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VILLAGE OF BALLSTON SPA
SARATOGA, NEW YORK
JOHN STREET TANK REHABILITATION
 OCTOBER 2023

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PART 1

LEGAL PROCEDURAL DOCUMENTS AND BONDS

Wherever any Item of these Specifications conflict with another Item of these Specifications, the more stringent requirements applicable to the condition shall govern.

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ADVERTISEMENT FOR BIDS

Sealed bids for JOHN STREET TANK REHABILITATION will be received by the _____ until _____ AM/PM local time on _____, 2023 and then at said office, publicly opened and read aloud. John Street Storage Rehabilitation includes repair, upgrades, painting and long term maintenance of a 750,000 gallon steel stand pipe water storage tank.

The Information for Bidders, Form of Bid, Form of Contract, Plans and Specifications and Forms of Bid Bond, Performance and Payment Bond and other Contract Documents may be examined at the following places:

VILLAGE OF BALLSTON SPA, 66 FRONT STREET, BALLSTON SPA NY 12020
AND
LABERGE GROUP, 4 COMPUTER DRIVE WEST, ALBANY, NEW YORK 12205.

An electronic copy of the documents may be obtained from Laberge Group by emailing bidding@labergegroup.com. The request must provide the following information: complete firm name, contact person, phone number, and email address. Documents will be emailed to the address provided. There is no charge for electronic files delivered by email. Only bidders who requested and received the contract documents directly from Laberge Group shall be permitted to bid. Any bidder that is not on the Laberge Group plan holder list will have their bid returned unopened.

The Owner reserves the right to waive any informalities or to reject any or all bids.

Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Information for Bidders.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the Contract.

BIDDERS OF THIS WORK WILL BE REQUIRED TO COMPLY WITH THE PRESIDENT'S EXECUTIVE ORDERS #11246 AND #11375. THE REQUIREMENTS FOR BIDDERS AND CONTRACTORS UNDER THIS ORDER, WHICH CONCERNS NON-DISCRIMINATION IN EMPLOYMENT, ARE EXPLAINED IN THE SPECIFICATIONS.

Minority and Women's Business Enterprises as well as Section 3 Business Enterprises are strongly encouraged to apply.

No bidder may withdraw his bid within forty-five (45) days after the actual date of the opening thereof.

DATE

Village Clerk

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INFORMATION FOR BIDDERS

1.2.01 PROPOSALS are requested for furnishing materials to be incorporated into the work and for furnishing the work and labor for the construction of

JOHN STREET TANK REHABILITATION

VILLAGE OF BALLSTON SPA, SARATOGA COUNTY, NEW YORK

in accordance with Drawings, Specifications, and other Contract Documents prepared by LABERGE GROUP, 4 Computer Drive West, Albany, New York 12205.

a. Form: Each Proposal shall be made on a form prepared therefore and included as one of the Contract Documents, and shall be submitted in a sealed envelope bearing the title of the work and the name of the Bidder.

b. Discrepancies: In case of a difference between the stipulated amount of the Proposal written in words and the stipulated amount of the Proposal written in figures, the stipulated amount stated in written words shall govern.

c. Modifications: Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered.

d. Examination of Contract Documents and Visit to Site: Before submitting a Proposal, Bidders shall carefully examine the Drawings, read the Specifications, and other Contract Documents, shall visit the site of the work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the Proposal a sum to cover the cost of all items in the Contract Documents.

e. Delivery of Proposals: Proposals shall be delivered by the time and to the place stipulated in the Advertisement. It is the sole responsibility of the Bidder to see that his Proposal is received in proper time. Any Proposal received after the scheduled closing time for receipt of Proposals shall be returned to the Bidder unopened.

f. Withdrawal: Any Bidder may withdraw his Proposal, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of Proposals.

g. Opening: Proposals will be opened and publicly read aloud at the time and place set forth in the Advertisement.

h. Award or Rejection: The Contract will be awarded to the lowest responsible Bidder, within 45 days after bid opening, complying with these Contract Documents. The Owner reserves the right to reject any or all Proposals or to waive any informality or technicality in any Proposal in the interest of the Owner. If at the time this Contract is to be awarded, the lowest bid submitted by a responsible Bidder does not exceed the amount of funds then estimated by the Owner as available to finance the Contract, the Contract will be awarded on the base bid or alternate base bid(s) where applicable. If such bid exceeds such amount, the Owner may reject all bids or may award the Contract on the base combined with such deductible alternates applied in the numerical order in which they are listed in the Proposal, as produces a net amount which is within the available funds.

1.2.02 INTERPRETATION OF DOCUMENTS: If any person contemplating submitting a Proposal is in doubt as to the true meaning of any part of the Drawings, Specifications or other Contract Documents, or finds discrepancies in or omissions from the Drawings or Specifications, he may submit to the Engineer a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery and all such requests shall be delivered no less than ten (10) days prior to the bid date. Any interpretation or correction of the documents will be made only by Addendum duly issued and a copy of the Addendum will be mailed or delivered to each person receiving a set of the Contract Documents. Neither the

Owner nor the Engineer will be responsible for any other explanations or interpretations of the Contract Documents.

1.2.03 ADDENDA: Any addenda issued during the time of bidding, or forming a part of the Contract Documents loaned to the Bidder for the preparation of his Proposal, shall be covered in the Proposal, and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Proposal.

1.2.04 BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL: No person, firm or corporation shall be allowed to make, file or to be interested in more than one Proposal for the same work, unless alternate Proposals are called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

1.2.05 PROPOSAL GUARANTY: Each Proposal shall be accompanied by a certified check or bid bond acceptable to the Owner, in an amount equal to at least 5% of the Proposal, payable without condition to the Owner, as a guaranty that the Bidder, if awarded the Contract, will promptly execute the Agreement in accordance with the Proposal and the other Contract Documents, and will furnish good and sufficient bond for the faithful performance of the same, and for the payment to all persons supplying labor and material for the work. The Proposal Guaranties of all Bidders except the three lowest will be returned promptly after the canvass of Proposals.

1.2.06 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND: The successful Bidder, simultaneously with the execution of the Contract, will be required to furnish a faithful Performance Bond in an amount equal to one hundred percent (100%) of the Contract Amount and a Labor and Material Payment Bond equal to one hundred percent (100%) of the Contract Amount; said Bonds shall be secured from a surety company satisfactory to the Owner. The forms of the Bonds the successful Bidder will be required to execute are included in the Contract Documents. The Performance Bond, and Labor and Material Payment Bond must remain in effect for twelve months after Project completion.

1.2.07 WAGE SCALE: The Contractor shall conform to the "General Prevailing Wage Scale" currently in effect, as prepared by the New York State Department of Labor. Prevailing rates to be paid are those that are in effect at the time the work is being performed. The current rates are appended hereto and made a part of the Contract Documents.

1.2.08 SALES AND COMPENSATING USE TAXES: The amount bid by the Contractor shall not include the sales and compensating use taxes of the State of New York or of any City and County in the State of New York for any materials which are to be incorporated into the work.

1.2.09 DISCLAIMER: In addition to all the information, conditions, and items contained within these Contract Documents, the Contractor should also take note of the following:

As of the date of the Advertisement for Bid of these contract documents, the Owner has not received all required government approvals. While it is expected that these approvals will be received in a timely manner, no guarantee is made to that effect and the Owner may not be able to award the project. The purpose of this note is to specifically advise the Bidder of the above and the Bidder agrees by his submission of a bid to hold the Owner and their agents harmless from any and all costs that may have been incurred in the preparation of the bid submitted.

SECTION 1.3

PROPOSAL

PLACE: _____

DATE: _____

Proposal of _____

(Hereinafter called "Bidder") * a corporation, organized and existing under the laws of the State of _____, * a partnership, or an individual doing business as _____

To the: Village of Ballston Spa (Hereinafter called "Owner")

Gentlemen:

The Bidder, in compliance with your invitation for bids for the construction of JOHN STREET TANK REHABILITATION having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence work on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project on or before September 15, 2024 as stipulated in the Specifications. Bidder further agrees to pay, as liquidated damages, the sum of \$250.00 plus Engineering Costs, for each consecutive calendar day there after, as hereinafter provided. The Bidder understands that: (1) certain of the Bid items listed below may have a stipulated minimum and maximum, or just stipulated unit price amount, and that for a Bid Proposal to be considered formal the unit price entered by the Bidder, for these particular items, must fall within the stipulated price range or the amount shown; (2) all unit or lump sum prices of the Bid Proposal shall be balanced and reflect true costs for the respective work; and (3) failure to submit a formal bid in accordance with these requirements will be considered sufficient grounds for rejection of the entire bid.

- Insert corporation, partnership or individual, as applicable.

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STATEMENT OF CONTRACTOR'S QUALIFICATIONS

This statement must be submitted by the Contractor with his proposal. All questions must be answered and the data given must be clear and comprehensive.

1. Name of Bidder _____
TELEPHONE NO. _____ FEIN: _____

2. Permanent main office address _____

3. When organized or began business _____

4. If a corporation, where incorporated _____

5. How many years have you been engaged in the contracting business under your present firm name?

6. Have you ever failed to complete any work awarded to you? _____
If so, where and why _____

7. Prequalification package: Bidders shall submit two (2) copies of a prequalification submittal with their bid.
The prequalification submittal shall include the following:

a. Project Experience

i. Rehabilitation Experience - Provide a complete record of their experience in the rehabilitation of painted steel/water storage tanks conforming to AWWA standards with a minimum capacity of 0.50 million gallons [MG]. The record shall indicate the size of the tank, the name and address of the owner, the year of rehabilitation, and the name of the engineer for each project.

ii. Maintenance and Inspection Experience – Provide a complete record of their experience in the annual inspection and maintenance of steel painted water storage tanks with a minimum capacity of 0.50 [MG] and a maximum capacity of 2 MG. The record shall indicate the size of the tank, the name and address of the owner, the year of the work , and the engineer for each project.

b. Contracts on Hand - (indicate location, client, gross amount of each contract, approximate anticipated dates of completion, A/E name, address and contact person).

c. Company Personnel – Provide the names, project responsibilities, experience on similar projects and resumes for personnel responsible for the following:

- Project Manager
- Design Engineer

- Site Superintendent
 - Quality Control Manager
- d. Construction Equipment, Materials and Methods – Provide the following:
- Summary of all equipment to be used in the rehabilitation of the tank.
 - Construction schedule and plan including labor requirements and responsibilities, sequencing, materials and methods.
 - Quality control plan and procedures including testing, correcting deficiencies, systems and methods, schedule and responsibilities.
 - List all major suppliers and subcontractors who may work on this project.
- e. Financial Capacity – Provide the following:
- References for bank and bonding company
 - Insurance Limits
 - Warranty Statement
 - Annual Reports and/or financial statements
 - Credit Available (written evidence)
- f. Safety Plan
- The Proposer shall submit a formal Safety Plan stating company policy on all safety procedures. Document procedures to include workers protection, confined space, and general safety procedure. Safety Program may be submitted on a separate CD or other electronic media.
- g. Environmental
- Each firm is responsible for testing the current materials in place on the tank for hazardous content. All work must comply with OSHA Confined Space Entry, New York State of Health Department, AWWA, NSF Regulations, EPA Standards, and the “10 States Standards” – Recommended Standards for Water Works Latest Addition. Proposals will be considered and should be written to provide the contracted maintenance of the tank previously listed within the RFP.
- h. Quality Assurance
- Each firm shall provide a description of the proposing company’s assurance to conduct and complete all work in adherence with all environmental, federal, and state regulations. The proposing company MUST address a quality assurance program in place to confirm all associated work will be completed in accordance with manufacturer’s recommendations, OSHA regulations, SSPC standards, AWWA specifications, and ANSI/NSF Standard 61 requirements.

TO BE SUBMITTED WITH BID PROPOSAL

- i. Provide a description of the proposing company's adherence to all requirements set forth by the International Organization of Standardization (ISO), under ISO 9001:2015. The proposing company must possess an ISO 9001:2015 Certification. Firms that do not possess an ISO 9001:2005 Certification or equivalent will not be considered. The proposing Firm must submit a copy of their ISO 9001:2015 certification.
 - j. The contractor shall sign, date and notarize the information provided and certify that to the extent of the Contractor's knowledge, the information is true and accurate, and the design and construction supervisory personnel for the tank construction will be directly involved with and used on this project. Substitutions of personnel and/or methods will not be allowed without the written authorization of the Owner.
8. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in certification of the recitals comprising this Statement of Contractor's Qualifications.

Dated at _____ this _____ day of _____, 2023.

NAME OF CONTRACTOR

BY _____

TITLE _____

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NON-COLLUSION CERTIFICATION

The Bidder certifies that:

1. (a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief;

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

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

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

(b) A bid shall not be considered for award nor shall any award be made where (a) (1) (2) and (3) above have not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a) (1) (2) and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the state, public department or agency to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph one (a).

2. Any bid hereafter made to the Municipality, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule or regulation, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

(Corporate Seal,
if any)

Sincerely yours,

Firm _____
By _____
Title _____
Address _____

Date: _____

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TO BE SUBMITTED WITH BID PROPOSAL

CERTIFICATE OF NON-DISCRIMINATION

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

1. The Contractor will not discriminate against any employee or applicant for employment because of race, gender, creed, color or national origin. The Contractor will take affirmative action to ensure that applicants are employees and that employees are treated (during employment), without regard to their race, gender, creed, color or national origin. Such action 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, selection for training, including apprenticeship. The Contractor agrees to post, in conspicuous places and available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.
2. The Contractor 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 race, creed, color or national origin.
3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice (to be provided by the agency contracting officer), advising the labor union or workers' representative of the Contractor's commitments under Section 202 of *Executive Order No. 11246 dated September 24, 1965*, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of *Executive Order No. 11246 of September 24, 1965*, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by *Executive Order No. 11246 of September 24, 1954*, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
6. In the event of the Contractor's non-compliance with the non-discrimination clauses of this contract or with any such rules, regulations or orders, this contract may be cancelled, terminated or suspended, in whole or in part, and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in *Executive Order No. 11246 of September 24, 1965*, and such other sanctions may be imposed and remedies invoked as provided in *Executive Order No. 11246 of September 24, 1964*, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of *Executive Order No. 11246 of September 24, 1965*, so that such provisions will be binding upon such subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

TO BE SUBMITTED WITH BID PROPOSAL

Firm _____

By _____

Title _____

Address _____

(Corporate Seal,
if any)

Date _____

BASE BID
BID PROPOSAL – VILLAGE OF BALLSTON SPA – JOHN STREET TANK REHABILITATION

| ITEM NO. | ESTIMATED QUANTITY | DESCRIPTION | TOTAL PRICE IN WRITING | TOTAL PRICE (Numerical Only) |
|--|--------------------|--|------------------------|------------------------------|
| 1 | LUMP SUM | Furnish and install all labor, materials, tools, plant, and equipment to complete John Street Rehabilitation, Complete Per Lump Sum. | \$ | \$ |
| TOTAL AMOUNT OF BASE BID – JOHN STREET TANK REHABILITATION | | | | |
| _____ AMOUNT IN WRITING | | | \$ | \$ |
| DEDUCTIBLE ALTERNATIVE NO. 1 – COMMUNICATIONS CORRAL | | | | |
| _____ AMOUNT IN WRITING | | | \$ | \$ |
| TOTAL AMOUNT OF BASE BID LESS DEDUCTIBLE ALTERNATIVE NO. 1 | | | | |
| _____ AMOUNT IN WRITING | | | \$ | \$ |
| 2025 ANNUAL INSPECTION AND MAINTENANCE COST | | | | |
| _____ AMOUNT IN WRITING | | | \$ | \$ |
| ANNUAL INFLATIONARY ADJUSTMENT PERCENTAGE APPLICABLE TO YEARS 2026 THROUGH 2043 | | | | |
| _____ AMOUNT IN WRITING | | | % | % |
| <ul style="list-style-type: none"> • DEPENDING UPON THE AMOUNT OF THE TOTAL BASE BID, THE OWNER RESERVES THE RIGHT TO ELIMINATE ANY OR ALL OF THE CONTRACT WORK, BASED UPON THE AVAILABILITY OF FUNDS, WITHOUT COST OF ANY NATURE TO THE OWNER. • THE OWNER RESERVES THE RIGHT TO ELIMINATE ANNUAL INSPECTION AND MAINTENANCE COSTS FROM THE CONTRACT AT ANY TIME UPON DELIVERY OF AT LEAST THREE (3) MONTHS ADVANCE NOTICE. | | | | |

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TO BE SUBMITTED WITH BID PROPOSAL

BID (PROPOSAL)

(Amounts are to be shown in both words and figures. In case of discrepancy the amount shown in words will govern.)

