground – GREEN
3) Single conductor ac control wires shall be multicolored whenever group is installed in same conduit or terminated in same panelboard, cabinet, junction box, etc.

2.2. INSTRUMENT CABLES

2.2.1. Instrumentation cables carrying analog signals shall be single or multipair twisted, shielded tinned copper conductors. In multipair cables, each pair shall be individually twisted, shielded conductors with an overall protective jacket.

2.2.2. Minimum size No. 16 AWG with seven or more concentric strands for single pair and single triad cables and No. 18 AWG with seven (7) or more concentric strands for multipair and multi-triad cables shall be provided. Each pair shall have a mylar/aluminum, 100 percent coverage tape shield with a drain wire, not more than two sizes smaller than the conductor size. Conductors shall be polyethylene or polypropylene insulated for a minimum of 300 volts and shall be covered with chrome vinyl or PVC jacket. The conductor shall have 600-volt insulation where physical limitations require analog signal wires to run in the same enclosure with wires requiring 600-volt insulation, for a run not to exceed five feet.

2.2.3. The CONTRACTOR shall install all cable or conductors used for instrumentation wiring in a grounded metal raceway. Analog signal wires shall exclusively occupy these conduits.

2.2.4. All shielding shall be continuous and shall be grounded in accordance with the instrumentation equipment manufacturer's recommendations, as approved.

2.2.5. Raceway containing instrumentation cable shall be installed to provide the following clearances:

2.2.6. Raceway installed parallel to raceway conductors energized at 480, 240/120 or 208/120 volts: two feet

2.2.7. Raceway installed at right angles to conductors energized at 480, 240/120 or 208/120 volts: six inches

2.2.8. Where practicable, a raceway containing instrumentation cable shall cross a raceway containing conductors of other systems at right angles.

2.2.9. Where instrumentation cables are installed in panels, among others, the CONTRACTOR shall arrange wiring to provide maximum clearance between cables and other conductors. Instrumentation cables shall not be installed in same bundle with conductors of other circuits.

A. Grounding of cable shield shall be accomplished at one point only, unless otherwise required by instrumentation systems manufacturer.

B. Extra pull boxes shall be installed, for ease of cable pulling and the cable manufacturer's recommended conduit fill factor shall be followed. Cables shall be moisture sealed at all connections.

2.2.10. Special instrument cable shall be as specified or recommended by the vendor of the equipment or instruments requiring such wiring but shall not be sized less than the minimum wire size requirements of #16AWG, #18AWG for single and multipair cables, respectively.

2.2.11. All cable, insulation and jacket shall have adequate strength to allow for it to be pulled through the conduit systems. Sufficient conductors shall be installed to provide space and serve future equipment were shown and specified.

2.2.12. All conductors shall be color-coded, and all wires shall be suitably tagged with permanent markers at each end, at each JBX, PBX termination location. Each conductor shall be identified with a unique number corresponding to approved shop drawing

PART 3 – EXECUTION

3.1. 600 VOLT AND BELOW POWER CABLES

3.1.1. Cable Ampere Rating: The sizes of wire and cable for individual circuits shall be shown on drawings or as acceptable to the ENGINEER as being proper for the service requirements. Wires for branch circuits shall not be smaller than No. # 12 AWG. Wires of greater size, as indicated or required, shall be used to minimize voltage drops for circuit runs over 100ft or where voltage drop exceeds 5%.

3.1.2. Wire Terminals: Wires on manufactured assemblies such as distribution boards, motor control centers, and individual motor control equipment shall be terminated with cup terminals, pronged washers, compression-type, or pressure-type terminals furnished on devices. Set-screw type pressure connectors shall be provided with saddles.

3.1.3. Wires and cable terminations utilizing compression connectors shall be made with a pressure tool per the manufacturer’s instructions. For wires 250 MCM and larger, the lugs shall have long barrels to allow double indentations.

3.1.4. All 600-volt cables shall have the minimum possible number of splices and splices shall only be made in junction boxes. All wire splices shall be identified using wire markers.

3.1.5. The finished splice shall be made waterproof via the application of an epoxy coating manufactured for the purpose.

3.1.6. Sealing of Conduits. Where cables enter pull boxes, switchgear enclosures, or incoming line sections from the underground system, conduit ends shall be sealed with oakum packing and plastic, rat repellent sealing compound, in addition to the OZ Type "CSBG" fittings, and all spare conduits shall

be capped. Unused conduit and duct entrances shall be closed off by spring clip attached, galvanized, sheet steel covers.

3.1.7. Sealing of Conduits: Where cables enter pullboxes, junction boxes, HVAC enclosures, or incoming feeders from the underground system, conduit ends shall be sealed with OZ Type "CSBG" fittings, and all spare conduits shall be capped with cast screw covers and made waterproof.

3.1.8. Phasing/Rotation. All wiring to motors, automatic transfer switch, motor control centers, panelboards, etc. shall be phase coordinated with existing power where applicable and coordinated with rotational requirements of equipment. Where phasing or rotation is incorrect, contractor shall change connections to obtain proper results and retape termination at no additional cost to owner.

3.1.9. Cables and wires shall be installed continuously from the power source or pickup point to the load or destination without unnecessary splices. Pullboxes shall be installed judiciously, as required by code, or to avoid tension due to the length of pull.

3.2. INSTRUMENTATION CABLE

3.2.1. Instrumentation cables shall be moisture sealed, using shrink-on socks at all connections.

3.3. PULLING TEMPERATURE

3.3.1. Cable shall not be flexed or pulled when the temperature of the insulation or of the jacket is such that damage will occur due to low temperature embrittlement. When cable will be pulled with an ambient temperature within a three-day period prior to pulling is 40°F or lower, cable reels shall be stored during the three-day period prior to pulling in a protected storage with an ambient temperature not lower than 55°F and pulling shall be completed during the workday for which the cable is removed from the protected storage.

3.3.2. All feeder and underground conduits shall be swabbed with a brush, followed by clean rags, then a mandrel (85% of conduit diameter), before pulling cables through. A lubricating compound shall be applied to the cables to reduce friction and damage to the cables during the pulling operation.

3.4. TESTING

3.4.1. Testing. All wiring shall be continuity tested, meggered, to ensure the integrity of the insulation. A typewritten report shall be submitted to the Engineer containing all the test results. All wire/cable failing test or judged by the engineer as being deficient, shall be replaced.

3.4.2. Perform resistance measurements through bolted connections with a low-resistance ohmmeter in accordance with Section 26000, ELECTRICAL GENERAL (item 3.12).

3.4.3. Perform an insulation-resistance test on each conductor with respect to ground and adjacent conductors. The applied potential shall be 500 volts dc for 300-volt-rated cable and 1000 volts dc for greater than 300-volt-rated cable. The test duration shall be one minute.