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 45 calendar days after the date of opening of bids.

In computing this bid, Bidder has not included the sales and compensating use taxes of the State of New York for any supplies or materials to be sold to the Owner pursuant to the provisions of the modifications to the General Conditions which are exempt from such taxes in accordance with the provisions of the modifications to the General Conditions.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal Contract attached within ten (10) days and deliver a Surety Bond, or Bonds, as required by the General Conditions. The bid security attached in the sum of _____ (\$ _____) is to become the property of the Owner in the event the Contract and Bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Bidder acknowledges receipt of the following Addendum:

| <u>Addendum No.</u> | <u>Dated</u> |
|---------------------|--------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Respectfully Submitted:

(Title)

Business Address & Zip Code

(SEAL - if bid is by
a corporation)

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AGREEMENT

1.4.01 THIS AGREEMENT, made as of the _____ day of _____, 2023, by and between Village of Ballston Spa, hereinafter called the Owner, and _____ hereinafter called the Contractor,

WITNESSETH, that whereas the Owner intends to purchase materials for, and have constructed, JOHN STREET TANK REHABILITATION hereinafter called the Project, in accordance with the Drawings, Specifications and other Contract Documents prepared by Laberge Group, 4 Computer Drive, West, Albany, New York 12205.

NOW, THEREFORE, The Owner and Contractor for the considerations hereinafter set forth agree as follows:

1.4.02 THE CONTRACTOR AGREES to sell all materials to be incorporated into the work and to furnish all the necessary labor, materials, equipment, tools, and services necessary to perform and complete, in a workmanlike manner, all work required for the construction of the Project, in strict compliance with the Contract Documents herein mentioned, which are hereby made a part of the Contract, including the following Addenda:

| ADDENDUM NO. | DATED |
|--------------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

a. **CONTRACT TIME:** Work under this Agreement shall be commenced upon written notice to proceed, and shall be completed within the period as set forth in the Proposal.

b. **SUBCONTRACTORS:** The Contractor agrees to bind every subcontractor by the terms of the Contract Documents. The Contract Documents shall not be construed as creating any contractual relations between any subcontractor and the Owner.

1.4.03 THE OWNER AGREES to purchase, and the Contractor agrees to sell and to accept, in full payment for all materials to be incorporated into the project, and for the furnishing of all work and labor required for the construction of the project, the Contract Amount of _____00/100 Dollars (\$ _____), in accordance with the provisions of the Contract Documents.

a. **TITLE** to all materials to be sold by the Contractor to the Owner, pursuant to the provisions of this Contract, shall immediately vest in the Owner, upon delivery of such materials to the job site, before their installation or incorporation into the project. Such materials then become the sole property of the Owner, subject to the right of the Owner and the Engineer to reject the same, within a reasonable period, for failure to conform to the standards and specifications of the Contract Documents and the purchase orders.

b. **PROGRESS PAYMENTS** will be made in accordance with the General Conditions of the Contract.

1.4.04 CONTRACT DOCUMENTS: The Contract comprises the Contract Documents listed in the General Conditions of the Contract and as supplemented herein. In the event that any provision of one Contract Document

conflicts with the provision of another Contract Document, the provision in that Contract Document first listed below shall govern, except as otherwise specifically stated:

- a. Agreement (This Instrument);
- b. Addenda to Contract Documents;
- c. Remaining Legal and Procedural Documents
 1. Proposal
 2. Information for Bidders
 3. Advertisement;
- d. Special Specification Requirements;
- e. Detailed Specification Requirements;
- f. Drawings;
- g. Special Conditions;
- h. General Conditions of the Contract (Sections 2.1 through 2.7);
- i. Bonds
 1. Performance Bond
 2. Labor and Material Payment Bond
 3. Proposal Guaranty.

1.4.05 AUTHORITY AND RESPONSIBILITY OF THE ENGINEER: All work shall be done under the general review of the Engineer. The Engineer shall decide any and all questions, which may arise, as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of Drawings and Specifications and all questions as to the acceptable fulfillment of the Contract on the part of the Contractor.

1.4.06 SUCCESSORS AND ASSIGNS: This Agreement and all of the covenants hereon shall inure to the benefit of and be binding upon the Owner and the Contractor, respectively and his partners, successors, assigns and legal representatives. Neither the Owner nor the Contractor shall have the right to assign, transfer or sublet his interests or obligations hereunder without written consent of the other party.

1.4.07 SPECIAL PROVISIONS: The Owner and the Contractor mutually agree that this Agreement shall be subject to the following Special Provisions, which shall supersede other conflicting provisions of this Agreement.

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

CONTRACTOR

Firm Name

*

By

Title

Business Address

City State Zip

OWNER

Village of Ballston Spa
Municipality

*

By Frank Rossi, Jr.

Mayor
Title

66 Front Street
Business Address

Ballston Spa New York 12020
City State Zip

* The Owner and Contractor shall place their respective seal (if any) over the signature of each authorized person signing this Agreement.

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SECTION 1.5

BID BOND

1.5.01 KNOW ALL MEN BY THESE PRESENTS, that we _____
_____, hereinafter called the Principal, as Principal, and the _____, of
_____, a corporation duly organized
under the laws of the State of New York, hereinafter called the Surety, as Surety, are held and firmly bound
unto _____ hereinafter called the Obligee, in the sum of _____
_____ Dollars (\$_____), for the payment of which sum well and truly to
be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors
and assigns, jointly and severally, firmly by these presents.

1.5.02 WHEREAS, the Principal has submitted a bid for John Street Tank Rehabilitation.

1.5.03 NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

1.5.04 SIGNED AND SEALED this _____ day of _____ A.D. 2023.

In the presence of:

PRINCIPAL (Seal)

WITNESS

TITLE

SURETY (Seal)

WITNESS

TITLE

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SECTION 1.6

PERFORMANCE BOND

1.6.01 KNOW ALL MEN BY THESE PRESENTS, that _____
_____, as Principal, hereinafter called the Contractor, and
(Here insert the name and address or legal title of the Contractor)

(Here insert the legal title of Surety)
as Surety, hereinafter called Surety, are held and firmly bound unto Village of Ballston Spa, 66 Front Street,
Ballston Spa, New York 12020 as Oblige, hereinafter called Owner, in the amount of _____
_____ Dollars
(\$ _____), for the payment whereof Contractor and Surety bind themselves, their heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by these presents.

1.6.02 WHEREAS, the Contractor has by written agreement dated _____, 2023 entered into a
contract with Owner for John Street Rehabilitation in accordance with drawings and specifications prepared
by LABERGE GROUP, 4 COMPUTER DRIVE WEST ALBANY, NEW YORK 12205 which contract is
by reference made a part hereof, and is hereinafter referred to as the Contract.

1.6.03 NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the
Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void;
otherwise it shall remain in full force and effect.

a. The Surety hereby waives notice of any alteration or extension of time made by the Owner.
b. Whenever the Contractor shall be, and declared by Owner to be in default under the Contract,
the Owner having performed Owner's obligations there under, the Surety may promptly remedy the default,
or shall promptly:

1. Complete the Contract in accordance with its terms and conditions; or
2. Obtain a bid or bids for submission to Owner for completing the Contract in
accordance with its terms and conditions, and upon determination by Owner and Surety of the lowest
responsible bidder, arrange for a contract between such bidder and Owner, and make available as
work progresses (even though there should be a default or a succession of defaults under the contract
or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of
completion less the balance of the Contract price; but not exceeding, including other costs and
damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph
hereof. The term "balance of the Contract price", as used in this paragraph, shall mean the total
amount payable by Owner to Contractor under the Contract and any amendments thereto, less the
amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final
payment under the Contract falls due.

d. No right of action shall accrue on this bond to or for the use of any person or corporation
other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

1.6.04 SIGNED AND SEALED this _____ day of _____ A.D. 2023.

In the presence of:

PRINCIPAL (Seal)

WITNESS

TITLE

SURETY (Seal)

WITNESS

TITLE

SECTION 1.7

LABOR AND MATERIAL PAYMENT BOND

1.7.01 KNOW ALL MEN BY THESE PRESENTS, that we _____,
_____, as Principal, hereinafter called the Principal, and
(Here insert the name and address or legal title of the Contractor)

(Here insert the legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto Village of Ballston Spa, 66 Front Street, Ballston Spa, New York 12020 as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the amount of _____ Dollars

(Here insert a sum equal to at least 100% of the Contract price)

(\$ _____), for the payment whereof Principal and Surety bind ourselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

1.7.02 WHEREAS, the Principal has by written agreement dated _____, 2023 entered into a contract with Owner for John Street Tank Rehabilitation in accordance with drawings and specifications prepared by LABERGE GROUP, 4 COMPUTER DRIVE WEST ALBANY, NEW YORK 12205 which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

1.7.03 NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

a. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

b. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

c. No suit or action shall be commenced hereunder by any claimant:

1. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer.

2. After the expiration of one (1) year following the date on which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is

prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

3. Other than in a State Court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

d. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

1.7.04 SIGNED AND SEALED this _____ day of _____ A.D. 2023.

In the presence of:

PRINCIPAL (Seal)

WITNESS

TITLE

SURETY (Seal)

WITNESS

TITLE

PART 2

GENERAL CONDITIONS OF THE CONTRACT

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GENERAL CONDITIONS OF THE CONTRACT

SECTION 2.1

CONTRACT DOCUMENTS

2.1.01 GENERAL: The Contract Documents comprise the following general classification of documents, including all additions, deletions and modifications incorporated therein before the execution of the Agreement:

- a. Bidding Documents;
- b. Contractual Documents;
- c. General Conditions of the Contract;
- d. Special Conditions;
- e. Drawings and Specifications;

2.1.02 BIDDING DOCUMENTS: Documents issued by the Owner to assist bidders in preparing their proposals include:

- a. Advertisement;
- b. Information for Bidders;
- c. Proposal: The offer of a Bidder to perform the work described by the Contract Documents made out and submitted on the prescribed Proposal Form, properly signed and guaranteed;
- d. Proposal Guaranty: A cashier's check or Bidder's Bond shall accompany the Proposal submitted by the Bidder, as a guaranty that the Bidder will enter into an Agreement with the Owner for the construction of the work, if the Contract is awarded to him;
- e. Addenda to Contract Documents: Any Addenda issued during the time of bidding or forming a part of the Contract Documents loaned to the Bidder for the preparation of his Proposal, shall be covered in the Proposal and shall be made a part of the Contract. Receipt of each Addendum shall be acknowledged in the Proposal.

2.1.03 CONTRACTUAL DOCUMENTS:

a. Agreement: The Agreement covers the performance of the work described in the Contract Documents, including all supplemental Addenda thereto and all general and special provisions pertaining to the work or materials therefor;

b. Bond: The Contractor shall, at the time of his execution of the Agreement, furnish bonds in a form prescribed by the Owner, with a Surety Company authorized to do business in the State where the work is located, as follows:

1. Performance Bond in an amount equal to 100% of the Contract Amount as a guaranty of good faith on the part of the Contractor to execute the work in accordance with the terms of the Contract.

2. Labor and Material Payment Bond in an amount equal to 100% of the Contract Amount as a guaranty of good faith on the part of the Contractor to make all payments for labor and material in connection with the Contract.

2.1.04 GENERAL CONDITIONS OF THE CONTRACT: The General Conditions outline certain general responsibilities of the Owner and the Contractor (who are the parties to the Contract) and also those responsibilities delegated by the Owner to the Engineer.

a. Modifications of the General Conditions are included so that these General Conditions of the Contract may be exactly tailored to the specific project.

2.1.05 SPECIAL CONDITIONS: Special Conditions are special provisions, not included in the General Conditions of the Contract, which apply to this specific project.

2.1.06 DRAWINGS AND SPECIFICATIONS: The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, materials, equipment and transportation necessary for the proper execution of the work, unless specifically noted otherwise. The Contractor shall do all the work outlined in the Contract Documents and all incidental work necessary to complete the project in a substantial and acceptable manner and to fully complete the work or improvement, ready for use, occupancy and operation by the Owner.

a. Discrepancies: Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer, who shall promptly correct such inconsistencies or ambiguities in writing. Any work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk;

b. Adequacy: Responsibility for adequacy of the design and for sufficiency of the Drawings and Specifications shall be borne by the Owner. The complete requirements of the work to be performed under the Contract shall be set forth in Drawings and Specifications to be supplied by the Owner through the Engineer or by the Engineer as representative of the Owner. The Drawings and Specifications shall be considered inseparable documents and in considering them, the Contractor shall rely upon both instruments in order to perform the work in accordance with their combined intent;

c. Aerial Photography and/or Mapping: If the detail plans are based upon field surveys and/or aerial photography mapping, the date of field surveys and/or photography for each plan/profile sheet is shown thereon. It is specifically noted that above ground and underground facilities and objects of every nature have changed since the dates of field surveys and/or photography being added to or deleted from the landscape or being otherwise modified. The Owner expressly disclaims the responsibility for the accuracy or completeness of the information given on the Drawings with respect to existing facilities and objects of every nature, above or below ground, and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information, such information being shown only for the convenience of the Contractor. The Contractor shall, independently and on his own account, verify the information given to his own satisfaction prior to submitting his Proposal, which Proposal shall include in the various unit prices or lump sum prices bid, sufficient compensation to cover all costs which may be incurred by the Contractor on account of any and all inaccuracies or incompleteness of information shown;

d. Additional Instructions: Further instructions may be issued by the Engineer during the progress of the work by means of Drawings, or otherwise to make clear or specific, the Drawings and Specifications, or as may be necessary to explain or illustrate changes in the work to be done;

e. Copies Furnished to Contractor: All required copies of Drawings and Specifications necessary for the execution of the work shall be furnished to the Contractor without charge, except as otherwise provided;

f. Dimensions: Only figured dimensions on the Drawings will be used by the Contractor. Where the work of the Contractor is affected by finished dimensions, these shall be determined by the Contractor at the site and he shall assume the responsibility therefor;

g. Reference To Other Specifications: Where reference is made to specifications such as ASTM, AWWA, AASHTO, etc., the latest edition shall be used. Whenever reference is made to the furnishing of materials or testing thereof to conform to the standards of any technical society, organization, or

body, it shall be construed to mean the latest standard, code, specification or tentative specification adopted and published at the date of Advertisements for Bids, even though reference has been made to an earlier standard. Reference to a technical society, organization or body, may be made in the Specification by abbreviations in accordance with the following list:

| | |
|------------|--|
| AASHTO | American Association of State Highway and Transportation Officials |
| ACI | American Concrete Institute |
| AGA | American Gas Association |
| AIEE | American Institute of Electrical Engineers |
| AISC | American Institute of Steel Construction |
| ANSI | American National Standards Institute |
| ASCE | American Society of Civil Engineers |
| ASME | American Society of Mechanical Engineers |
| ASTM | American Society for Testing Materials |
| AWPA | American Wood Preservers Association |
| AWSC | American Welding Society Code |
| AWWA | American Water Works Association |
| DIPRA | Ductile Iron Pipe Research Association |
| NEMA | National Electrical Manufacturers Association |
| Fed. Spec. | Federal Specifications |

Where reference is made to New York State Department of Transportation's "Standard Specifications", it is intended to mean the "Standard Specifications" of the Design and Construction Division, Department of Transportation, State of New York. Wherever reference is made to the "Standard Specifications", as amended, it is intended that the quality of materials and method of construction be that as contained in the latest edition, as amended, for like materials and items of work. Where the latest edition, as amended, does not embrace like materials or items of work, as specified herein, the provisions of the latest previous edition shall govern.