3.4.4. Verify uniform resistance of parallel conductors.

END OF SECTION

SECTION 26 05 27
GROUNDING

PART 1 – GENERAL

1.1. WORK INCLUDED

1.1.1. The CONTRACTOR shall furnish and install the system and equipment grounding provisions. These shall be complete in accordance with the minimum requirements established in the NEC and as shown, specified, or required. All new systems shall be incorporated into existing systems. Where existing conditions may require updating, these changes should be included.

1.1.2. In addition to the NEC requirements, the following shall be permanently and effectively grounded:

A. Service Equipment

B. All pullboxes.

C. All conduit supports; and

D. Transfer switches.

PART 2 - PRODUCTS

2.1. GROUNDING EQUIPMENT & MATERIAL

2.1.1. The grounding electrode cables, where required, shall consist of bare medium hard-drawn 97.5 percent minimum conductivity stranded copper cable. Where required, these shall be insulated and protected from their point of inception to their termination.

2.1.2. The grounding electrode system shall consist of all qualified electrodes bonded together to form an electrode system. Where required, a 5/8-inch diameter copper-clad steel rod is required. Grounding electrodes shall be supplemented where required by the NEC.

2.1.3. All underground ground cable taps and grounding electrode taps shall be of the crucible weld copper thermite process as manufactured by Erico Products Incorporated, Burndy Co., or equal. Above-ground connections shall be listed and labelled compression-type fittings.

2.2. FITTINGS

2.2.1. Grounding connections to equipment may be compression or bolted. Cable end connections may be made by use of the crucible weld process, compression, or bolted type connections. Bolted connectors shall consist of corrosion-resistant copper alloy with silicone bronze bolts, nuts, and lock washers, which are designed for this purpose.

2.2.2. Grounding connection below grade shall only be made by the crucible weld copper thermite process.

2.2.3. All fittings shall be listed and labelled for grounding application.

2.3. GENERAL REQUIREMENTS – HIGH-FREQUENCY BONDING:

2.3.1. All motors operated on variable frequency drives shall be bonded from the motor foot to system ground with a high-frequency ground strap made of flat braided, tinned copper with terminations to accommodate motor foot and system ground connection.

2.3.2. Proper grounding of motor frame for all inverter-driven induction motors

A. References: ABB Technical Guide No.5

- Allen Bradley Publication 1770-4.1 Application Data, Industrial
- Automation Wiring and Grounding Guidelines

PART 3 – EXECUTION

3.1. RACEWAYS

3.1.1. Conduit which enters equipment such as pullboxes, junction boxes, control panels, panelboards, and similar equipment shall be bonded to the ground bus, where provided, and as otherwise required by the NEC.

3.1.2. Where raceways are not mechanically and electrically connected, bare stranded copper bonding jumper cables shall be installed, connected to the separate raceway ends utilizing insulated grounding type bushings.

3.2. PREPARATION AND INSTALLATION

3.2.1. Surfaces where grounding connections are to be made shall be clean and dry. Steel surfaces shall be ground or filed to remove all scales, rust, grease, and dirt. Copper and galvanized steel shall be cleaned with Energy cloth to remove oxide before making connections.

END OF SECTION

SECTION 26 05 31
PULL AND JUNCTION BOXES

PART 1 – GENERAL

1.1. WORK INCLUDED

1.2. The CONTRACTOR shall furnish and install all junction and pullboxes as shown and as required to install the electrical systems properly and professionally.

1.3. Boxes specified in this Section are of the type that must be utilized where standard octagonal and square sheet steel or cast boxes, classified as OUTLET BOXES, cannot be used.

PART 2 - PRODUCTS

2.1. INDOORS

2.1.1. Pull and junction boxes for dry indoor exposed use shall be galvanized sheet steel with neoprene gasketed screwed-on covers and of all welded construction.

2.1.2. Boxes for use in hazardous shall be listed as suitable in corresponding Classified locations, such as cast type NEMA 4 and NEMA 7 cast construction for hazardous areas as manufactured by O.Z. Electric CABB o., Steel City, or equal. Materials shall be aluminum or galvanized steel. Covers shall be same material as box with screwed-on covers, screws shall be stainless steel.

2.2. OUTDOORS

2.2.1. Boxes for use outdoors shall be of cast NEMA 3R or, where subject to water spray, NEMA 4 construction, as manufactured by O.Z. Electric Co.; Steel City; Hoffman or equal. Material shall be aluminum or galvanized steel. Covers shall be same material as box with screwed-on covers, screws shall be stainless steel.

2.3. GALVANIZING

2.3.1. Boxes and covers shall be hot-dipped or electrogalvanized after fabrication, inside and outside surfaces.

2.4. BOX SIZES

2.4.1. The size of boxes shall be generous, considering the number and size of conductor and providing generous access for removal of conductors.

2.5. BARRIERS

2.5.1. Galvanized steel or aluminum barriers shall be provided in junction or pullboxes to isolate conductors of different voltages, such as 480-volt, 240-volt, 120-volt AC, DC, and instrumentation signal leads. The gage of these barriers shall not be less than the gage of the box required.

PART 3 – EXECUTION

3.1. INSTALLATION

3.1.1. All junction boxes and pullboxes shall be solidly attached to structural members prior to installation of conduit and set true and plumb. Wooden plugs will not be permitted for securing boxes to concrete.

3.1.2. (2) Where control wires must be interconnected in a junction box, terminal boards consisting of an adequate number of screw-type terminals shall be installed. Terminal board current-carrying parts must be of ample capacity to carry the full load current of the circuits connected thereto. Approximately 20 percent of the total amount of terminals provided shall consist of spare terminals. Terminals shall be lettered and/or numbered to conform with the wiring diagrams.

3.1.3. All junction boxes and pullboxes shall have identifying nameplates attached thereto.

3.1.4. All junction boxes and pullboxes installations must conform to the requirements of the National Electrical Code and be listed and labelled.

END OF SECTION

SECTION 26 05 34
CONDUIT

PART 1 – GENERAL

1.1. DESCRIPTION

1.1.1. Scope:

A. CONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install conduit and fittings to form complete, coordinated, and grounded raceway systems.

1.1.2. All conduits shall be as follows, except as otherwise shown.

A. Rigid steel conduit for exposed conduit runs where subject to physical damage, or as shown on drawings.

B. EMT for exposed indoor dry locations as indicated on drawings. A compression fitting shall be utilized when supplying electronic loads from EMT conduit.

C. PVC-coated rigid steel for exposed conduit runs in corrosive areas.

D. Schedule 40 PVC for concrete-encased duct bank runs or for direct burial.

E. Schedule 80 PVC for outdoor use under parking lots, roadways, and where exposed.

F. All conduit installations shall be performed in accordance with the National Electrical Code.

1.1.3. Coordination:

A. Conduit runs shown are diagrammatic.

B. Coordinate conduit installation with piping, ductwork, lighting fixtures, and other systems and equipment, and locate to avoid any interference.

1.1.4. Related Sections:

A. Section 26 00 00

1.2. QUALITY ASSURANCE

1.2.1. Reference Standards: Comply with applicable provisions and recommendations of the following, except where otherwise shown or specified:

A. NEC Article 344, Rigid Metal Conduit.

B. NEC Article 352, Rigid Nonmetallic Conduit.

C. UL Standard No. 6, Rigid Metal Electrical Conduit.

D. UL Standard No. 514, Electrical Outlet Boxes and Fittings.

E. UL Standard No. 651, Schedule 40 and 80 PVC Conduit.

F. UL Standard No. 886, Electrical Outlet Boxes and Fittings for Use in Hazardous Locations.

G. ANSI C80.4, Specification for Fittings for Rigid Metal Conduit and Electrical Metallic Tubing.

H. NEMA TC2, Electrical Plastic Tubing, Conduit and Fittings.

I. NEMA TC3, PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.3. SUBMITTALS

1.3.1. Shop Drawings: Submit for approval the following:

A. Manufacturer's catalog cuts and technical information for the conduit, fittings, and supports proposed for use.

B. Layout drawings showing proposed routing of exposed conduits, conduits embedded in structural concrete, and conduits directly buried in earth. Drawings shall show locations of pull and junction boxes and all penetrations in walls and floor slabs.

1.3.2. Record Drawings: Include the actual routing of exposed and concealed conduit runs on record drawings.

PART 2 - PRODUCTS

2.1. MATERIALS

2.1.1. Rigid Steel Conduit, Elbows and Couplings:

A. All rigid galvanized conduit installed below grade or outdoors shall have threads generously coated with Thomas & Betts "Kopr-Shield". In addition, all direct burial rigid galvanized conduit shall be thoroughly coated with Koppers bitumastic.

B. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads, and carefully reamed ends; 3/4-inch NPS minimum size.

C. Manufacturer: Provide rigid steel conduit and fittings of one of the following:

- Allied Tube and Conduit Corporation.
- Republic Steel Corporation.
- Triangle PWC Incorporated.
- Or equal.

2.1.2. PVC Conduit:

A. Material: Schedule 40 PVC plastic, NEMA Type EPC 40 PVD, 90 C rated, conforming to UL No. 651.

B. Manufacturer: Provide non-metallic conduit of one of the following:

- Amoco Chemicals Corporation.
- Carlon, Division of Indian Head, Incorporated.
- Or equal.

C. Non-metallic Fittings: Form elbows, bodies, terminations, expansions, and fasteners of the same material and manufacturer as the base conduit. Provide cement by the same manufacturer as the base conduit.

2.1.3. Metallic Conduit Fittings and Outlet Boxes:

A. Material and Construction: Cast gray iron alloy, cast malleable iron bodies, and covers. Outdoor units to be gasketed and watertight. Gaskets to be of an approved type designed for the purpose. Improvised gaskets are not acceptable. All units to be threaded type with five full threads. Material to conform to ANSI C80.4 and be listed by UL. Fittings and boxes on PVC-coated conduit runs to have a factory-applied coating of 40 mil-thick polyvinyl chloride. The use of "LB" fittings shall be avoided and type "LBD" fittings applied wherever the use of fittings is unavoidable.

B. Manufacturer: Provide metallic conduit fittings and outlet boxes of one of the following:

- Crouse Hinds Company.
- Appleton Electric Company.
- Or equal.

PART 3 – EXECUTION

3.1. INSTALLATION

3.1.1. Exposed Conduit:

A. Install parallel or perpendicular to structural members or walls.

B. Wherever possible, run in groups. Provide galvanized conduit racks of suitable width, length, and height, and arranged to suit field conditions. Provide support at every ten feet minimum.

C. Install on structural members in protected locations.

D. Locate clear of interferences.

E. Maintain 12 inches from hot fluid lines and 1/4 inch from walls. Where it is impractical to maintain 12 inches of separation, the contractor shall insulate the source of high temperature as approved by the Engineer.

F. Install vertical runs plumb. Unsecured drop length not to exceed 12 feet.

3.1.2. Conduit Embedded in Concrete:

A. Separation: Three times outer diameter of the larger conduit center to Center.

B. Minimum Slab Thickness:

- With no crisscrossing of conduit, three times the outer diameter of the conduit.
- With crisscrossing of conduits, four times the outer diameter of the larger conduit.

C. Run conduit in the center of the slab.

D. Before concrete is placed, make the necessary location measurements of the conduit to be embedded so that the information is available to prepare record drawings.

E. A red dye shall be used in the top layer of concrete to identify the presence of conduit or duct bank.

3.1.3. PVC Conduit:

A. Install in accordance with the manufacturer's recommendations.

B. Join sections in accordance with the manufacturer's installation procedures for push-fit, bell, and spigot-type joints, if applicable, or with the manufacturer's recommended cement.

C. During installation, provide expansion fittings for expansion and contraction to compensate for temperature variations. Expansion fittings shall be watertight and of the type suitable for direct burial.

D. Make transition to intermediate or rigid steel conduit before making turn-up to enclosures.

E. Provide watertight expansion/deflection fittings at all wall and floor penetrations of all buildings and equipment concrete pads.

3.1.4. Underground Conduits:

A. Install individual underground conduits a minimum of 24 inches below grade unless otherwise indicated.

B. Perform all excavation, bedding, backfilling, and surface restoration, including pavement replacement where required.

C. Make conduit connections watertight.

D. Protect metallic conduits from corrosion by one of the following means:

- Provide three inches of concrete all around conduits.
- Tape conduits with an all-weather polyvinyl chloride plastic tape with a high tack adhesive formulated to resist corrosion, Scotchwrap Brand 50 or equal.
- Apply 2 coats of a bitumastic coating.

E. Red indicating tape, or other approved means, shall be installed above the conduit or duct bank.

3.1.5. Installation: Except as shown, the minimum size conduit permitted is 3/4 inch for exposed work and one inch for conduit encased in concrete or mortar.

3.1.6. All bolts and hardware for fastening, etc., shall be cadmium plated.

3.1.7. Conduits shall not contain the equivalent of three 90-degree bends without the use of a pull/junction box approved for the purpose and in accordance with the National Electric Code.

3.1.8. All conduit extending through the floor behind panels or into control centers or similar equipment shall extend a minimum of six inches above the floor elevations, with no couplings at floor elevations.

3.1.9. Conduit installed in concrete or other masonry shall be so arranged that a minimum of three inches of covering is obtained. Spacing between conduits shall be sufficient to permit a complete filling with concrete or mortar without voids.

3.1.10. Conduits passing through sleeves in interior walls and floors shall be tightly sealed with an NFPA-approved fire-rated caulk.

3.1.11. Install in conformance with National Electrical Code (NFPA 70) requirements.

3.1.12. Supports:

A. Rigidly support conduits by clamps, hangers, or Unistrut channels.

B. Support single conduits by means of one hole pipe clamps in combination with one screw back plates, to raise conduits from the support surface. Support multiple runs of conduits on trapeze type hangers with steel horizontal members and threaded hanger rods, Kindorff or equal. Rods shall be not less than 3/8-inch diameter and shall be cadmium coated.