When no reference is made to a code, standard or specification, the Standard Specifications of the A.S.T.M. shall govern.

2.1.07 CONTRACT DOCUMENTS FOR THE USE OF THE ENGINEER: The Contractor shall maintain one complete set of the Contract Documents at the job site which shall be available to the Engineer at all times and upon which the Contractor shall record all changes and field adjustments.

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SECTION 2.2

OWNER-CONTRACTOR-ENGINEER RELATIONS

2.2.01 OWNER'S RIGHTS AND RESPONSIBILITIES:

a. **Prohibited Interests:** No officer, employee or any representative of the Owner, who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve, or take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any Subcontractor in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project or any part thereof.

b. **Lands by Owner:** The Owner will provide the lands shown on the Drawings or described in the Specifications upon which the work under the Contract is to be performed and to be used for right-of-way for access. Any delay in furnishing these lands by the Owner will be deemed proper cause for adjustment in the contract amount and in the time of completion;

c. **Base Lines and Bench Marks:** Unless otherwise specified, the Owner will establish base lines necessary for the location of the principal component parts of the work, together with a suitable number of elevation bench marks adjacent to the work;

d. **Owner's Right to Correct Deficiencies:** Upon failure to perform the work in accordance with the Contract Documents, including any requirements with respect to the Schedule of Completion and after five days written notice to the Contractor, the Owner, may, without prejudice to any other remedy he may have, correct such deficiencies in work intended to become a permanent part of the project;

e. **Suspension of Work by Owner:** The Owner shall have the authority to suspend the work, wholly or in part, for such period or periods as he may deem necessary due to unsuitable weather or such other conditions as are considered unfavorable to carry out the provisions of the Contract, or to supply materials meeting the requirements of the Contract Documents;

1. **Notice:** The work, or any portion thereof, may be suspended at any time by the Owner provided that he gives the Contractor five days notice of suspension which shall set forth the date on which work is to be resumed. The Contractor shall resume the work upon written notice from the Owner and within ten days after the date set forth in the notice of suspension. If the Owner does not give written notice to resume work within the ten days of the date fixed in the notice of suspension, the Contractor may abandon that portion of the work so suspended and shall be entitled to payment in accordance with Paragraph 2.7.15 "Payment for Work Suspended By the Owner."

f. **Owner's Right to Terminate Agreement and Complete the Work:** The Owner shall have the right to terminate his agreement with the Contractor after giving ten days written notice of termination to the Contractor without cause or in the event of any default by the Contractor.

1. **Default by Contractor:** It shall be considered a default by the Contractor whenever he shall:

(a) Declare bankruptcy, become insolvent or assign his assets for the benefit of his creditors;

(b) Disregard or violate provisions of the Contract Documents or fail to prosecute the work according to the agreed Schedule of Completion, including extensions thereof;

(c) Fail to provide a qualified superintendent, competent workmen or subcontractors or proper materials, or fail to make prompt payment therefor.

2. **Completion by the Owner:** In the event of termination of the Agreement by the Owner because of default by the Contractor, the Owner may take possession of the work and of all

materials and equipment thereon and may finish the work by whatever method and means he may select.

2.2.02 CONTRACTOR'S RIGHTS AND RESPONSIBILITIES: All work shall be done in strict accordance with the Contract Documents. Observations, construction reviews, tests, recommendations by the Engineer or persons other than the Contractor, shall in no way relieve the Contractor of his obligation to complete all work in accordance with the Contract Documents. All work shall be done under the direct supervision of the Contractor. The Contractor shall be responsible for construction means, methods, techniques and procedures and for providing a safe place for the performance of the work by the Contractor, Subcontractors, suppliers and their employees and for access, use, work or occupancy by all authorized persons.

a. **Lands Provided by the Contractor:** Any land and access thereto not specifically shown to be furnished by the Owner that may be required for temporary construction facilities or for storage of materials shall be provided by the Contractor with no liability to the Owner. The Contractor shall confine his apparatus and storage to such additional areas as he may provide at his expense.

1. **Private and Public Property:** The Contractor shall not enter upon private property for any purpose without obtaining permission and he shall be responsible for the preservation of all public property, trees, monuments, structures and improvements, along and adjacent to the street and/or right-of-way and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits and other underground structures and shall protect carefully from disturbance or damage all monuments and property markers until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

b. **Surveys:** Based upon the information provided by the Owner, the Contractor shall develop and make all detailed surveys necessary for construction, including slope stakes, batter boards, stakes for pile locations and other working points, lines and elevations. The Contractor shall carefully preserve bench marks, reference points and stakes and, in the case of destruction thereof by the Contractor or resulting from his negligence, the Contractor shall be charged with the expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the loss or disturbance of such bench marks, reference points and stakes.

The Contractor shall engage the services of either a Professional Land Surveyor or Professional Engineer in private practice and licensed in New York State to: make the stake-out survey for construction purposes; replace monuments and property markers disturbed by construction; perform such work to only the highest standards of professional practices; and to promptly furnish to the Engineer neat and clean copies of all field notes, maps, etc.

The Contractor shall furnish all stakes and markers and shall furnish such labor or assistance as the Engineer may require in checking and measuring the work and for any other surveying purpose;

c. **Public Utilities:** The elevation and location of all public utilities shown on the Drawings were taken from existing public records. It shall be the duty of the Contractor to make final and exact determination of the location and extent of all utilities and he will be liable for any expense resulting from damage to them;

d. **Obstructions:** In addition to showing the structures to be built, the Drawings may show certain information obtained by the Owner regarding the pipes, conduits, poles, utilities and other structures which exist along the lines of the work, both at and below the surface of the ground.

The Owner expressly disclaims the responsibility for the accuracy or completeness of the information given on the Drawings with respect to the foregoing, and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness or omission of such information; said information being shown only for the convenience of the Contractor who must verify the information given to his own

satisfaction. He shall independently, and on his own account, make any underground explorations or similar investigations prior to submitting his proposal.

The giving of this information on the Contract Drawings shall not relieve the Contractor of his obligation to support, protect, repair and/or relocate all pipes, conduits, poles, utilities and other structures and to make good all damage done by his operations at his own cost and expense, unless otherwise provided for in these Specifications;

e. Superintendent: A qualified superintendent, who is acceptable to the Owner, shall be maintained on the work and give efficient supervision to the work until its completion. The superintendent shall have full authority to act in behalf of the Contractor, and all instructions given to the superintendent shall be considered as given to the Contractor. It shall be the responsibility of this Contractor's superintendent to coordinate the work of all the Subcontractors. The superintendent shall be present on the site at all times to perform adequate supervision and coordination;

f. Subcontracts: At the time set forth in the Contract Documents or when requested by the Owner, the Contractor shall submit in writing, for review of the Owner the names of the Subcontractors proposed for the work. Subcontractors may not be changed except at the request or with the approval of the Owner. The Contractor is responsible, to the Owner, for the acts and deficiencies of his Subcontractors and of their direct and indirect employees to the same extent as he is responsible for the acts and deficiencies of his employees. The Contract Documents shall not be construed as creating any contractual relation between any Subcontractor and the Owner. The Contractor shall bind every Subcontractor by the terms of the Contract Documents.

1. For convenience of reference and to facilitate the letting of Contracts and Subcontracts, the Specifications are separated into titled sections. Such separation shall not, however, operate to make the Owner or the Engineer an arbiter to establish limits to the contracts between Contractor and Subcontractor;

g. Contractor's Right to Suspend Work or Terminate Agreement: The Contractor may suspend work or terminate his Agreement with the Owner upon ten days written notice to the Owner for any of the following reasons:

1. If an order of any court or other public authority caused the work to be stopped or suspended for a period of ninety days through no act or fault of the Contractor or his employees;

2. If the Owner should fail to act upon any Request for Payment within forty-five days after it is presented in accordance with the General Conditions of the Contract; or

3. If the Owner should fail to pay the Contractor any sum within forty-five days after its award by arbitrators;

h. Work During an Emergency: The Contractor shall perform any work and shall furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases he shall notify the Owner of the emergency as soon as practicable, but he shall not wait for instruction before proceeding to properly protect both life and property.

2.2.03 RESPONSIBILITY OF THE ENGINEER: The Engineer shall decide questions which may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of Drawings and Specifications and all questions as to the acceptable fulfillment of the Agreement on the part of the Contractor. The duties and responsibilities of the Engineer, as set forth herein, shall not be extended except through written consent of the Engineer and the Owner.

a. Observation of the Work: All materials and each part or detail of the work shall be subject, at all times, to observation by the Engineer and the Owner, and the Contractor will be held strictly to the intent of the Contract Documents in regard to quality of materials, workmanship and the diligent execution of the Contract. Observations may be made at the site or at the source of material supply whether mill, plant or shop.

The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor, as is required, to make his observations and construction review;

b. Acceptability of Work: The Engineer's decision as to the acceptability or adequacy of the work shall be final and binding upon the Contractor. The Contractor agrees to abide by the Engineer's decision relative to the performance of the work;

c. Engineer's Decisions: All claims of the Owner or the Contractor shall be presented to the Engineer for decision which shall be final except in cases where time and/or financial considerations are involved which shall be subject to arbitration.

2.2.04 ORAL AGREEMENTS: No oral order, objection, claim or notice by any party to the others shall effect or modify any of the terms of obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing and no evidence shall be introduced in any proceeding of any other waiver or modification.

2.2.05 OBSERVATION OF COMPLETED WORK: The Contractor shall remove or uncover such portions of the completed work as may be directed by the Owner at any time before acceptance of the work. After examination, the Contractor shall restore the work to the standard required by the Contract Documents. Should the work thus exposed or examined prove acceptable, the uncovering or removing and the restoring of the work shall be paid for as Extra Work; but should the work exposed or examined prove unacceptable, the uncovering, removing and restoring of the work shall be at the Contractor's expense.

2.2.06 INSPECTION BY STATE AND/OR FEDERAL REPRESENTATIVES: The authorized representatives of Federal and State Agencies shall have access to the work wherever it is in preparation of progress and the Contractor shall provide proper facilities for such access and inspection. The Contractor shall agree that representatives of the Federal and State Agencies will have access to the work at any time they may desire and that records, materials, equipment and work completed or under construction which are subject to inspection, review or examination by the Engineer or Owner may be examined by said representatives at any time they may desire. The Contractor shall provide proper and reasonable facilities for such inspection, review or examination and shall provide the inspecting representatives with a guide in the person of a construction superintendent, foreman, engineer or other qualified or informed representative of the Contractor for the duration of each inspection period. The provision of proper and reasonable facilities and the provision of a guide will be at the Contractor's sole cost and expense. The Contractor will receive no direct payment for providing such facilities and guide and compensation for same shall be included in the prices to be paid for the various Items of the Contract.

2.2.07 WORK BY OWNER OR OTHER CONTRACTORS:

a. Separate Contracts: The Owner may let other contracts in connection with the Construction. The Contractor shall cooperate with other contractors with regards to storage of materials and execution of their work. It shall be the Contractor's responsibility to observe all work by other contractors affecting his work and to report to the Owner any irregularities which will not permit him to complete his work in a satisfactory manner. His failure to notify the Owner of such irregularities shall indicate that the work of other contractors has been satisfactorily completed to receive his work. The Contractor shall not be responsible for defects of which he could not have known and which develop in the work of others after the work is completed. It shall be the responsibility of the Contractor to measure the completed work in place and report to the Owner, immediately, any differences between completed work by others and the provisions of the Contract Documents;

b. Written Agreement: Whenever work being done by the Owner, through his own employees or through other contractors, is contiguous to work covered by the Contract Documents the respective rights of the various interests involved shall be established by written agreement to secure the completion of the various portions of the work in general harmony.

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SECTION 2.3

MATERIALS, EQUIPMENT AND WORKMANSHIP

2.3.01 MATERIALS AND EQUIPMENT: The materials and equipment installed in the work shall meet the requirements of the Contract Documents and no materials or equipment shall be ordered until reviewed by the Engineer. All materials and equipment not otherwise specifically indicated shall be furnished by the Contractor. The Contractor shall guarantee all materials and equipment he provides in accordance with Paragraph 2.3.08.

a. Substitutions: In order to establish standards of quality, the Engineer has, in the detailed Specifications, referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equivalent or better quality by manufacturers where fully suitable in design.

1. The Contractor shall furnish a complete list of proposed substitutions prior to signing of the Contract, together with such engineering and catalog data as the Engineer may require;

2. The Contractor shall abide by the Engineer's recommendations when proposed substitute materials or items of equipment are not recommended for installation and shall furnish the specified material or item of equipment in such case. All proposals for substitutions shall be submitted in writing by the Contractor and not by individual trades or material suppliers. The Engineer will review the proposed substitutions and make his recommendations in writing within a reasonable time;

b. Space Requirements: It shall be the responsibility of the Contractor to insure that materials and equipment to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Contract Documents.

Before ordering any material or doing any work, the CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT A STRUCTURE ON PROJECT AS CONTEMPLATED BY THIS CONTRACT AND SHALL BE RESPONSIBLE FOR CORRECTNESS OF SAME. No extra charge or compensation will be allowed on account of difference between actual dimensions and measurements indicated on Drawings, any difference which may be found shall be submitted to the Engineer for consideration before proceeding with the work;

c. Excavation For Test Pits: Under this Contract, the Contractor shall perform excavation for test pits and other exploratory excavation as may be desirable for locating underground structures or for examining the trench conditions in advance of actual trenching operations, when required by the Engineer.

Wherever the Engineer shall so recommend, the Contractor shall excavate test pits. The work shall be carefully performed within the limits given by the Engineer, by hand digging so as not to disturb or injure underground structures. The Engineer may require the Contractor to provide sheeting or suitable bracing if conditions so warrant. Pumps shall be provided for dewatering, if so recommended by the Engineer.

The safety of persons and property shall be guarded by the use of barricades and warning lights, the same as prescribed under the provisions of excavation under the appropriate Items of this Contract.

After the information on underground conditions has been noted, the test pit shall be promptly filled in. Material used in backfilling shall be "selected backfill" in accordance with Item No. 3B of the Contract Specifications, unless, in the opinion of the Engineer, the excavated materials are suitable. Excess material from the excavation shall be promptly disposed of in an approved manner.

No test pit or exploratory excavation shall remain open overnight, except with the express permission of the Engineer.

Where the Contractor may consider it necessary for his own convenience, he may, at his option, excavate test pits for exploratory purposes. However, unless specifically directed by the Engineer, such work shall be performed as an adjunct to other Items of the Contract, at the Contractor's own cost and expense. Where the Contractor is specifically directed by the Engineer to excavate Test Pits, the Contractor will be reimbursed at a unit price of \$30.00 per cubic yard, for the total volume of excavation measured within the lines given by the Engineer. Where the volume of excavation is less than 3-1/3 cubic yards, the Contractor will be guaranteed a minimum of \$100.00 per test hole. The volume to be paid for shall be strictly limited to the lines given and any excess excavation shall be at the Contractor's own cost and expense.