C. For PVC-coated rigid steel conduit runs, supports, and hardware shall be PVC-coated or stainless steel.

D. Conduit and/or conduit fittings shall not be welded together or to any steel structure; however, conduit supports may be welded to flanges of steel beams, columns, etc., in accordance with approved welding techniques and engineering practice.

3.1.13. Fastenings: Fasten raceway systems rigidly and neatly to support structures by the following methods:

A. To Wood: Wood screws.

B. To Hollow Masonry Units: Toggle bolts.

C. To Brick Masonry: Price expansion bolts, or equal.

D. To Concrete: Phillips, Hilti Corporation, or equal anchors.

E. To Steel: Welded threaded studs, beam clamps, or bolts with lockwashers or locknuts.

3.1.14. Empty Conduits:

A. Install nylon pull wire in each empty conduit and cap conduits not terminating in boxes with permanent fittings designed for the purpose.

B. Identify each empty conduit with a durable tag showing the conduit end points and mark on as-built drawings.

3.1.15. Field Bends: Factory bent elbows or field bent elbows with approved tools may be used. Heating of conduit to facilitate bending is prohibited except for PVC conduit where nonstandard bends are required. No indentations are allowed. Diameter of conduit shall not vary more than 15 percent at any bend.

3.1.16. Joints:

A. Apply conductive compound to all joints before assembly.

B. Make up joints tight and ground thoroughly.

C. Use standard tapered pipe threads for conduit and fittings.

D. Cut conduit ends square and ream to prevent damage to wire and cable.

E. Use full-threaded couplings. Split couplings are not permitted.

F. Use strap wrenches and vises to install conduit. Replace conduit with wrench marks.

G. Apply zinc-rich paint to exposed threads and other areas of the galvanized conduit system where the base metal is exposed.

H. Approved conduit expansion joints shall be provided wherever conduit crosses a structural expansion joint, is attached between two separate structures, and wherever the conduit run is 100 ft or more in a single straight length.

3.1.17. Terminations:

A. Install insulated bushings on conduits entering boxes or cabinets, except threaded hub types.

B. Provide locknuts on both inside and outside of the enclosure for grounding.

C. Bushings are not to be used in lieu of locknuts.

D. Connections from rigid conduit to motors, limit switches, solenoid valves, level controls, etc., shall be made with short lengths of liquid-tight flexible neoprene jacketed metal conduit. These lengths shall be provided with appropriate connectors with devices that will provide an excellent electrical connection between equipment and the rigid conduit for the flow of ground current.

3.1.18. Moisture Protection:

A. Plug or cap conduit ends at the time of installation to prevent the entrance of moisture or foreign materials.

B. Make underground and embedded conduit connections watertight.

C. Thru-wall Seals: Install for conduits passing through new exterior subsurface walls or base slabs of buildings and for conduits passing through existing exterior walls. For individual exposed conduits passing through interior walls, install non-metallic sleeves to protect the conduit against the action of alkaline substances, which may be present.

D. Drainage: Pay particular attention to drainage for conduit runs. Wherever possible, install conduit runs to drain to one end and away from buildings. Avoid pockets or depressions in conduit runs.

3.1.19. Corrosion Protection:

A. Conduit Curb:

- In concrete slabs or floors, provide a two-inch high curb extending two inches from the outer surface of the conduit penetrating the floor, to prevent corrosion.
- Terminate conduit stub-ups in couplings, slightly above the finished concrete curb.
- Paint the stub up with Scotch Clad Protective Coating #1706 or equal a minimum of 6 inches above and below the finished surface of the concrete.

B. Dissimilar Metals:

- Take every action to prevent the occurrence of electrolytic action between dissimilar metals.
- Do not use copper products in connection with aluminum work, and do not use aluminum in locations subject to drainage of copper compounds on the bare aluminum.
- Back-paint aluminum in contact with masonry or concrete with two coats of aluminum pigmented bituminous paint.

C. PVC Coating: Field apply a 40-mil thick polyvinyl chloride coating to supports and fasteners for PVC-coated conduit runs.

3.1.20. Reused Existing Conduits:

A. Pull a rag swab through the conduits to remove water and to clean the conduit prior to installing the new cable.

B. Repeat swabbing until all foreign material is removed.

C. Pull mandrel through conduit, if necessary, to remove obstructions.

3.1.21. Core drill for individual conduits passing through existing concrete slabs. Obtain authorization from the OWNER prior to core drilling. Seal spaces around conduit with epoxy grout. All cutting, channeling, and drilling of holes through walls, floors, foundations, and ceilings required for the correct installation of the electrical work shall be done by and repaired by the Contractor. The cost of cutting and patching shall be included in the bid. All work shall be finish painted (prime coat and two (2) finish coats) to match the existing finishes. All incidental damage to existing wall, structures etc. shall be refinished to the satisfaction of the owner's representative.

3.1.22. The cutting of walls or floors for conduit shall be kept to a minimum. Where such cutting is necessary care shall be taken so as not to weaken the walls or floor involved. Beams or other structural supports shall not be cut under any condition, except as approved in writing by the Engineer.

3.2. HAZARDOUS LOCATIONS

3.2.1. All conduit work in hazardous locations shall be performed in accordance with Article 500 of the National Electric Code, as shown on the contract drawings and as specified herein.

3.2.2. Conduit entering/exiting any hazardous Class I Division II areas shall have seal fittings installed for the purpose at the barrier between the two areas. A sealing compound ("Chico") shall be poured into fitting(s) after all wiring has been installed and accounted for.

3.2.3. Seal fittings shall also be installed at all devices, control stations, lighting fixtures, etc., which are not factory sealed and UL listed for hazardous locations.

3.2.4. Flexible conduit, solenoid valves, control stations, fittings, junction boxes, etc., utilized in hazardous locations shall be UL listed for use in hazardous areas.

3.2.5. Conduit sleeves/penetrations through floors and walls of hazardous areas shall be thoroughly sealed around the outside with non-shrink grout across the entire floor or wall thickness.

3.3. TELEPHONE CONDUITS

3.3.1. Material and Installation: Telephone conduits shall be of the material and size as required by the Telecommunications vendor. Each conduit shall be provided with a continuous 1/8-inch diameter nylon "fish line" pulled through for use by Telephone Co.

3.4. TESTING

3.4.1. Test conduits by pulling through each conduit a cylindrical mandrel not less than two pipe-inside-diameters long, having an outside diameter equal to 90 percent of the inside diameter of the conduit.

3.4.2. Maintain a record, by number, of all conduits testing clearly.

3.5. IDENTIFICATION

3.5.1. Tag all conduits at the ends and in all intermediate boxes, chambers, handholes, and other enclosures. Use durable tags securely fastened, appropriate for the environment.

END OF SECTION

SECTION 26 36 13

MANUAL TRANSFER SWITCH (WITH MCCB, ALL FRAMES)

PART 1 - GENERAL

1.1 SCOPE

(1) Install the low voltage manual transfer switches, pre-purchased by the Borough of Hamburg and furnished to the contractor, having the ratings, features/accessories and enclosures as specified herein and as shown on the contract drawings.

(2) The contractor shall check and verify that the equipment furnished by the Borough of Hamburg is in conformance to this specification and the contract drawings prior to installation. The contractor shall notify the engineer, prior to installation, of any deviations.

1.2 REFERENCES

(1) The transfer switch shall be designed, manufactured, and tested in accordance with the following latest applicable standards:

1. ETL/UL LISTED to 1008: Standard for Safety - Transfer Switch Equipment
2. UL 991 - Standard for Tests for Safety-Related Controls Employing Solid-State Devices
3. UL 50 - Standard for Enclosures for Electrical Equipment
4. NFPA 70 - National Electrical Code
5. NFPA 99 - Essential Electrical Systems of Health Care Facilities
6. NFPA 110 - Emergency and Standby Power Systems
7. NEMA ICS 10 - Electromechanical AC Transfer Switch Equipment
8. IEEE 446 - Recommended Practice for Emergency and Standby Power Systems

1.3 SUBMITTALS – FOR REVIEW/APPROVAL

(1) The following information shall be submitted to the Engineer:

1. Front view and plan view of the assembly
2. Schematic diagram
3. Conduit space locations within the assembly.
4. Assembly ratings including:
    a. Voltage rating
    b. Continuous current rating
    c. Withstand and closing current ratings

5. Cable terminal sizes
6. Cam Lock Connectors ratings and sizes.
7. Circuit breaker (including trip unit setting range)
8. Product Data Sheets.

(2) Where applicable, the following additional information shall be submitted to the Engineer:

1. Busway connection
2. Connection details between close-coupled assemblies
3. Composite front view and plan view of close-coupled assemblies

1.4 SUBMITTALS – FOR CONSTRUCTION

(1) The following information shall be submitted for record purposes:

1. Final as-built drawings and information for items listed in section 1.04 and shall incorporate all changes made during the manufacturing process.
2. Wiring diagrams
3. Certified production test reports
4. Installation information

1.5 QUALIFICATIONS

(1) For the equipment specified herein, the manufacturer shall be ISO 9001 or 9002 certified.

(2) The manufacturer of this equipment shall have produced similar electrical equipment for a minimum period of five (5) years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.

1.6 REGULATORY REQUIREMENTS

(1) Provide a certificate of compliance with UL 1008 for the transfer switches furnished under this section.

1.7 DELIVERY, STORAGE AND HANDLING

(1) Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of these instructions shall be included with the equipment at time of shipment.

(2) Equipment being stored prior to installation shall be maintained in a clean and dry condition. If stored outdoors, indoor equipment shall be covered and heated, and outdoor equipment shall be heated.

1.8 COORDINATION

(1) Coordinate layout and installation of Generator Docking Station, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

1.9 OPERATION AND MAINTENANCE MANUALS

(1) Equipment operation and maintenance manuals shall be provided with each assembly shipped and shall include instruction leaflets and instruction bulletins for the complete assembly and each major component.

1.10 GUARANTEE/WARRANTY

(1) Manufacturer Warranty shall be provided for a minimum of 1 Year,

(2) New materials and equipment shall be guaranteed against defects in composition, design, or workmanship. Guarantee certificates shall be furnished.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND MODELS

(1) Trystar:

1. TMTS-011W-LLM, Rotary Docking Station with Breaker (Temporary Generator Position), Solid Neutral
2. TMTS-013W-LLM-W, Rotary Docking Station with Breaker (Temporary Generator Position), Switched Neutral
3. TMTS-022W-LLM-W, Rotary Docking Station with Breaker (Temporary Generator Position), Switched Neutral
4. TMTS-025W-LLM-W, Rotary Docking Station with Breaker (Temporary Generator Position), Switched Neutral
5. TMTS-045W-LLM, Rotary Docking Station with Breaker (Temporary Generator Position), Solid Neutral

(2) The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety. Products in compliance with the specification and manufactured by others not named will be considered only if pre-approved by the engineer ten (10) days prior to bid date.

2.2 RATINGS

(1) Voltage and amperage ratings shall be as indicated on the drawings.

2.3 GENERAL CONFIGURATION

(1) Manual Transfer Switch (MTS) shall have three positions – Utility/Permanent Line – OFF – Temporary Line

2.4 INTERNAL CONSTRUCTION

(1) Transfer switches shall be UL 1008 listed for application in their intended enclosures at 100% of continuous ampere rating and shall meet or exceed UL 1008 endurance test criteria to include rate of operation and number of operation cycles.

1. The transfer switch shall be designed and intended for switching the load connection between two power sources.
2. The transfer switch shall include mechanical interlocks to prevent unintentional paralleling of the power sources.
3. The transfer switch shall be of double throw construction and include molded case switches and/or circuit breakers in a fixed mount configuration, with high-endurance characteristics capable of no-load and full-load interruptions at rated current equal to or exceeding UL 1008 endurance ratings. Breakers must be UL 489 Listed.
4. Molded case circuit breakers shall include integral overcurrent protection equipped, with an electronic trip element for source 1 and source 2.
5. Molded case switches/circuit breakers shall include a fixed instantaneous override trip element providing protection against high fault currents.
6. Molded case switches/circuit breakers shall be encased in a rigid housing constructed of durable high-strength insulating material with excellent dielectric characteristics capable of withstanding high-dynamic and thermal stresses. The molded case switch/circuit breaker interrupt current rating shall equal or exceed the transfer switch short-circuit withstand closing current rating.
7. Molded case switches/circuit breakers shall include arc extinguishers that confine, divide, and extinguish an arc that may develop between the main contacts.
8. The transfer switch shall include a reliable mechanical operator mechanism that can open and close the main contacts.
9. Front access to all molded case switch/circuit breaker connection points shall be provided for ease of troubleshooting.
10. Breakers shall be removable for service and maintenance.
11. The transfer switch main contacts shall be of silver composition, manually operated and mechanically held in position.
12. A removeable, steel dead-front panel shall be mounted in front of each molded case switch/circuit breaker providing a physical barrier when the front door is open.
13. The transfer switch shall include a permanently affixed handle for manually initiating and operating a load transfer between the power sources under full-rated load conditions.

14. The transfer switch shall provide colored, mechanical indication of source 1 and source 2 main contact position (open/closed).

15. A copper ground bus shall be furnished firmly secured to the enclosure structure.

16. Control wire bundles shall be secured to the assembly with nylon ties, pre-punched lances, or anchors. All current transformer secondary leads shall first be connected to shorting terminal blocks with shorting screws. Control wire shall be marked with an origin and destination over the entire length of the wire using a cured ink process to the maximum extent possible. Where ink marking is not possible, printed sleeve wire markers at each end of control wire shall be provided.