The above payment shall be considered reimbursement to the Contractor for: the cost of excavation; protection of the trench by sheeting, bracing, barricades and warning lights; dewatering; backfilling; together with all other labor materials, tools, plant and equipment to properly perform the work. No added allowance to cover any claim for overhead and profit will be due the Contractor, the same being considered allowed for in the unit price of the minimum herein agreed;

d. Arrangement: Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the Contractor to install the equipment to operate properly and in harmony with the intent of Contract Documents and to make all changes in the work required by such arrangement;

e. Unacceptable Materials and Equipment: Materials and equipment which do not conform to the requirements of the Contract Documents or which are not equal to samples reviewed by the Engineer, or which are in any way unsatisfactory or unsuited to the purpose for which they are intended shall be termed unacceptable and shall not be furnished nor installed in the work;

f. Storage: Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and/or they shall be placed under cover. Stored materials and equipment shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the owner or lessee;

g. Manufacturer's Directions: Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as recommended by the manufacturer.

2.3.02 SAMPLES: All samples called for in the Specifications or required by the Engineer shall be furnished by the Contractor and shall be submitted to the Engineer for his review. Samples shall be furnished so as not to delay fabrication, allowing the Engineer reasonable time for the consideration of the samples submitted.

a. Samples For Tests: Contractor shall furnish such samples of materials as may be required for examination and testing. All samples of materials for tests shall be taken according to standard methods or as provided in the Contract Documents;

b. Tests: Reviews and tests required to establish compliance with the Contract Documents, except as otherwise provided in the Contract Documents, will be made by an independent testing agency selected by the Owner. The cost of the initial services of such agency will be paid by the Owner, unless the test indicates non-compliance with the Contract Documents, in which case the cost thereof shall be borne by the Contractor. When the initial tests indicate non-compliance with the Contract Documents, the cost of any subsequent retesting occasioned by such non-compliance shall be borne by the Contractor. The Contractor shall provide facilities for access for inspection and testing.

Reviews or tests required by codes or ordinances, or by a plan approval authority and made by a legally constituted authority shall be the responsibility of, and paid for by, the Contractor.

Reviews or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor;

c. **Contractor's Guaranty:** All samples shall be submitted by the Contractor with a covering letter indicating that such samples are recommended by the Contractor for the service intended and that the Contractor's Guaranty will fully apply;

d. All materials, equipment and workmanship shall be in accordance with samples guaranteed by the Contractor and reviewed by the Engineer.

2.3.03 SHOP DRAWINGS: The Contractor shall provide shop drawings, setting schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the Drawings, Specifications or the Engineer's instructions. Deviations from the Drawings and Specifications shall be called to the attention of the Engineer at the time of the first submission of shop drawings and other drawings for consideration. The Engineer's review of any drawings shall not release the Contractor from responsibility for such deviations. Shop drawings shall be submitted according to a schedule prepared jointly by the Contractor and the Engineer.

a. **Contractor's Certification:** When submitted for the Engineer's review, shop drawings shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings, that they are in harmony with the requirements of the Project and with the provisions of the Contract Documents, and that he has verified all field measurements and construction criteria, materials, catalog numbers and similar data. The Contractor shall also certify that the work represented by the shop drawings is recommended by the Contractor and the Contractor's Guaranty will fully apply;

b. Before initiating work, the Contractor shall prepare a list of all materials and equipment and a schedule for the submission of shop drawings for the review of the Engineer. Shop drawings, samples and equipment data shall be accompanied by the Contractor's transmittal letter, in duplicate, and shall be dated and contain: name of project; description of names of equipment; materials and items; complete identification of locations at which materials or equipment are to be installed; number of drawings, samples, titles and other pertinent data.

Unless otherwise specified, the number of shop drawings, samples and equipment data which the Contractor shall submit and, if necessary, resubmit, is the number that the Contractor requires to be returned, plus three (3) paper and one (1) electronic copy in PDF format which will be retained by the Engineer.

If the Engineer's review determines that a particular drawing, sample or equipment data is not acceptable, one copy of same shall be returned to the Contractor.

2.3.04 EQUIPMENT DATA: The Contractor shall submit, for the Engineer's review, complete catalog data for every manufactured item of equipment and all components to be used in the work, including specific performance data, material description, rating, capacity, working pressure, material gauge or thickness, brand name, catalog number and general type. This submission shall be compiled by the Contractor and reviewed by the Engineer before any of the equipment is ordered.

a. **Index:** Each data sheet or catalog in the submission shall be indexed according to specification section and paragraph for easy reference;

b. **Relation to Contract Documents:** Catalog data for equipment reviewed by the Engineer shall not supersede the Engineer's Contract Documents. The review of the Engineer shall not relieve the Contractor from responsibility for deviations from Drawings or Specifications, unless he has, in writing, called the Engineer's attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in the Items submitted. The Contractor shall check the work described by the catalog data with the Engineer's Contract Documents for deviations and errors;

c. **Contractor's Certification:** Equipment data shall be submitted by the Contractor with a covering letter indicating that he has reviewed, checked and approved the data submitted, that they are in harmony with the requirements of the Project and with the provisions of the Contract Documents and that he

has verified all field measurements and construction criteria, materials, catalog numbers and similar data. Contractor shall also certify that the work represented by the equipment catalog is recommended by the Contractor and that his Guaranty will fully apply;

d. Operating Instructions, Etc.: At a time prior to the operation and acceptance of the equipment, the Contractor shall furnish and deliver to the Engineer ten (10) complete sets of approved shop drawings, instructions, technical bulletins, diagrams, spare parts lists and diagrams, etc., containing full and complete information required for the proper operation, maintenance and repair of the equipment. All materials submitted shall be suitably bound and indexed. All materials shall be bound in heavy duty 3-ring binders with pockets for drawings, etc. which are not suitable for punching. This requirement is in addition to the shop drawings submitted for the Engineer's review;

e. Experience Clause: Equipment which does not meet experience periods specified herein can be considered only if the equipment supplier or manufacturer provides an acceptable bond or cash deposit which will guarantee in full the cost of removal and replacement in the event of equipment failure. The period of time for which the bond or cash deposit is required shall be equal to the experience period specified. The equipment which does not meet the specified experience period, but is being proposed under the conditions stated above, shall meet all technical requirements. The requirements as stated above will also apply to new materials as well as equipment.

2.3.05 REJECTED WORK AND MATERIALS: Any defective work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be removed within ten days after written notice is given by the Owner and the work shall be re-executed by the Contractor. The fact that the Engineer may have previously overlooked such defective work shall not constitute an acceptance of any part of it.

a. Should the Contractor fail to remove rejected work or materials within ten days after written notice to do so, the Owner may remove them and may store the materials;

b. Correction of faulty work after final payment shall be in accordance with Paragraph 2.6.17.

2.3.06 CUTTING AND PATCHING: The Contractor shall do all necessary cutting and patching of the work that may be required to properly receive the work of the various trades or as required by the Drawings and Specifications to complete the structure. He shall restore all such cut or patched work as recommended by the Engineer. Any cutting of the existing structure that may endanger the work, adjacent property, workmen or the public shall not be done.

2.3.07 CHARACTER OF WORKMEN: The Contractor shall, at all times, be responsible for the conduct and discipline of his employees and/or any Subcontractor or persons employed by the Subcontractors. All workmen must have sufficient knowledge, skill and experience to properly perform the work assigned to them. Any foreman or workman employed by the Contractor or Subcontractor who does not perform his work in a skillful manner or appears to be incompetent or to act in a disorderly or intemperate manner shall, at the written request of the Owner, be discharged immediately and shall not be employed again in any portion of the work without the approval of the Owner.

2.3.08 GUARANTY: The Contractor shall guarantee all materials, equipment furnished and the work performed for a period of one year from the date of written acceptance of the work.

a. The Performance Bond shall remain in full force and effect during the guaranty period;

b. Correction of faulty work after final payment shall be as provided in Paragraph 2.6.17.

SECTION 2.4

INSURANCE, LEGAL RESPONSIBILITY AND SAFETY

2.4.01 INSURANCE: The Contractor shall not commence any work until he obtains, at his own expense, all required insurance. Such insurance must have the approval of the Owner as to company, limit, form, and amount. The Contractor shall not permit any Subcontractor to commence work on this project until the same insurance requirements have been complied with by such Subcontractor.

a. **Types:** The types of insurance the Contractor is required to obtain and maintain for the full period of the Contract will be: Workmen's Compensation Insurance, Comprehensive General Liability Insurance, Owner's Contractor's Protective Liability and Commercial Umbrella Insurance and Automotive Insurance, all as detailed in the following portions of this specification.

b. **Evidence:** As evidence of specified insurance coverage, the Owner may, in lieu of actual policies, accept certificates issued by the insurance carrier showing such policies in force for the specified period. Each policy or certificate shall bear an endorsement or statement waiving right of cancellation or reduction to coverage within ten days notice in writing, to be delivered by registered mail, to the Owner. Should any policy be cancelled before final payment by the Owner to the Contractor and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor under this Contract.

c. **Adequacy of Performance:** Any insurance bearing on adequacy of performance shall be maintained after completion of the project for the full guaranty period. Should such insurance be cancelled before the end of the guaranty period and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to charge the cost thereof to the Contractor.

d. **Payment of Damages:** Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations under this Contract.

2.4.02 WORKMEN'S COMPENSATION INSURANCE: Before the Agreement between the Owner and the Contractor is entered into, the Contractor shall submit written evidence that he and all Subcontractors have obtained, for the period of the Contract, full Workmen's Compensation Insurance coverage for all persons whom they employ or may employ in carrying out the work under this Contract. This insurance shall be in strict accordance with the requirements of the most current and applicable State Workmen's Compensation Insurance Laws.

2.4.03 COMPREHENSIVE GENERAL LIABILITY INSURANCE: Before commencement of the work, the Contractor shall submit written evidence that he and all his Subcontractors have obtained for the period of the Contract, full Comprehensive General Liability Insurance coverage and will provide updated proof as policies renew throughout the period of the contract. This coverage shall provide limits of \$1,000,000 per occurrence for both bodily injury, personal injury and property damage with a general aggregate limit of \$2,000,000. This coverage will include products and completed operations as applicable including an additional \$5,000,000 umbrella. The Comprehensive General Liability Insurance shall include as Additional Insured: the Owner, the Engineer and his consultants, and each of their officers, agents and employees, and, if the project is funded with monies from a New York State Program, State of New York. Included in such insurance will be contractual coverage sufficiently broad to insure the provisions of Paragraph 2.4.06.

2.4.04 OWNERS AND CONTRACTORS PROTECTIVE LIABILITY POLICY: Before commencement of the work, the Contractor shall submit written evidence that he has obtained, for the period of the Contract, an Owner's and Contractor's Protective Liability Policy with one million dollars (\$1,000,000) coverage per occurrence.

2.4.04A BUILDERS' RISK "ALL RISK" INSURANCE: (APPLICABLE TO BUILDING CONSTRUCTION PROJECTS ONLY.) Before commencement of the work, the Contractor shall submit written evidence that he has obtained, for the period of the Contract, Builders' Risk "All Risk" Completed Value Insurance coverage, including Flood and Earthquake, upon the entire project which is the subject of this Contract, including completed work and work in progress. Such insurance shall include as Additional Named Insured: The Owner; the Engineer and his consultants; and each of their officers, employees and agents; and any other persons with an insurable interest designated by the Owner as an Additional Named Insured.

a. Deductible: Deductible shall not exceed five thousand dollars (\$5,000) other than local earthquake provisions.

2.4.05 AUTOMOTIVE INSURANCE: The Contractor shall obtain Automotive Liability Property Damage Insurance covering the use of all owned, non-owned and hired vehicles of which the coverage, named insured, etc. shall be equal to that required for Comprehensive General Liability Insurance.

2.4.06 INDEMNITY: "The Contractor shall hold harmless, indemnify and defend the Owner, the Engineer and his Consultants, each of their officers and employees and agents, and Additional Insured on a primary and noncontributory basis including a waiver of subrogation from any and all liability claims, losses or damages arising or alleged to arise from the performance of the work described herein, but not including the sole negligence of the Owner or Engineer."

2.4.07 PATENTS AND ROYALTIES: If any design, device, material or process covered by letters, patent or copyright is used by the Contractor, he shall provide for such use, by legal agreement with the owner of the patent or a duly authorized licensee of such owner, and shall save harmless the Owner and the Engineer from any and all loss or expense on account thereof, including its use by the Owner.

2.4.08 PERMITS: All permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor.

2.4.09 LAWS TO BE OBSERVED: The Contractor shall give all notices and comply with all Federal, State and Local Laws, Ordinances and Regulations in any manner affecting the conduct of the work and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over the work, and shall indemnify and save harmless the Owner and the Engineer against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees. The Contractor shall keep himself fully informed of all laws of the State and of the United States and of all Municipal Laws and Ordinances in any manner affecting the work of this Contract and of all orders or decrees of any body or tribunal having any jurisdiction or authority in any manner affecting said work and shall be responsible for a strict compliance therewith. If any clause of this Contract does not conform to any such law, such clause shall be void insofar as it conflicts with such law, and such law shall be operative in lieu thereof.

Each and every provision of law and clause required by law to be inserted in this Contract should be, is and is deemed to be inserted herein, and if through a mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be amended physically to make such insertion.

If this Contract contains any unlawful provisions not an essential part of the Contract and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the Contract without affecting the binding force of the remainder.

Nothing shall be construed as a waiver of any provision, division or subdivision of this Contract except in writing which: names specifically the provision, division or subdivision; states the extent to which it is waived; and is signed by the party making the waiver.

2.4.10 WRITTEN NOTICE: Written notice shall be considered as served when delivered in person or sent by registered mail to the individual, firm or corporation or to the last business address of such known to him who serves the notice.

a. Change of Address: It shall be the duty of each party to advise the other parties to the Contract as to any change in his business address until completion of the Contract.

2.4.11 ASSIGNMENT OF CONTRACT: Neither the Contractor nor the Owner shall sublet, sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

2.4.12 ORAL AGREEMENTS: No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms of obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

2.4.13 WORK DURING AN EMERGENCY: The Contractor shall perform any work and shall furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases he shall notify the Owner of the emergency as soon as practicable, but he shall not wait for instructions before proceeding to properly protect both life and property.

2.4.14 WARNING SIGNS AND BARRICADES: The Contractor shall provide adequate signs, barricades, lights and watchmen and take all necessary precautions for the protection of the work and the safety of the public. All barricades and obstructions shall be protected at night by suitable signal lights which shall be kept burning from sunset to sunrise. Barricades shall be of substantial construction and shall be painted such as to increase their visibility at night. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricades, or detours exist.

2.4.15 PUBLIC CONVENIENCE: The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the proper authorities. Fire hydrants, on or adjacent to the work, shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to

insure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches and irrigation ditches which shall not be obstructed.

Construction activities shall be confined to normal daytime working hours, except in extraordinary circumstances or emergencies.

2.4.16 SAFETY: In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property affected directly or indirectly by his operations during the performance of the work. This requirement will apply continuously, 24 hours per day, until acceptance of the work by the Owner and shall not be limited to normal working hours.

a. The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on or near the construction site.

The Contractor shall comply with the Department of Labor, Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54).