17. Mechanical type lugs shall be provided for all source 1, source 2, and load terminations suitable for copper or aluminum cable.

18. Two-hole compression type lugs shall be provided for all source 1, source 2, and load terminations suitable for copper or aluminum cable.

(2) Transfer switches shall be open transition (break-before-make) and permit the manual operator to pause in the load disconnect ("neutral") position.

(3) Transfer switches requiring a switched neutral shall include a fully rated fourth pole that is identical to the other power poles. Switched neutral poles which are add-on, overlap, or not capable of breaking full rated load current are not acceptable.

(4) Transfer switches requiring a solid neutral shall include a fully rated, solid neutral plate.

(5) Transfer switches shall be capable of being operated manually under full-rated load conditions. Manual operation shall be accomplished by use of a permanently affixed handle. Removable handles are not acceptable. Manual operators requiring power source disconnection or de-energization prior to manual operation are not acceptable.

(6) Transfer switches intended for use as service equipment shall meet the following:

1. UL1008 listed as a complete assembly to include the transfer switch, service disconnect, and overcurrent protection device(s). UL1008 listed transfer switches with a separately attached compartment or enclosure, for housing the service disconnect and/or overcurrent protection device(s), which has not passed UL 1008 temperature rise testing and is UL 891 listed only will not be accepted.

2. UL1008 listed and marked "continuous load current not to exceed 100 percent of switch rating". Transfer switches marked as 80 percent will not be accepted.

3. Provide integral overcurrent protection in the form of a molded case circuit breaker equipped with an electronic trip element for source 1 and source 2.

4. Provide a fused disconnect for control power.

5. Provide a ground bus, neutral disconnect link, and neutral-to-ground bonding jumper as required for service entrance equipment.

6. Provide ground fault protection for use with solidly grounded wye electric services of more than 150 volts to ground where the service disconnect rating is 1000A or more.

(7) Temporary generator and load bank connectors shall be Camlok style mounted on gland plate.

1. Camlok shall be 16 Series model and color coded according to system voltage requirements.
2. Camlok connections shall be Bus Bar Style, Cabling or Double Set Screw is not acceptable
3. Camlok connection shall be protected against accidental contact while not in use

(8) Permanent connection shall be factory installed broad range set-screw mechanical type, located behind a physical barrier.

2.5 ENCLOSURE

(1) Each transfer switch shall be provided in a NEMA 3R Rain-Tight Aluminum Enclosure suitable for use in environments indicated by the drawings.

(2) NEMA 3R steel enclosures shall include a light gray ANSI 61 finish.

(3) MTS shall be located behind pad lockable door to prevent any tampering by unauthorized personnel.

(4) The assembly shall be provided with adequate lifting means and shall be capable of being moved into installation position and mounted using the anchor points shown on the as-built drawings.

(5) Surge protection device: Provide a 100KA surge protection device as indicated on the drawings.

(6) Pad-lockable front door shall include a hinged access plate at the bottom for entry of temporary cabling that prevents unauthorized tampering while in use.

(7) NEMA 3R Integrity shall be maintained while temporary cabling is connected during use.

(8) Front and Side shall be accessible for maintenance.

(9) Top, Side, and Bottom shall be accessible for permanent cabling.

(10) Powder coat.

(11) Paint after fabrication shall be Hammer tone Gray.

2.6 PHASE, NEUTRAL, AND GROUND BUSBAR

(1) Material: Silver-plated Copper.

(2) Equipment Ground Bus: bonded to box.

(3) Isolated Ground Bus: insulated from box.

(4) Ground Bus: 50% of phase size.

(5) Neutral Bus: Neutral bus rated 100 percent of phase bus.

2.7 WITHSTAND AND CLOSING CURRENT RATINGS

(1) Short-circuit

1. The transfer switch shall be UL1008 listed and rated for use in a circuit capable of delivering the short-circuit current shown on the drawings.
2. The transfer switch shall have a short-circuit withstand and closing current rating of 100 KA at 480 volts.

2.8 FACTORY INSTALLED PHASE ROTATION MONITOR DEVICE

(1) Phase monitoring relay to be Siemens 3U4512-1AR20 or equal and factory installed

PART 3 - EXECUTION

3.1 EXAMINATION

(1) Examine elements and surfaces to receive Generator Docking Station for compliance with installation tolerance and other conditions affecting performance of the Work.

(2) Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FACTORY TESTING

(1) The following standard factory tests shall be performed on the equipment provided under this section. All tests shall be in accordance with the latest version of UL and NEMA standards.

1. Insulation checks to ensure the integrity of insulation and continuity of the entire system.
2. Visual inspection to ensure that the switch matches the specification requirements and to verify that the fit and finish meet quality standards.
3. Mechanical tests to verify that the switch's power sections are free of mechanical hindrances.
4. Electrical tests to verify the complete electrical operation of the switch and to set up time delays and voltage sensing settings of the logic.

(2) The manufacturer shall provide a certified copy of factory test reports.

(3) Transfer switch shall include a label indicating order number, catalog number, and date.

3.3 INSTALLATION

(1) The Contractors shall install all equipment per the manufacturer’s recommendations and the contract drawings.

(2) All necessary hardware to secure the assembly in place shall be provided by the contractor.

3.4 FIELD QUALITY CONTROL

(1) Third Party Tests and Inspections to include the following:

1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
2. Prepare test and inspection reports, including a certified report that identifies Generator Docking Station and that describes scanning results. Include notation.
3. Test the MTS, Mobile Generator and Mobile Load Bank system at each location.

3.5 MANUFACTURER'S CERTIFICATION

(1) A qualified factory-trained manufacturer's representative shall certify in writing that the equipment has been installed, adjusted, and tested in accordance with the manufacturer's recommendations.

(2) The Contractor shall provide a copy of the manufacturer's representative's certification.

3.6 TRAINING

(1) The Manufacturer's qualified representative shall conduct a training session for up to five (5) owner's representatives for 1 normal workday at a job site location determined by the owner. The training program shall consist of the instruction on the operation of the transfer switch and the major components within the assembly.

3.7 FIELD SERVICE ORGANIZATION

(1) The manufacturer of the MTS shall also have a national service organization that is available throughout the contiguous United States and is available on call 24 hours a day, 365 days a year.

3.8 IDENTIFICATION

(1) Comply with requirements in Division 26 Section "Identification for Electrical Systems."

(2) Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.

(3) Label each enclosure with engraved metal or laminated-plastic nameplate.

APPENDIX A: PREVAILING WAGE RATES

Notice

TO ALL PUBLIC WORKS EMPLOYERS:

Please be advised that effective February 18, 1992, Regulation N.J.A.C. 12:60-2.1 and 6.1 of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq requires that certified payroll records must be submitted to the public body for each employee on the project. The General Contractor is responsible for ensuring that each sub-contractor submits the certified payroll 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.

A copy of the certified payroll form may be obtained by contacting the New Jersey Department of Labor, Division of Workplace Standards, Public Contracts Section, P.O. Box 389, Trenton, NJ 08625-0389, telephone (609) 292-2259.