Under this Contract, the Contractor shall conform in all respects to the Occupational Safety and Health Act (OSHA) as amended. It shall be the Contractor's responsibility to furnish and install all materials and workmanship in strict compliance with the requirements of OSHA. If the contract plans and specifications do not conform to the requirements of OSHA, it shall be the Contractor's responsibility to correct same as recommended by the Engineer.

Additionally, the Contractor shall assume the defense of and indemnify and save harmless the Owner, all officers and agents of the Owner and the Engineer, from all claims, suits, actions, damages and costs of every name and nature, in consequence of any such non-compliance with said OSHA regulations.

2.4.17 EXISTING CONSTRUCTION: When new construction is adjacent to or crosses highways, railroads, streets or utilities under the jurisdiction of State, County, City or other public agency, public utility or private entity, the Contractor shall secure written permission from the proper authority before executing such new construction. A copy of this written permission must be filed with the Owner before any work is done. The Contractor shall replace or repair all existing construction damaged in the execution of this Contract. The Contractor will be required to furnish a release from the proper authority before final acceptance of the work.

2.4.18 WATER SUPPLY AND SANITARY PROVISIONS: The Contractor shall supply at convenient points, ample supplies of water for all of the operations under this Contract. Water from the supply of the Owner will be available to the Contractor at a charge. The method and points at which such water is taken, shall be designated by the Engineer and the pipe, hose, pumps and other means of conveying the water to the point or points needed, shall be at the expense of the Contractor.

The Contractor shall provide and maintain such sanitary accommodations for the use of his employees and those of his Subcontractors as may be necessary to comply with the requirements and regulations of the Local and State Departments of Health.

2.4.19 LIMIT OF LIABILITY: The Contractor and his Subcontractors are skilled and experienced in the use and interpretations of plans and specifications such as those included in the bid documents for this Contract. They have carefully reviewed the plans and specifications and have found them free of ambiguities and sufficient for bid purposes. Further, they have based their bid solely on these documents, not relying in

any way on any explanation or interpretation, oral or written, from any other source. Having assured himself of the adequacy of the documents and the accuracy of his bid, the Contractor agrees and shall require his Subcontractors to agree to limit the liability of the Owner and of the design professional to a total aggregate liability to the Contractor of \$50,000 or 50% of the amount of the design professional's total fee for services rendered on this project, whichever is the greater. Except as may be otherwise provided in these specifications, neither the Contractor nor any of his Subcontractors assume any liability for the sole errors, omissions or negligent acts of the design professional.

2.4.20 CONSTRUCTION LOSSES & PROTECTION AGAINST CLAIMS & LIABILITIES: As between the Contractor and the Owner, all damage of whatever nature resulting from the work or resulting to the work during its progress, from whatever cause, including omissions and supervisory acts of the Owner, shall be borne and sustained by the Contractor. All work shall be solely at the Contractor's risk until it has been finally completed, as established by the Engineer's Statement of Substantial Completion of the Contract. Any defect, omission or mistake on the part of the Contractor may be made good by the Owner at the sole expense of the Contractor.

It is agreed that borings and test pits cannot give complete information as to subsurface conditions and that those which have been made in connection with this Contract do not give complete information, and therefore, the Contractor agrees to assume all risks contingent upon the nature of subsurface conditions to be actually encountered in doing the work under this Contract. Borings and subsurface information, if shown, is for the general information of the bidders and is not guaranteed. Information concerning borings, appended as reference for bidders, or otherwise, is not to be construed as part of the specifications. There is no expressed or implied agreement that the character of material has been correctly indicated or that variance might not be encountered. The bidder is advised to make his own investigations and conclusions.

The Contractor shall take all responsibility of the work and shall take all precautions for preventing injuries to persons or damage to property in and about the work; shall bear all losses resulting to him, losses sustained on account of the character, quality or quantity of any part or all of the work, or because of the nature of the land in or on which the work is done being different from what was estimated or indicated by borings and test pits, or any other data, or on account of the weather elements, or other causes; shall cover or protect the work from damage by fire, flood, or frost action; and all injury or damage to the work, regardless of the cause of such injury or damage before the completion of the Contract, shall be made good by him to the Owner. The Contractor shall assume the defense of, and indemnify and save harmless, the Owner, all officers and agents of the Owner and the Engineer, from all claims, suits, actions, damages and costs of every name and nature, relating to injuries to persons or damage to property; to labor, equipment or materials furnished for the work; to inventions, patents and patent rights used in doing the work; or in consequence of any improper materials, equipment, implements or labor used therein, and to any act, omission or neglect of the Contractor and his employees therein.

The Contractor shall be responsible for payment of all services, labor, equipment and materials furnished by or through him for the purposes of the Contract. The Contractor shall assume the defense of and indemnify and save harmless the Owner from all claims, suits, actions, damages and costs of every nature and name against the Owner from mechanics, laborers, subcontractors, materialmen and others, for services or labor performed or materials furnished for the purposes of the Contract. If through neglect of this provision, by the Contractor, or through any other neglect on the part of the Contractor, claims are made or are anticipated against the Owner, until such claims shall have been discharged or secured satisfactorily, the Owner may, in addition to other remedies, retain from any money due or that may thereafter become due the Contractor under the Contract, sums sufficient to cover said claims. Further, the Owner may, in such manner and in such amount as the Engineer may deem proper, apply any portions of sums thus retained toward the settlement of such claims, and such applications shall be deemed payments for the Contractor's account.

SECTION 2.5

LABOR PROVISIONS

2.5.01 LABOR REQUIREMENTS: The Contractor shall abide by all regulations and laws that relate to labor that may affect the work of this Contract, including Federal, State, County, Town, City and Village Regulations.

The Contractor shall not discriminate in employment of any of his employees because of age, race, creed, color or national origin.

The Contractor shall make such provisions for disability benefits, workmen's compensation, unemployment insurance, social security and safety code provisions, as required by law.

Certain applicable provisions of the State Labor Law are listed below and shall be complied with in the performance of this Contract as well as any other provisions of said law not herein referred to which may be applicable, the latter being incorporated herein by reference.

As used in this Section and in all other provisions of the Contract Documents, "Fiscal Officer" shall be deemed to be, on public work performed by or on behalf of the State or a public benefit corporation or a county, or a town, or a village or other civil division of the State except a city, the Industrial Commissioner of the State of New York, and on public work performed by or on behalf of a city, the Comptroller or other analogous officer of such city.

The Contractor specifically agrees, as required by Article 8 of the State Labor Law (Sections 220 and 220-d, as amended) that:

1. No laborer, workman or mechanic, in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or any part of the work contemplated by the Contract, shall be permitted or required to work more than eight hours in any one calendar day or more than five days in any one week, except in the emergencies set forth in the Labor Law;

2. The wages (including supplements) paid for a legal day's work shall be not less than the prevailing rate of wages (including supplements) as defined by law;

3. Each laborer, workman or mechanic, employed by the Contractor, Subcontractor or other person about or upon such public work, shall be paid not less than the prevailing rate of wages and shall be provided supplements not less than the prevailing supplements as determined by the Fiscal Officer.

It is understood by the Contractor that the State Labor Law provides that the Contract shall be forfeited and no sum paid for any work done thereunder on a second conviction for willfully paying less than:

1. The stipulated wage scale or supplements as provided in the State Labor Law, Section 220, Subdivision 3, as amended, or;

2. Less than the stipulated minimum hourly wage scale, as provided in the State Labor Law, Section 220-d, as amended.

The Contractor specifically agrees, as required by the provisions of the State Labor Law, Section 220-e, as amended, that:

1. In the hiring of employees for the performance of work under this Contract or any subcontract hereunder, or for the manufacture, sale or distribution of materials, equipment or supplies hereunder, no Contractor, Subcontractor nor any person acting on behalf of such Contractor or Subcontractor, shall by reason of race, creed, color or national origin, discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;

2. No Contractor, Subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Contract on account of race, creed, color or national origin;

3. There may be deducted from the amount payable to the Contractor, by the State under this Contract a penalty of five dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the Contract;

4. This Contract may be cancelled or terminated by the State or municipality and all monies due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the Contract;

5. The aforesaid provisions of Section 220-e covering the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.

The Contractor specifically agrees, as required by the State Labor Law, Section 222, as amended, that:

1. Preference shall be given to citizens of the State of New York who have been residents for at least six months immediately prior to the commencement of their employment;

2. Persons other than citizens of the State of New York may be employed when New York citizens are not available;

3. The Contractor and each Subcontractor shall keep a list of his employees stating whether they are citizens of the State of New York, native born citizens or naturalized citizens, and in case of naturalization, the date thereof and the name of the court in which granted;

4. If the State Labor Law, Section 222, as amended, be not complied with, this Contract shall be void.

The Contractor specifically agrees, as required by the State Labor Law, Section 222-a, as amended, that:

1. If in the construction of the work, a harmful dust hazard be created for which appliances or methods for the elimination of harmful dust have been approved by the Board of Standards and Appeals, such appliances or methods shall be installed and maintained and effectively operated by the Contractor;

2. If the State Labor Law, Section 222-a, as amended, is not complied with, the Contract shall be void.

As provided in the General Regulations, as issued by the State Commission for Human Rights, it is hereby agreed by and between parties hereto that every Contractor and Subcontractor, engaged in the public work described in this Contract, shall post and maintain, at each of his establishments and at all places at which the public work described hereunder is being conducted, the notice of the said Commission for Human Rights indicating the substantive provision of the law pertaining thereto, as to where complaints may be filed along with other pertinent information. Such notice shall be posted in easily accessible and well-lighted places customarily frequented by employees and applicants for employment.

2.5.02 MINIMUM HOURLY WAGE RATES: The minimum rates of wages and schedule of supplements to be provided for the various trades shall be in accordance with the Prevailing Wage Rate Schedule which is attached to the Contract Documents. The rate of wage and schedule of supplements for any trade not appearing or mentioned in this schedule shall be in accordance with the prevailing rates established for that particular trade by the New York State Industrial Commissioner, or if the Owner be a city, by the Comptroller or other analogous officer of such city. Minimum wages required to be paid shall include supplements for hospital, surgical, medical or other benefits as determined by Article 8 of the State Labor Law. If for any reason and at any time the State of New York, or the proper city officer, shall in any way supplement changes or amend such Prevailing Wage Rate Schedule, then the Contractor, Subcontractor or other person about or upon such public work shall follow such schedule as supplemented, changed, or amended. In no case shall

the Contractor be entitled to any additional compensation or extras because of any supplement, change or amendment of the Prevailing Wage Rate Schedule.

The Contractor and every Subcontractor shall post, in a prominent and accessible place on the site of the work, a legible statement of all wage rates and supplements, as specified in the Contract to be paid or provided, as the case may be, for the various classes of mechanics, working men or laborers employed on the work.

If this project is to receive a grant-in-aid from the Federal Government, then the Contractor shall comply with the requirements of the Labor Standards as issued by the Secretary of Labor (or with such other Federal requirements specifically included in the Contract Documents), including compliance with the specific Federal Wage Determination Rate for this project. The above requirements are attached to the rear cover of the Contract Documents if the project is to receive Federal Aid.

The Contractor and every Subcontractor shall post, in a prominent and accessible place on the site of the work, a legible copy of the State Wage Rate Schedule (including supplements), together with a legible copy of the Federal Wage Determination Rate Schedule (if such is included in the Contract Documents).

The rates established by each schedule are minimum and all employees shall be paid no less than the established rate listed for each trade or occupation. In case of conflict between schedules in any one trade or occupation, the higher rate listed shall control and such higher rate shall be considered to be the minimum.

SECTION 2.6

PROGRESS AND COMPLETION OF WORK

2.6.01 NOTICE TO PROCEED: Following the execution of the Contract by the Owner and the Contractor, written Notice to Proceed with the work shall be given by the Owner to the Contractor. The Contractor shall begin and shall prosecute the work regularly and uninterruptedly thereafter (except as provided for herein) with such force as to secure the completion of the work within the Contract Time.

2.6.02 PRE-CONSTRUCTION CONFERENCE: The Contractor and pertinent Subcontractors, if any, shall attend Pre-Construction Conferences, as may be required by the various State and Federal agencies and/or the Engineer.

2.6.03 CONTRACT TIME: The Contractor shall complete, in an acceptable manner, all of the work contracted for in the time stated herein. Computation of Contract Time shall commence on the seventh day following the date of mailing, by regular mail, of the Notice to Proceed and every calendar day following, except as herein provided, shall be counted as Contract Time.

2.6.04 RECORDS, SCHEDULES, AND DATA: The Contractor and each of his Subcontractors shall submit to the Owner such schedules of quantities and cost, Progress Schedules, payrolls, reports, estimates, invoices of materials, records of personnel, records and other data as the Owner may request concerning work performed or to be performed under this Contract.

Prior to commencing work, the Contractor shall prepare and submit to the Engineer, schedules of construction progress and completion. Revised schedules shall be submitted by the Contractor whenever the previously submitted schedule does not reflect current conditions and as may be required by the Engineer. Upon receiving approved schedules, the Contractor shall furnish one (1) copy to all other prime contractors on the project. Progress Schedules shall be updated monthly.

2.6.05 PHOTOGRAPHS: High resolution color photographs of commercial quality shall be taken by the Contractor at the location of the work to show the general condition before work starts and at the completion of construction. In each case, the completed photographs shall be issued to the Engineer on CD, DVD or USB drive.

On all gravity sewer work, color photographs shall be taken upstream and downstream of each manhole or catch basin. On all water mains, sewer force mains, etc., color photographs shall be taken upstream and downstream at points no more than 500 feet apart. Where an obstruction blocks the view or at a bend or angle point, photographs should be taken within 250 feet. On all street and highway work, photographs shall be taken at intervals not exceeding 500 feet in both directions for the entire project. All photographs shall indicate station and sequence. A smaller spacing may be required if full width of improvement cannot be obtained 50 feet from the point of photography. On all building site work, park projects or solid waste projects, color photographs shall be taken to adequately cover the entire site, not spanning more than 250 feet for any one photograph.

On all pipeline, street or highway projects, the buildings, trees and hedges adjacent to the centerline of the pipeline, street or highway shall be clearly shown.

A minimum of four (4) color photographs of the actual construction shall be taken per month and delivered to the Engineer to show progress of the work. The Engineer shall select the location of the point of photography to be taken each month for the monthly progress photograph.

At the conclusion of the work, two prints (16" x 20") mounted on 1/8-inch thick poster board, of not more than five color photographs, of views selected by the Engineer shall be delivered to the Engineer.

Each photograph file name shall be identified with site name, the location and direction taken, and the date on which each photograph was taken.

2.6.06 SIGNS: In addition to any State or Federal required signs, the Contractor shall erect a sign at the project site, identifying the project and indicating the name of the Owner, Engineer and Contractor, which sign shall be: of 3/4-inch marine plywood; measure at least 4 feet x 8 feet; and maintained in good condition until the completion of the project, all to the satisfaction of the Engineer. This sign may be placed directly under any required State or Federal sign or installed on independent supports.

The sign panel shall be set in a 2-inch x 4-inch frame and fastened with galvanized hardware. The face background and the sign back panel shall receive two coats of white enamel. All lettering shall be royal blue in color varying in size from 1½ inches to 3 inches and of an acceptable layout submitted to the Engineer for review prior to fabrication.

Should the sign require independent supports, they shall consist of 4-inch x 4-inch timbers adequately set at the location directed. All sign supports shall be painted black.

The sign shall be maintained by the Contractor, in good condition at all times, for the duration of the Contract and removed only following such direction by the Engineer.

All cost of fabrication, erection and maintenance, removal and all other costs shall be disbursed equally among the Items of the Contract.

2.6.07 RECORD DRAWINGS: During the progress of work, each Contractor shall keep on file one complete set of Contract Drawings, furnished by the Engineer, on which shall be accurately and promptly noted by the Contractor, as the work progresses, all changes, revisions and additions to the work under this Contract. The prints shall be available for use and review by the Engineer and turned over to the Engineer at the completion of the work.

2.6.08 CHANGES IN THE WORK: The Owner may, as the need arises, order changes in the work through additions, deletions or modifications to the extent of 25% of the Contract Amount without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change.

2.6.09 EXTRA WORK: New and unforeseen items of work found to be necessary and which cannot be covered by any Item or combination of Items for which there is a Contract Price shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials, as may be required, for the proper completion or construction of the whole work contemplated upon written order from the Owner, as recommended by the Engineer. In the absence of such written order, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these Contract Documents where applicable and work not covered by such shall be done in accordance with the best construction practice and in a workmanlike manner. Extra Work required in an emergency to protect life and property shall be performed by the Contractor as required.

2.6.10 FAILURE TO COMPLETE WORK ON TIME: It is hereby understood and mutually agreed, that the date of beginning and the time for completion, as specified in the Contract, of the work to be done hereunder are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the Notice to Proceed.

The Contractor agrees that said work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the sum of two hundred fifty dollars (\$250.00) plus engineering charges, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day (not including Sunday), that the Contractor shall be in default after the time stipulated in the Contract for completing the work.

Such Engineering charges shall be those incurred by the Owner. The Engineer shall determine when such engineering services are to be rendered in the interest of the Owner.

The said amounts are fixed and agreed upon, by and between the Contractor and the Owner, because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would, in such event, sustain and said amounts are agreed to be the amount of damages which the Owner would sustain and said amounts shall be retained, from time-to-time, by the Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this Contract and of the Specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract, an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract; provided that the Contractor shall not be charged with liquidated damages, any excess cost or engineering and inspection charges, when the delay in completion of the work is due to:

- a. Any preference, priority or allocation order duly issued by the Government, if a Federally aided project;
- b. Unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to: acts of God or of the public enemy; acts of the Owner; acts of another Contractor in the performance of a Contract with the Owner; or fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather;
- c. Any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided further that the Contractor shall immediately, after such a delay (unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract), notify the Engineer in writing of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of his decision in the matter.

2.6.11 EXTENSION OF CONTRACT TIME: A delay beyond the Contractor's control occasioned by an Act of God, by act or omission on the part of the Owner or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time in which to complete the work as agreed by the Owner, provided however, that the Contractor shall immediately give written notice to the Owner of the cause of such delay.

- a. Act of God shall mean an earthquake, major flood, cyclone or other cataclysmic phenomenon of nature. Rain, wind, flood or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God and no reparation shall be made to the Contractor for damages to the work resulting therefrom.

2.6.12 USE OF COMPLETED PORTIONS: The Owner shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding that the time for completing

the entire work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the completion of uncompleted work or causes refinishing of completed work, the Contractor shall be entitled to such extra compensation or extension of time or both, as agreed by the Owner.

2.6.13 REMOVAL OF CONSTRUCTION EQUIPMENT, TOOLS AND SUPPLIES: At the termination of this Contract, before acceptance of the work by the Owner, the Contractor shall remove all of his equipment, tools and supplies from the property of the Owner. Should the Contractor fail to remove such equipment, tools and supplies, the Owner shall have the right to remove them at the expense of the Contractor.

2.6.14 CLEANING UP: The Contractor shall remove from the Owner's property and from all public and private property, all temporary structures, rubbish, and waste materials resulting from his operation or caused by his employees, and shall remove all surplus materials leaving the site smooth, clean and true to line and grade. All materials to be disposed of shall be removed in such a manner and to such a disposal site as will be consistent with all Federal, State and Local Laws.

2.6.15 ENGINEER'S STATEMENT OF SUBSTANTIAL COMPLETION: When the work to be performed under this Contract is substantially completed in accordance with the Contract Documents, the Engineer shall prepare an Engineer's Statement of Substantial Completion to be acknowledged and accepted by the Owner and the Contractor. The Statement may list items to be completed or corrected but such Statement shall not relieve the Contractor of his obligation to complete all work, whether listed or not, in accordance with the Contract Documents, nor will it preclude any right the Owner may have for recourse in accordance with the Contract Documents.

2.6.16 TERMINATION OF CONTRACTOR'S RESPONSIBILITY: The Contract will be considered complete when all work has been finished, the final review made up by the Engineer and the project accepted in writing by the Owner. The Contractor's responsibility shall then cease, except as set forth in his Performance Bond and as provided in Paragraph 2.3.08 "Guaranty", and as provided in Paragraph 2.6.17 "Correction of Faulty Work After Final Payment".

2.6.17 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT: The making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of the work.

SECTION 2.7

PAYMENTS TO CONTRACTOR

2.7.01 DETAILED BREAKDOWN OF CONTRACT AMOUNT: Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall, within ten days of receipt of Notice to Proceed, submit a complete breakdown of the Contract Amount showing the value assigned to each part of the work, including an allowance for profit and overhead. Upon acceptance of the breakdown of the Contract Amount by the Owner, it shall be used as the basis for all Requests for Payment.

2.7.02 SALES AND COMPENSATING USE TAXES:

a. Transfer of Title of Material Delivered to Site: Title to all materials to be sold by the Contractor to the Owner, pursuant to the provisions of the Contract Documents, shall immediately vest in and become the sole property of the Owner upon delivery of such materials to the site. Notwithstanding such transfer of title, the Contractor shall have the sole continuing responsibility to install such materials, protect them, maintain them in proper condition and forthwith repair, replace and make good any damage thereto without cost to the Owner until such time as the work covered by the Contract is fully accepted by the Owner. Such transfer of title shall in no way affect any of the Contractor's obligations under the Contract. In the event, that after title has passed to the Owner, any of such materials are rejected as being defective or otherwise unsatisfactory, the Contractor must then replace said defective or otherwise unsatisfactory materials with other acceptable materials at no additional cost to the Owner;

b. Exemption from Sales and Compensating Use Taxes of the State of New York and of Cities and Counties: The Owner is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties on all materials separately sold to the Owner pursuant to this Contract. This exemption does not, however, apply to tools, machinery, equipment or other property purchased by, leased by or to the Contractor or a Subcontractor, or to supplies of materials not incorporated into the completed Project. The Contractor and his Subcontractors shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes on such tools, machinery, equipment or other property or such unincorporated supplies and materials and the provisions set forth below will not be applicable to such tools, machinery, equipment, property, supplies or materials;

c. The purchase by the Contractor of the materials sold hereunder will be a purchase or procurement for resale and, therefore, not subject to the New York State sales or compensating use taxes or any such taxes of cities or counties. The sale of such materials by the Contractor to the Owner will not be subject to the aforesaid sales or compensating use taxes. With respect to such materials sold hereunder, the Contractor, at the request of the Owner, shall furnish to the Owner such bills of sale and other instruments as may be required by the Owner, properly executed, acknowledged and delivered, assuring to the Owner, title to such materials free of encumbrances; and the Contractor shall mark or otherwise identify all such materials as the property of the Owner;

d. The purchase by Subcontractors of materials to be sold hereunder will also be a purchase or procurement for resale to the Contractor (either directly or through other Subcontractors) and, therefore, not subject to the aforesaid sales or compensating use taxes, provided that the Subcontract agreements provided for the resale of such materials prior to and separate and apart from the incorporation of such materials into the permanent construction and that such subcontract agreements are in a form similar to this contract with respect to the separation of the sale of materials from the work and the labor to be provided.

2.7.03 UNIT PRICES: The Owner will pay and the Contractor will accept, as full payment of the Contractor's obligations under this Contract, the unit prices or lump sums specifically set forth in the Proposal (which forms a part of this Contract), the total of which is indicated in the Proposal based on the estimated

quantities as contained in said Proposal. Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the Contract Documents (including the Proposal), they are given for use in comparing, on a uniform basis, the bids offered for the work under this Contract. The Owner expressly reserves the right, except as herein not otherwise provided, to increase, decrease or omit any class of work as may be deemed reasonably necessary or desirable by the Owner, and the Contractor shall make no claim for anticipated profits or for loss of profit (nor other claims or liability for damages) because of a difference between the quantities of work actually done or materials actually delivered and the estimated quantities set forth in the Contract Documents.

2.7.04 ALL COSTS TO BE INCLUDED: The cost of all labor, materials, tools, plant and equipment and such other things required in the "General Conditions of the Contract", "Modifications to the General Conditions", "Special Conditions" and "Special Requirements", and not specifically included in an Item of payment under the Detailed Specifications, shall be fully borne by the Contractor.

The cost of these requirements shall be included in the prices bid for the various Items of the Contract and no additional compensation or allowance beyond the unit prices or lump sum bid will be allowed for such costs.

Where "Special Specification Requirements" follow an Item of the Technical Specifications, they shall be considered as being included in the respective Item.

2.7.05 MEASUREMENT OF QUANTITIES: When work is to be paid for by units of measure, such as lengths, area, volume and weight, only the net amount of work actually done, as it shall appear in the finished work as measured only inside the lines and grades given, shall be paid for, excepting as may otherwise be specifically provided herein. The quantities of work performed will be computed by the Engineer on the basis of measurements taken by the Engineer and these measurements shall be final and binding. For estimation of quantities in which the computation of areas by geometric methods would be comparatively laborious, the Contractor agrees that computer aided drafting software shall be considered instruments of precision adopted to the measurement of such area.

2.7.06 MATERIAL PAYMENTS: Payment for materials stored on the site will be considered only if a properly receipted invoice marked "Paid in Full" from the respective manufacturer or supplier accompanies such request for payment.

2.7.07 REQUESTS FOR PAYMENT: The Contractor may submit to the Owner periodically, but not more than once each month, a Request for Payment for work done and materials delivered to and stored on the site. The Contractor shall furnish the Owner all reasonable information required for obtaining the necessary data relative to the progress and execution of the work. Payment for materials stored on the site will be conditioned upon evidence submitted to establish the Owner's title to such materials. Each Request For Payment shall be computed on the basis of work completed on all items listed in the Detailed Breakdown of Contract (or on unit prices, as the case may be), less 5 percent to be retained until substantial completion and acceptance of the work and less previous payments.

2.7.08 ENGINEER'S ACTION ON A CONTRACTOR'S REQUEST FOR PAYMENT: All Contractor's Requests for Payment shall be referred to the Engineer for his review and, within a reasonable period, the Engineer shall:

- a. Recommend payment by the Owner of the Request for Payment as submitted;

b. Recommend payment by the Owner of such other amount as the Engineer shall consider is due the Contractor, informing the Owner and the Contractor in writing of his reasons for recommending the amended amount; or

c. Recommend to the Owner that payment of the Request for Payment be withheld, informing the Contractor and the Owner in writing of his reasons for so recommending.

2.7.09 OWNER'S ACTION ON REQUEST FOR PAYMENT: Within 45 days after receipt of a Request for Payment from the Contractor, the Owner shall:

a. Pay the Request for Payment as recommended by the Engineer;

b. Pay such other amount, in accordance with Paragraph 2.7.10, as he shall decide is due the Contractor, informing the Contractor and the Engineer in writing of his reasons for paying the amended amount; or

c. Withhold payment in accordance with Paragraph 2.7.10, informing the Contractor and the Engineer of his reasons for withholding payment.

2.7.10 OWNER'S RIGHT TO WITHHOLD PAYMENT OF A REQUEST FOR PAYMENT: The Owner may withhold payment, in whole or in part, of a Request for Payment to the extent necessary to protect himself from loss on account of any of the following:

a. Defective work;

b. Evidence indicating the probable filing of claims by other parties against the Contractor which may adversely affect the Owner;

c. Failure of the Contractor to make payments due to Subcontractors, material suppliers or employees;

d. Damage to another contractor; or

e. As long as any lawful or proper order or instruction concerning the work or material, given by the Engineer, shall remain un-complied with by the Contractor.

2.7.11 INTEREST ON UNPAID REQUESTS FOR PAYMENT: Should the Owner fail to pay any Request for Payment or take alternate action in accordance with Paragraph 2.7.09, within 45 days from the date of his receipt of such from the Contractor, the Owner shall pay the Contractor interest on the amount of the Request for Payment at the rate of nine percent per annum until payment is made.

2.7.12 PAYMENT FOR UNCORRECTED WORK: Should the Owner direct the Contractor not to correct work that has been damaged or that was not performed in accordance with the Contract Documents, an equitable deduction from the Contract Amount shall be made to compensate the Owner for the Uncorrected Work.

2.7.13 PAYMENT FOR REMOVAL OF REJECTED WORK AND MATERIALS: The removal of work and materials rejected in accordance with Paragraph 2.3.05 and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor, and he shall pay the cost of replacing the work of other contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.

a. Removal by Owner: Removal of rejected work or materials and storage of materials by the Owner, in accordance with Paragraph 2.3.05, shall be paid by the Contractor within thirty days after written notice to pay is given by the Owner. If the Contractor does not pay the expenses of such removal and after ten days written notice being given by the Owner of his intent to sell the materials, the Owner may sell the materials at auction or at private sale and will pay, to the Contractor, the net proceeds therefrom after deducting all the costs and expenses that should have been borne by the Contractor.

2.7.14 PAYMENT FOR EXTRA WORK: Written notice of claims for payment for Extra Work shall be given by the Contractor within ten days after receipt of instructions from the Owner to proceed with the Extra Work and also before any work is commenced, except in emergency endangering life or property. No claim shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material, shall be submitted to the Owner. The Owner's order for Extra Work shall specify any extension of the Contract Time and one of the following methods of payment:

- a. Unit prices or combinations of unit prices which formed the basis of the original Contract;
- b. A lump sum based on the Contractor's estimate and accepted by the Owner;
- c. Actual cost plus overhead and profit based upon the following:
 1. For the Contractor, for any work performed by his own forces, overhead shall be 10% and profit shall be 10% of the respective costs;
 2. For each Subcontractor involved, any work performed by his own forces, overhead shall be 5% and profit shall be 10% of the respective costs;
 3. For the Contractor, for work performed by his Subcontractor, 10% of the amount due the Subcontractor.

Cost shall be limited to the following: Cost of materials, including cost of delivery; cost of labor, including Social Security and unemployment insurance. Labor cost may include: a pro-rata share of foreman's time, only in case an extension of Contract Time is granted, on account of the extra work; Workmen's Compensation Insurance; for rented equipment, the Associated Equipment Distributors "Green Book" standard rental rates on each piece of equipment having a value of \$300.00 or more; for owned equipment, the prorated standard monthly rental rates on each piece of equipment having a value of \$300.00 or more.

Overhead shall include the following: Bond premiums; supervision; superintendence; wages of timekeepers, watchmen and clerks; small tools and equipment having a value of less than \$300; incidental general office expenses and all other expenses not included in Cost, as defined above.

If the net value of a change results in a credit from the Contractor or Subcontractor, the credit given shall be the net cost without overhead or profit. The cost assessed herein shall include all items of labor, equipment and materials.

To further clarify rental rates on owned equipment having a value of \$300.00 or more, said rental rates shall be based upon the current rental rate "Green Book". Hourly and daily rates will be prorated on the standard monthly rate as follows:

- Hourly rate = 1/176 of monthly rate (If equipment is used less than 8 hours in one day)
- Daily rate = 1/22 of monthly rate (If equipment is utilized for a full 8-hour day)

Upon award, the Contractor shall submit for approval a rental schedule on all equipment to be used on the project.