APPENDIX B: PUBLIC UTILITIES

BOROUGH OF HAMBURG
PUBLIC UTILITIES

The following is a list of all corporations, companies, agencies or municipalities owning or controlling the utilities in the vicinity of the project site, and the name, address and telephone number of their local representatives:

ELECTRIC:
JCP&L – 1-800-662-3115
www.firstenergycorp.com

GAS:
Elizabethtown Gas
1-800-242-5830
www.elizabethtowngas.com

GARBAGE PICKUP:
Ayers Sanitation – 973-948-3352
https://www.ayerssanitation.com/

Blue Diamond Disposal – 973-598-9800
https://www.bluediamonddisposal.com/

Waste Management – 1-800-633-9096
https://www.wm.com/

PHONE:
CenturyLink 1-800-366-8201
www.centurylink.com/

RECYCLING/DUMP:
SCMUA – 973-579-6998 x 107
www.scmua.org/

WATER and SEWER:
Borough of Hamburg
Alec Yanish
DPW Supervisor
973-827-7702
Email:DPW@hamburgnj.org

GAS:
CSC TKR, LLC
c/o Altice USA
275 Centennial Avenue
Piscataway, NJ 08854

Attn: Marilyn Davis
marilyn.davis16@alticeusa.com

Notification of major utilities for markout may be accomplished by calling Garden State Underground Location Service at 1-800-272-1000.

APPENDIX C: NEW JERSEY OFFICE OF EMERGENCY MANAGEMENT (NJOEM) GRANT

DHS/FEMA Region 2
One World Trade Center
285 Fulton Street
New York, New York 10007
FEMA

March 26, 2026

Major Douglas Lemanowicz
Governor's Authorized Representative
New Jersey Office of Emergency Management
P.O. Box 7068
West Trenton, NJ 08628-0068

RE: FEMA-4725-DR-NJ
Hazard Mitigation Grant Program (HMGP)
HMGP Project: 4725-0005
Borough of Hamburg
Generator for Critical Infrastructures Water/Sewer Pump Stations - Approval Letter

Dear Major Lemanowicz:

The Federal Emergency Management Agency (FEMA) Region 2 has completed review of the New Jersey Office of Emergency Management (NJOEM) request for funding of the Hazard Mitigation Grant Program (HMGP) project number 4725-0005 for the Borough of Hamburg Generator for Critical Infrastructures Water/Sewer Pump Stations Project. NJOEM is the grant recipient (hereinafter known as the Recipient), will administer this sub-grant award to the Borough of Hamburg (hereinafter known as the Sub-recipient).

Funding has been made available on February 28, 2026 in an amount not to exceed the project cost of $301,719.00 with a Federal share of $226,289.25 (75%) and the required non-Federal matching share of $75,429.75. In addition, Sub-recipient management costs (SRMC) were requested and have been made available for an amount not to exceed $11,314.46 with a Federal share of $11,314.46 and the required non-Federal matching share of $0.00. The necessary costs of requesting, obtaining, and administering federal disaster sub-grants will only be covered by an allowance as defined in 44 CFR Part 207. Approval is contingent upon the fulfillment of all conditions identified by FEMA, see the attached Conditions of Approval (COA). The following table details the funding available for this project.

	Federal Share	Non-federal Share	Total
Project Costs	$226,289.25	$75,429.75	$301,719.00
SRMC	$11,314.46	$0.00	$11,314.46
Total Funding	$237,603.71	$75,429.75	**$313,033.46**

The period of performance (POP) deadline of November 11, 2028, has been established for this grant program. The POP is in accordance with Hazard Mitigation Assistance Guidance dated March 22, 2023, Part. 8. Award Administration Requirements, G. Program Period of Performance. NJOEM will administer this sub-grant within the grant program POP.

The approved Scope of Work (SOW) as outlined within the application is for the purchase of a new 200-kilowatt (kW) trailer-mounted diesel generator for Borough Water and Wastewater Pump Stations to mitigate against the interruption of services for power outages. The Generator will be stored at the Department of Public Works (DPW) Garage in a covered storage garage in a non-flood area located at 8 Wallkill Avenue, Hamburg, NJ 07419.

The Water and Sewer Infrastructures to be protected are as follows:

Site #1 Sewer Station: 45 Limekiln Road, Hamburg, NJ 07419 Lat, Long: (41.13843, -74.57617).
Site #2 Sewer Station: 26 Quarry Road, Hamburg, NJ 07419 Lat, Long: (41.13843, -74.57011).
Site #3 Sewer Station: 201 Heritage Lane, Hamburg, NJ 07419 Lat, Long: (41.14067, -74.56455).
Site #4 Sewer Station: 57 Gingerbread Castle Road, Hamburg, NJ 07419 Lat, Long: (41.14560, -74.57814).
Site #5 Sewer Station: 14 Michael Court, Hamburg, NJ 07419 Lat, Long: (41.15934, -74.57136).
Site #6 Water/Well House: 55 Banks Street, Hamburg, NJ 07419 Lat, Long: (41.14438, -74.57039).
Site #7 Water/Well House: 80 Linwood Avenue, Hamburg, NJ 07419 Lat, Long: (41.15303, -74.57087).
Site #8 Water/Well House: 28 Main Street, Hamburg, NJ 07419 Lat, Long: (41.15147, -74.57559).

Any change to the approved Scope of Work as identified within the application must be submitted to FEMA Region 2 for consideration and approval prior to implementation. This includes any potential extension of the sub-recipient project schedule as identified within the conditions of approval. Execution of any modification to the approved scope of work without prior FEMA Region 2's approval may jeopardize funding for the sub-grant project as a whole. In accordance with 2 CFR Part 200, the Recipient must ensure that Sub-recipients are aware of requirements imposed upon them by Federal Statute and regulations.

Once the project is completed, the sub-recipient shall perform all necessary maintenance and annual inspections to ensure the structural stability of the project for its useful life. Maintenance and inspections shall be documented and maintained by the sub-recipient, since this documentation would be essential in determining the eligibility of federal funding for any future damages occurring at the site.

Should you have any questions or require additional information, please contact Sharon Edwards, Hazard Mitigation Assistance Branch Chief at (212) 680-3633 or by email at Sharon.Edwards@fema.dhs.gov.

Sincerely,

PATRICK M TUOHY
Digitally signed by PATRICK M TUOHY
Date: 2026.03.26 12:50:14 -04'00'

William McDonnell
Mitigation Division Director
FEMA Region 2

cc: Lt. Dinan Amin, State Hazard Mitigation Officer
Attachment: Conditions of Approval (COA)
Record of Environmental Consideration

CONDITIONS OF APPROVAL
HMGP Project # 4725-0005
Borough of Hamburg
Generator for Critical Infrastructures Water/Sewer Pump Stations

FEMA Region 2 approval is contingent upon fulfillment of all the following conditions:

1. **Approved Scope of Work**

   The approved Scope of Work (SOW) as outlined within the application is for the purchase of a new 200-kilowatt (kW) trailer-mounted diesel generator for Borough Water and Wastewater Pump Stations to mitigate against the interruption of services for power outages. The Generator will be stored at the Department of Public Works (DPW) Garage in a covered storage garage in a non-flood area located at 8 Wallkill Avenue, Hamburg, NJ 07419.