2.7.15 PAYMENT FOR WORK SUSPENDED BY THE OWNER: If the work or any part thereof shall be suspended by the Owner and abandoned by the Contractor, as provided in Paragraph 2.2.01(e) -

"Suspension of Work by Owner", the Contractor will then be entitled to payment for all work done on the portions so abandoned.

2.7.16 PAYMENT FOR WORK BY THE OWNER: The cost of the work performed by the Owner in removing construction equipment, tools and supplies, in accordance with Paragraph 2.6.13 - "Removal of Construction Equipment, Tools and Supplies", and in correcting deficiencies in accordance with Paragraph 2.2.01(f) - "Owner's Right to Terminate the Agreement and Complete the Work", shall be paid by the Contractor.

2.7.17 PAYMENT FOR WORK BY THE OWNER FOLLOWING HIS TERMINATION OF THE CONTRACT: In cases of default by Contractor: Upon termination of the Contract by the Owner, in accordance with Paragraph 2.2.01(f) - "Owner's Right to Terminate Agreement and Complete the Work", no further payments shall be due the Contractor until the work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the work, including all the overhead costs, the excess shall be paid to the Contractor. If the cost of completing the work shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The cost incurred by the Owner, as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Owner.

In cases without cause: For completed and acceptable work executed in accordance with the Contract Documents prior to the effective date of termination, the Contractor shall be due payment for all work to the date of termination, including fair and reasonable sums for overhead and profit on such work; for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted work, plus fair and reasonable sums for overhead and profit on such expenses; for all reasonable claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and for reasonable expenses directly attributable to termination. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

2.7.18 PAYMENT FOR WORK TERMINATED BY THE CONTRACTOR: Upon suspension of the work or termination of the Contract by the Contractor, in accordance with Paragraph 2.2.02(g) - "Contractor's Right to Suspend Work or Terminate Agreement", the Contractor shall recover payment from the Owner for the work performed, plus loss on plant and materials, plus established profit and damages.

2.7.19 PAYMENT FOR SAMPLES AND TESTING OF MATERIALS: Samples furnished in accordance with Paragraph 2.3.02 - "Samples", shall be furnished by the Contractor at his expense and may be used in the work after acceptance.

2.7.20 ACCEPTANCE AND FINAL PAYMENT: When the work or major portions of the work, as contemplated by the terms of the Contract, are substantially completed, the Contractor shall certify completion of the work to the Owner. The term "substantial completion" means completion of all work in accordance with the Contract Plans and Specifications and submission of all necessary paper work connected with the work by the Contractor.

Upon issuance of the Substantial Completion Statement by the Engineer and acceptance of the same by the Owner, the Contractor shall submit a requisition for payment of the remaining amount of the Contract balance which shall be the Contract amount plus all approved additions, less all approved deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials and equipment incurred in connection with the work. Upon receipt of such requisition, the Owner will release the Contractor, except as to the conditions of the Performance Bond and the Labor and Material Payment Bond

and Legal Rights of the Owner; required guarantees and correction of faulty work after final payment, and will promptly pay the remaining amount of the Contract, less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. The Contractor shall allow sufficient time between the time of completion of the work and recommendation of the final Request for Payment for the Engineer to assemble and check the necessary data. As the remaining items of work are satisfactorily completed or corrected, the Owner shall promptly pay, upon receipt of a requisition, for these items less an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. Any claims, liens and judgments referred to in this section shall pertain to the project and shall be filed in accordance with the terms of the applicable contract and/or applicable laws.

a. Release of Liens: The Contractor shall deliver, to the Owner, a complete release of all liens arising out of this Contract before the retained percentage or before the final Request for Payment is paid. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner, such amounts as the Owner may have been compelled to pay in discharging such liens, including all costs and a reasonable attorney's fee.

2.7.21 OVERTIME REIMBURSEMENT: If the Contractor receives approval from the Department of Labor to work in excess of eight (8) hours per day or five (5) days per week, he shall reimburse the Owner for all costs incurred by the Owner, resulting from the premium portion of overtime pay for all field personnel of the engineer working on the project. This reimbursement shall be made monthly by deducting the costs from the Contractor's monthly estimate.

PART 4

DETAIL SPECIFICATIONS REQUIREMENTS

Wherever any Item of these Specifications conflict with another Item of these Specifications, the more stringent requirements applicable to the condition shall govern.

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SPECIAL SPECIFICATION REQUIREMENTS

Wherever in these Contract Documents the phrases listed below or like phrases, whether listed or not, shall appear, they shall be **replaced** with the words "as required by the Contract Specifications":

As ordered by the Engineer
As directed by the Engineer
As determined by the Engineer
As required by the Engineer
With the permission of the Engineer
Acceptance of the Engineer
Satisfaction to the Engineer
Authorized by the Engineer, and
As deemed necessary by the Engineer.

Wherever in these Contract Documents the words "as approved by the Engineer" or like phrases shall appear, they shall be replaced by "as recommended by the Engineer" or appropriate form thereof.

For purposes of this Contract, the terms "ENGINEER" and "ARCHITECT" are interchangeable.

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SECTION 01010
SUMMARY OF WORK

PART 1: GENERAL

1.01 WORK UNDER THIS CONTRACT

The Contractor shall furnish all labor, materials, equipment and means to clean, repair, improve and paint the Village water storage tank and appurtenant work, as described herein.

The work includes Interior and Exterior Surfaces Abrasive blast and Coating repairs and improvements including but limited to:

- A. Contain tank prior to blasting per EPA standards guidelines. The proposer must investigate the site to determine the best method to rig the tank and stage equipment. All costs must be accounted for in the pricing proposal.
- B. Remove all Exterior paint in accordance with SSPC-SP6. Apply Prime Coat, Intermediate Coat, and Full Finish Coat as called out in the Technical Specifications.
- C. Remove all Interior paint in accordance with SSPC-SP10. Apply Prime Coat, Intermediate Coat, and Full Finish Coat as called out in the Technical Specifications.
- D. All repairs including steel, welding, safety and sanitary repairs as described in the Technical Specifications.
- E. Supply and install an active mixing system manufactured by PAX Water Technologies, Incorporated, or equivalent as approved by the engineer for the Village. Provide manufacturer's recommendation for sizing of mixer.
- F. Design, permitting construction and installation of 21 Post Corral as needed to complete construction of corral as generally shown in Appendix C of this RFP document.

The above general outline of principal features does not in any way limit the responsibility of the Contractor to perform all work and sequence thereof and furnish the required materials, equipment, labor and means as shown or required by the Contract Documents.

1.02 LOCATION

All work is to be performed at the tank site on the OWNER'S property located in the Village of Ballston Spa, NY.

1.03 DESCRIPTION OF JOHN STREET STEEL TANK

A. Descriptive Data

- Type Tank – Ground Storage - Steel
- Year Constructed - 1979
- Construction – Welded Steel
- Capacity e – 750,000 gallons
- Radio Equipment – Yes. Multiple cellular carriers.

All information given above and in the Contract Documents relating to subsurface and other conditions, natural phenomena, relating to pipes and other structures is from the best sources at present available to the OWNER. All such information is furnished only for the information and convenience of Proposers and is not guaranteed.

The dimensions referenced above are accurate to the best of our knowledge, and the appurtenances listed may not represent all tank attachments. It will be the Contractor's responsibility to verify the accuracy of this information, orientation of appurtenances as well as the presence of any and all attachments, which would be subject to the specified maintenance or impact the Contractor's ability to perform the required work. If the dimensions listed are found to be in error it is the Contractor's responsibility to inform the OWNER prior to bidding.

1.04 COST

The cost for all work associated with tank rehabilitation and improvements described into the Contract Documents shall be included in the total amount of base bid for John Street tank rehabilitation and shown on the bid proposal form. All costs associated with the design, permitting, construction and installation shall be included in the base bid for John Street tank rehabilitation and also individually shown on the bid proposal form as Deductible Alternative No. 1 – Communications Corral. The Village reserves the right to award the base bid, base bid deductible alternative, or reject all bids.

END OF SECTION

SECTION 09850
STEEL TANK PAINTING

PART 1: GENERAL

1.01 RELATED WORK

- A. Section 09860 – Abrasive Blast Cleaning Controls
- B. Section 09950 – Interior Water Chamber Painting
- C. Section 09960 – Exterior Tank Painting
- D. Section 09970 – Dry Interior Tank Cleaning and Painting
- E. Section 13800 – Miscellaneous Work

1.02 QUALITY ASSURANCE

A. Workmanship

- (1) All cleaning and painting work covered by these Specifications shall be performed by a firm having at least ten (10) years successful experience in the tank painting field and shall have performed specified type cleaning and painting on at least ten (10) tank of similar design.
- (2) All work shall be in accordance with the requirements hereinafter specified and the applicable requirements of the latest edition of standards provided by Steel Structures Painting Council (SSPC), and American Water Works Association (AWWA), and NACE International.
- (3) In-place quality assurance procedures including the use of NACE Certified inspectors to ensure the quality of the preparation and coatings application during the course of the projects.

Reference Standards

NACE Standards and Practices

AWWA D102 Painting Steel Water Storage Tank

SSPC - PA1 Shop, Field and Maintenance Painting

SSPC - PA2 Measurement of Dry Paint Thickness

SSPC - SP1 Solvent Cleaning

SSPC - SP3 Power Tool Cleaning

SSPC - SP6 Commercial Blast Cleaning

SSPC - SP7 Brush-Off Blast Cleaning

SSPC - SP10 Near White Blast Cleaning

SSPC - SP11 Power Tool Cleaning to bare metal with profile

SSPC - SP12 Ultra High Pressure Water Jet Cleaning

SSPC - Vis 1 Pictorial Surface Preparation Standards

- (4) Quality Management System. The responding firm must demonstrate and document the existence of a formal, audited Quality Management System such as ISO 9001:2015, or equivalent.

B. Product Labeling

All labels shall include the following:

- (1) Manufacturer's name
- (2) Type of paint
- (3) Manufacturer's stock number and batch number
- (4) Color
- (5) Instructions for thinning, where applicable

C. Sampling of Materials

- (1) When requested by the Owner, obtain test samples from material stored at project site or source of supply.
- (2) Select samples at random from sealed containers.

1.03 SUBMITTALS

All submittals shall be submitted to the Owner prior to purchase and in accordance with Section 01300 – Submittals.

A. Product Data

- (1) Provide written description and catalog cuts describing each coating in the system. Information shall include: product delivery, storage, handling, application and curing instructions and limitations. Include technical sheets to substantiate compliance with specifications.

B. Certification

- (1) Provide certification signed by supplier of the coating attesting that coating system proposed meets the specifications.

1.04 PRODUCTS DELIVERY AND STORAGE

A. Delivery of Materials

- (1) Store only acceptable project materials on project sites.
- (2) Store in a suitable location.
- (3) Restrict storage to paint materials and related equipment.
- (4) Comply with requirements listed on the manufacturer's Material Safety Data Sheets and all health, fire, EPA and OSHA regulations as regards storage materials.
- (5) All paints and solvents shall be delivered to the site in factory sealed containers, labeled as stated in 1.02B. Only newly purchased paint bought specifically for this job shall be used. Leftover paints from Contractor's previous jobs will not be allowed.

1.05 JOB CONDITIONS

A. Environmental Requirements

- (1) Volatile Organic Compounds (VOC) - VOC ratings (pounds per gallon (PPG) grams per liter (GPL) for coatings specified herein are believed to be in compliance with limits set forth by the air pollution control agency having jurisdiction in the area the work is to be performed. The VOC rating for each coating material to be used is included in the appropriate section of these specifications. The Contractor shall verify that each coating used is in compliance with the aforementioned air pollution limits. Thinning of coatings in excess of the coating manufacturer's recommendations is not permitted.
- (2) Contact with Potable Water - Interior tank coatings specified herein are in compliance with the ANSI/NSF Standard 61 for Potable Water Contact.
- (3) Safety Requirements - The Contractor shall comply with all health and safety regulations and requirements of OSHA, including but not limited to, 29 CFR Parts 1910 Confined Spaces for General Industry; Final Rule (or State Health and Safety Regulatory Agency), SSPC-PA Guide 3, and the paint and abrasive manufacturers. Should vents, holes, rigging attachments or any other modification, cutting, or welding be required to meet safety standards, they may be accomplished at the expense of the Contractor upon submitting of details in writing to, and with subsequent approval by the Owner.
- (4) Emissions - Compliance with local, state, federal regulations concerning emissions of solid, particulate, or gaseous matter as a result of the cleaning, painting, or other operations under this Agreement shall be the responsibility of the Contractor.

- (5) Waste Classification – Contractor shall immediately after Notice to Proceed satisfy all Laws and Regulations pertaining to the classification of waste generated on the project. Waste shall be understood to include abrasive blasting residuals, paint containers, unused paint and thinners, solvents or any other material whose disposal is subject to requirements contained in Laws and Regulations.
- (6) Responsibility - The compliance with all regulations shall be accomplished without supervision from the Owner, or other direct or indirect agents of the Owner.

B. No on-site work is to be done between sunset and sunrise. The times for work shall also comply with local, state and federal regulations and laws regarding days of week, noise and interference with activities of surrounding persons. Should tank interior temperatures be excessive for personnel welfare during daylight hours, permission may be granted by the Owner to conduct work at night provided that the necessary steel temperature, air temperature, humidity and dew point requirements are met. This permission shall only be granted if the Contractor provides the proper lighting and safety equipment.

C. All rigging attachments present on the tank shall be carefully inspected by the Contractor prior to use. The Contractor assumes all responsibility for use of any existing or added attachments.

D. The job site shall be kept in a clean and safe condition at all times. The daily debris shall be collected in covered containers and disposed of in a manner that will place no liability for hazardous waste on the Owner. Absolutely no paint, solvent material, gasoline, oil or other toxic or hazardous material is to be disposed of at or in the vicinity of the tank site.

E. All manholes and other tank openings shall remain open during interior cleaning, painting and curing.

F. Protection of Property

(1) Owner's Property

The Contractor shall cover all inlet, outlet, and drainpipe openings in the tank with a cover or pneumatic plug to keep blasting abrasive and paint material from entering the openings. Any Owner's or Leaseholder's equipment in or around the vicinity of the tank shall be covered to protect it from damage.

The Contractor shall protect the existing concrete foundation from damage and paint dripping during completion of the work by utilization of covering materials such as plywood, tarps, etc. If the concrete is damaged, soiled or paint stained, the Contractor shall prepare the surface and apply a coating specified for concrete. This product must be approved by the Owner.

(2) Adjacent Property

Special precautions shall be taken by the Contractor to restrict and control windborne fallout of residue and particulate matter from cleaning operations, and/or paint when the close proximity of adjacent property or vehicles warrants that special precautions are necessary. If needed the Contractor shall schedule and coordinate his work to avoid windborne fallout. All damage to existing facilities and adjacent property resulting from the Contractor's operations shall be cleaned, repaired or replaced by the Contractor at no additional expense to the Owner.

G. The tank must be drained for all tank painting, including exterior painting.

H. All temperature and humidity requirements of the paint manufacturer shall be met. In addition, no painting on the interior and/or exterior of the tank shall be done when the relative humidity is greater than 85%, or the temperature of the steel is or is expected to be less than 5°F above the dew point temperature during the application and the initial curing the coatings.

PART 2: PRODUCTS

2.01 MATERIALS

A. Paint Materials

All paint materials and thinners shall be supplied by the Contractor. The materials shall be as specified in Sections 09950 and 09960. All materials shall be furnished by one paint manufacturer and all thinners and solvents shall be of the same manufacturer as the paint materials. There will be no exceptions to this requirement.