   The Water and Sewer Infrastructures to be protected are as follows:

   Site #1 Sewer Station: 45 Limekiln Road, Hamburg, NJ 07419 Lat, Long: (41.13843, -74.57617).
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   Site #6 Water/Well House: 55 Banks Street, Hamburg, NJ 07419 Lat, Long: (41.14438, -74.57039).
   Site #7 Water/Well House: 80 Linwood Avenue, Hamburg, NJ 07419 Lat, Long: (41.15303, -74.57087).
   Site #8 Water/Well House: 28 Main Street, Hamburg, NJ 07419 Lat, Long: (41.15147, -74.57559).

2. **SOW Changes**

   In accordance with 2 CFR 200.308, pass-through entities (the program Recipient) must obtain prior approval from FEMA prior to implementation of any proposed SOW change. Requests must be made in writing and demonstrate the need for the SOW change. The request should also include a revised SOW, schedule, and budget. Any SOW changes are subject to all programmatic requirements.

3. **Environmental Review Project Conditions**

   Any change to the approved SOW will require re-evaluation for compliance with NEPA and other Laws and Executive Orders. Sub-recipients should be made aware that this document does not address all federal, state, and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state, and local laws. Failure to obtain all appropriate federal, state, and local environmental permits and clearances may also jeopardize federal funding. If ground disturbing activities occur during construction, the Sub-recipient will monitor ground disturbance and if any unanticipated archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA. Further Environmental Review Project Conditions are included in the Conditions Section of the attached Record of Environmental Consideration (REC).

4. **Budget Changes**

   Recipients and Sub-recipients are permitted to re-budget within the approved direct cost budget to meet unanticipated requirements and may make limited program changes to the approved budget.

For more information on direct cost categories, please see 2 CFR Part 225, Cost Principles for State, Local, and Indian Tribal Governments. Projects will require the prior written approval of FEMA as follows:

- Cost overrun and underruns can result from a scope, schedule or budget change.
- Recipients must notify FEMA prior to redirecting funds from an underrun to other approved sub-grants for which an overrun has been requested. The sub-grant must continue to programmatic eligibility requirements to include cost share.

5. Project Completion Schedule

The sub-grant project must be completed under the project schedule provided by the Sub-recipient within the project application, as finalized prior to project approval. The project completion date for this sub-grant award is November 11, 2028. Changes to this schedule would be considered a SOW change and therefore must be pre-approved by FEMA and the grant Recipient. Please note, the sub-grant project schedule is unique and separate from the grant Period of Performance (POP). The grant POP is the period during which the Recipient (NJOEM) is expected to administer all HMGP activities under the declared disaster.

6. Period of Performance Extensions

In order for the sub-recipient to be considered for a period of performance extension, NJOEM must submit a formal written request to the Regional Administrator no later than ninety (90) days prior to the expiration of the period of performance and must include a justification for the extension. This justification is a written explanation of the reason or reasons for the delay; an outline of remaining funds available to support the extended performance period; and a description of performance measures necessary to complete the project within the requested extended period of performance. Other information required with this request includes: a revised budget information form (regardless of whether or not there are changes to the budget); copies of any contracts entered into by sub-recipient with vendors; percentage of work completed, and a description of all work completed. Extensions may not be considered for projects that are a result of delays in project initiation and implementation.

7. Reporting Requirements

Recipients and Sub-recipients must maintain records of work and expenditures. Recipients submit quarterly financial and performance reports to FEMA on January 30, April 30, July 30, and October 30. The first quarterly reports are due 30 days of the end of this first federal quarter following the initial grant award. FEMA may waive the initial reports. The Recipient shall submit quarterly financial status and performance reports thereafter until the grant ends. Failure to submit financial and performance reports to FEMA in a timely manner may result in an inability to access grant funds until proper reports are received by FEMA. Recipients are encouraged to contact FEMA should this occur.

8. Financial Reports

Recipients shall submit a quarterly Federal Financial Report (FFR). Obligations and expenditures must be reported on a quarterly basis through the FFR (SF-425), which is due to FEMA within 30 days of the end of each calendar quarter (e.g., for the quarter ending March 31, the FFR is due no later than April 30). A report must be submitted for every quarter of the POP, including partial calendar quarters, as well as for periods where no grant activity occurs. Future awards and fund drawdowns may be withheld if these reports are delinquent. The final FFR is due 90 days after the end of the POP.

The Office of Management and Budget (OMB) has directed that FFR (SF-425) replace the use of the SF-269, SF-269A, SF-272, and SF-272-A. The SF-425 is intended to provide Federal agencies and grant recipients with a standard format and consistent reporting requirements. FEMA may suspend drawdowns from SMARTLINK/PARS if quarterly reports are not submitted on time.

9. Performance Reports

The Recipient shall submit a quarterly performance report for each grant award. Performance reports should include:

- Reporting period, date of report, and Recipient POC name and contact information.
- Project identification information, including FEMA project number (including disaster number and declaration date for the HMGP), Sub-recipient, and project type using standard NEMIS project type codes.
- Significant activities and developments that have occurred or have shown progress during the quarter, including a comparison of actual accomplishments to the work schedule objectives established in the grant.
- Percent of work completed and whether completion is on schedule, a discussion of any problems, delays, or adverse conditions that will impair the ability to meet the timelines stated in the grant, and anticipated completion date.
- Status of costs, including whether the costs are: (1) unchanged, (2) overrun, or (3) underrun. If there is a change in cost status, the report should include a narrative describing the change.
- A statement of whether a request to extend the grant POP is anticipated.

Requests for additional project time extensions would only be considered in instances where the sub-recipient has provided the Recipient with accurate quarterly status reports. FEMA may suspend drawdowns from SMARTLINK if quarterly reports are not submitted on time.

10. Closeout

As required by 44 CFR 206,438(d), the Recipient will submit a letter signed by the Governor's Representative or equivalent certifying that:

- The reported costs were incurred in the performance of eligible work;

CONDITIONS OF APPROVAL

HMGP Project # 4725-0005

Borough of Hamburg

Generator for Critical Infrastructures Water/Sewer Pump Stations

- The approved work was completed, and the mitigation measure is in compliance with the provisions of the FEMA-STATE Agreement;
- Each sub-grant has been completed in compliance with the approved SOW;
- Actual expenditures have been documented and are consistent with the SF-424A or SF-424C;
- All program income has been deducted from total project costs as specified in 2 CFR Part 200.80;
- All project work was performed in accordance with all required and applicable building codes as modified or protected by the approved project.