B. Abrasives

Abrasives used for blast cleaning shall be those mentioned in the specifications of the Steel Structures Painting Council Abrasive Specification No. 1 (SSPC-AB1). Particular attention shall be given to the maximum particle size requirements. Proprietary abrasive materials may be used only upon written approval of the Owner.

PART 3: EXECUTION

3.01 EQUIPMENT

All equipment, (compressor, blast pots and paint pumps, etc.) shall be in good operating condition and of sufficient capacity to provide satisfactory results for cleaning and painting.

Spray equipment and tip size shall be used as recommended in the paint manufacturer's instructions.

Compressed air for blasting and painting shall be free from detrimental amounts of water or oil.

Adequate traps and/or dryers shall be provided.

Adequate lighting shall be provided inside the tank to properly allow for safety, workmanship and inspection. OSHA approved air hoods, respirators and proper and sufficient ventilation shall be provided during blasting, painting and curing.

Contractor must have sufficient explosion proof ventilation equipment to properly and efficiently expel dust and paint fumes out of unit to prevent injury to workmen or the accumulation of volatile gases.

Contractor shall have available at the site, all inspection and measuring equipment such as wet and dry film thickness gages, wet bulb-dry bulb measuring equipment, steel temperature measuring equipment, holiday detector equipment, etc., as required by these Specifications.

3.02 SURFACE PREPARATION

All sharp edges, weld protrusions, erection burrs, erection brackets and/or other protrusions shall be removed by grinding. Sharp edges, burrs and protrusions shall be ground to at least a 1/8-inch radius. Weld spatter (if any) shall be completely removed.

The surfaces to be painted shall be free from mud, oil, grease, dust, moisture, old paint, or other foreign material that would cause adhesion problems.

All surfaces shall be cleaned in accordance with the Surface Preparation Specifications, latest edition, of the Steel Structure Preparation Specifications, latest edition, of the Steel Structure Painting Council to the degree specified in the Tank Painting System sections in these Specifications.

Surfaces cleaned to bare metal shall be prime painted before any rusting takes place on the cleaned areas. Surfaces shall not be allowed to stand overnight without a prime coat applied (unless appropriately sized dehumidification is employed). Primer shall be applied during the same daylight period that the cleaning was accomplished unless prior arrangements are made with the Owner or Owner's representative.

Refer to Section 09860 (if included in the specification) for additional requirements for abrasive blasting.

Following blast cleaning operations, surfaces shall be cleaned of all dust by blowing down with dry compressed air (unless restricted per Section 09860) and sweeping with bristle broom or by vacuuming.

3.03 APPLICATION

All paint shall be mixed and applied in strict accordance with the applicable portions of these specifications, AWWA D102, SSPC-PA1, and the paint manufacturer's recommendations. Particular care shall be taken in following manufacturer's instructions in the mixing of two component materials.

Each coat of paint shall be in a proper state of cure or dryness before the application of the succeeding coat. Contractor shall adhere strictly to the minimum times between coats specified herein and/or recommended by the manufacturer.

All weld seams, edges of steel members, rafters, roof to shell junction and spot cleaned areas (if any) shall receive a brush coat of the specified primer (stripe coat) after the specified surface preparation has been completed.

With the exception of the primer brush application (stripe coat) mentioned above, all coatings may also be applied as follows unless prohibited by the paint manufacturer:

A. Interior – Brush or spray

B. Exterior – Spray, brush and roller. Note: Spray application will not be allowed unless the tank is enclosed within an approved containment system.

Spray pole guns over 12 inches long will not be allowed. Rigging must afford proper close accessibility to the steel surfaces.

Where roller application is used for exterior paint systems, roller covers shall be synthetic nap with nap thickness per paint manufacturer's requirements.

All coats shall be smooth, free of brush marks, streaks, laps or pile-up of paints, and skipped or missed areas.

The final cure and coating thickness shall be verified by the paint manufacturer in writing to the Owner prior to the tank being filled. Arrangements for the manufacturer's inspector shall be made by the Contractor and the Owner shall be notified at least seventy-two (72) hours prior to the paint manufacturer's inspection.

3.04 INSPECTION

All cleaning and painting shall be subject to inspection by the Owner or their designated representative of the Owner and the painting manufacturer.

The Owner reserves the right to inspect all cleaned surfaces prior to primer application and also each coat of paint prior to subsequent paint applications. It is understood that such inspection shall be made available by the Owner within two (2) hours after notification by the Contractor.

In order to facilitate surface preparation inspection, at the beginning of the blast cleaning operation, sections of the structure to be painted shall be blast cleaned as specified. The Contractor shall have a current copy of the Society for Protective Coatings (SSPC) - Pictorial Standards VIS 1 to verify the degrees specified. After agreement is reached regarding the degrees of cleaning, the prepared areas shall be sealed in plastic or coated with a clear urethane coating and will serve as a visual reference for cleaning for the remainder of the project.

The dry film thickness and uniformity of the paint coatings shall be measured using an Elcometer, Mikrotest or similar type approved dry film thickness gauge in accordance with SSPC-PA2.

Depending on the final dry film thickness of the specified coating system the interior coatings will be checked with either a high or low voltage holiday detector, to check the interior paint film integrity after the completion of the finish coat of paint. In order to eliminate the potential for false test results due to solvents in the coatings this test is not to be performed sooner than three (3) days after the completion of the finish coat application.

All work shall be made accessible to the Owner's representative using the Contractor's rigging and equipment. Any rigging removed, and thus preventing proper inspection as described herein, shall be replaced at the Contractor's expense.

The Contractor shall correct such work as is found defective under the specification and shall supply such material required to make the repairs at his own expense. The inspector serving as the Owner's representative shall have full authority as to the determination of work declared defective.

If a coating failure is suspected and the Village and Contractor fail to agree on terms, the Village may engage a third-party consultant to analyze the failure and provide a professional opinion and report detailing the matter and advising an appropriate action to correct the noted deficiency.

END OF SECTION

SECTION 09950
INTERIOR WATER CHAMBER PAINTING

PART 1: GENERAL

1.01 SCOPE

This Section covers abrasive blast cleaning of the interior water chamber surfaces including but not limited to the tank roof, roof support structure, spider rods, walls, painters' angle, floor, wet riser and all associated interior faces of the roof hatch and riser manholes followed by the application of a high-performance coating system specifically designed for use on interior surfaces of steel water storage tank as outlined below.

In addition, the Contractor will be required to perform pit and/or patch plate welding on an as need basis as well as the installation of a new shell manhole as outlined elsewhere in these specifications.

The Owner will drain the tank to the lowest level after which the Contractor will be responsible for removal, testing and proper disposal of all remaining water and/or silt accumulations. On site disposal will not be allowed therefore the Contractor is to pump the water and/or silt into leak proof containers, which are then to be removed off site for proper disposal. The Contractor is responsible for all testing required prior to disposal and will provide documentation to the Owner showing the results of the testing.

The Contractor is to coordinate the scheduling of all painting work so that it is performed in the proper sequence of events with respect to related work to be performed on the interior and/or exterior surfaces.

PART 2: PRODUCTS

2.01 MATERIALS

Contractor shall furnish the Tnemec paint system specified herein. These specifications are based on the use of Tnemec paint products.

Products as supplied by Sherwin-Williams will be considered providing, they meet the "Or Equal" requirements of these specifications. Unless prior approval for an alternate system other than those listed above is received at the time of the RFP opening, only the specified Tnemec or an equal Sherwin-Williams system will be allowed.

The coatings used on this project must be certified to comply with NSF Standard 61.

PART 3: EXECUTION

3.01 SURFACE PREPARATION

Upon completion of all repairs, if any, all interior water chamber surfaces, including but not limited to the tank walls, floor and all appurtenances, are to be fully abrasive blast cleaned to bare metal in accordance with the Steel Structures Painting Council SSPC-SP10 near white metal blast grade, latest revision thereof.

All sharp edges, erection burrs, erection brackets and/or other protrusions shall be removed by grinding. Sharp edges, burrs and protrusions shall be ground to at least a 1/8-inch radius. Weld spatter (if any) shall be completely removed.

The degree of abrasive blasting is to result in a sharp angular surface profile compatible with the coatings to be applied. The manufactures minimum and maximum profile requirements will be strictly adhered to; therefore, the Contractor is cautioned to use the appropriate size and type abrasive as well as the proper velocities to achieve the required profile.

All cleaned surfaces will be primed within 8 hours and before rusting occurs. In the event rusting of the steel does occur, prior to priming, these areas will have to be re-cleaned to the degree originally specified.

3.02 INTERIOR PAINT SYSTEM

All blasted surfaces on the interior water chamber as referenced under Section 3.01 Surface Preparation are then to receive a high-performance coating system from the Tnemec Co. Inc. or equal.

All interior surfaces are to receive one coat of zinc primer as outlined below.

The following items, including but not limited to, all weld seams, the roof support structure and all miscellaneous items within the tank are to receive a stripe coat of epoxy applied by brush after the primer coat has been applied and allowed to cure sufficiently to be recoated.

The entire interior of the tank including the roof, shell walls, and floor is to receive one full coat of 100% solids epoxy as outlined below. All pits representing 30% metal loss or greater are to be welded as outlined elsewhere in these specifications.

TNEMEC SYSTEM:

First full coat: Series 94 H20 Hydro-Zinc 2.5 to 4.0 mils

(All interior surfaces cleaned to bare metal) SSPC – SP-10

Stripe coat: Series 21 4.0 to 6.0 mils

Second full coat: Series FC22 Epoxoline White 25.0 to 35.0 mils

3.03 SPECIAL INSTRUCTIONS

Shell, floor, roof, and riser- Total minimum D.F.T after two full coats of paint outlined above on the interior shell, floor and appurtenances will be 27.5 mils and the maximum will be 39.0 mils. Wherever the stripe coat was applied the minimum dry film thickness is to be 31.5 mils however in no case is the final DFT to exceed 50.0 mils. The Contractor is cautioned to minimize the application of excess paint that could result in heavy runs and sags.

Dry film thickness (DFT) will be measured by the onsite inspector in accordance with SSPC PA2 standards.

No excessive spray dust or solvent entrapment will be allowed in the completed paint system.

Manufacturer's Product Data Sheets are to be incorporated as part of this specification and the Material Safety Data Sheets (MSDS) on all applicable paint materials and solvents shall be available and posted prior to commencement of work. Refer to the appropriate product data sheets for information regarding minimum and maximum application temperatures. **The manufacturer's recommended drying time and application procedure shall be strictly adhered to, including all necessary requirements for heating, dehumidification, and ventilation.**

The Contractor is to use plural component spray equipment as recommended by the coating's manufacturer. The use of "hot potting" will not be allowed.

All painting practices shall be in complete accordance with the normal standards of good painting practice as outlined by the Steel Structures Painting Council in the SSPC Manuals Volume 1 and 2.

The Contractor shall provide a void free continuous coating shall perform a high voltage holiday test after the finish coat is applied to check the paint film integrity in accordance with the paint manufacturer's recommended testing procedures. Any holidays found as a result of this test will be re-coated and the area re-tested after the coating has dried. The Contractor is to supply small touch up kits of the specified coating system to be used during the touch up process as needed. This procedure will be repeated at no additional cost to the Owner until there are no holidays in the applied system. The on-site inspector will perform the holiday test after the coatings have cured for a minimum of two (2) days and provide a report to Owner.

The tank will not be placed back into active service until the interior coatings are sufficiently cured in compliance with the Coating Manufactures recommendations as well as the established parameters of the Owner and all State and Federal Government regulations. Generally, the Tnemec coatings (Series FC22) are to be cured for a minimum of 24 hours at 75° before being returned to service. Cooler ambient temperatures as well as higher dry film thickness (DFT) will retard the curing process therefore additional cure times will be outlined if the temperatures are below 75°.

It is the Contractor's responsibility to ensure the coatings are sufficiently cured prior to returning the tank to active service. Dehumidification and forced ventilation is required 24/7 throughout the finish coat application and curing process to achieve the required results. Depending on the time of year the project is performed continuous heat may also be necessary to achieve and maintain proper application and curing temperatures. All heat, dehumidification and ventilation necessary is to be provided by the Contractor at no additional cost to the Owner.

If a coating failure is suspected and the Village and Contractor fail to agree on terms, the Village may engage a third-party consultant to analyze the failure and provide a professional opinion and report detailing the matter and advising an appropriate action to correct the noted deficiency.

In-place quality assurance procedures including the use of NACE Certified inspectors to ensure the quality of the preparation and coatings application during the course of the projects.

END OF SECTION

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SECTION 09960
EXTERIOR TANK PAINTING

PART 1: GENERAL

1.01 SCOPE

The Contractor is to coordinate the scheduling of interior and exterior work so that it is performed in the proper sequence with respect to related work. Any damage to the foundation resulting from this work is to be repaired by the Contractor to return it to like new condition.

Section 13800 outlines requirements for welding. All welding is to be completed prior to cleaning and painting the exterior surfaces. The Contractor is to coordinate the scheduling of this work so that it is performed in the proper sequence of events with respect to related work to be performed on the interior and/or exterior surfaces.

Upon completion of all exterior painting the Contractor is to replace the existing overflow screen with new 4 mesh stainless steel screen.

If a coating failure is suspected and the Owner and Contractor fail to agree on terms, the Owner may engage a third-party consultant to analyze the failure and provide a professional opinion and report detailing the matter and advising an appropriate action to correct the noted deficiency.

1.02 RELATED WORK SPECIFIED ELSEWHERE

Section 09850 - STEEL TANK PAINTING.

Section 09860 - ABRASIVE BLASTING CONTROLS

Section 09950 - INTERIOR WATER CHAMBER PAINTING

Section 13800 – MISCELLANEOUS WORK

PART 2: PRODUCTS

2.01 MATERIALS

Contractor shall furnish the Tnemec paint system specified herein. These specifications are based on the use of Tnemec paint products.

Products as supplied by Sherwin-Williams will be considered providing they meet the “Or Equal” requirements of these specifications. Unless prior approval for an alternate system other than those listed above is received at the time of the RFP opening, only the specified Tnemec or an approved Sherwin-Williams system will be allowed.

PART 3: EXECUTION

3.01 EXTERIOR SURFACE PREPARATION AND CONTAINMENT

The entire exterior of the tank and all appurtenances are to be completely abrasive blasted to an SSPC-SP6 commercial blast cleanliness standard. Min 2 mil angular anchor profile required. And containment will adhere to minimum SSPC Guide 6 Class 2a containment standard.

3.02 EXTERIOR PAINT SYSTEM

As a minimum consideration, all areas cleaned to bare metal should receive (1) full coat of primer: TNEMEC 91H2O or 94H2O hydrozinc aromatic zinc rich urethane, or approved equivalent, applied to achieve 2.5-4.5 DFT mils (If intermediate coat is sprayed, a full stripe coat of Series 27 or Series 135 epoxy must be applied by brush and roller prior to intermediate coat application). (1) Full intermediate coat of

TNEMEC Series 27 applied to achieve 3-6 DFT mils or Series 135 epoxy applied to achieve 4-6 DFT mils. (1) Full finish coat of TNEMEC Series 72 pigmented acrylic polyurethane or, approved equivalent, applied to achieve 2-6 DFT mils. The finish color to match the existing color scheme along both the main plate surfaces.

TNEMEC SYSTEM:

| <u>Coating schedule</u> | <u>Coating system</u> | <u>Dry film thickness</u> |
|-------------------------------|---------------------------|---------------------------|
| First coat (full primer coat) | Hydrozinc Urethane primer | 2.5 - 4.5 mils |
| Second coat (full) | Epoxy | 3.0 - 6.0 mils |
| Third coat (full) | Acrylic Polyurethane | 2.0 - 6.0 mils |

Dry film thickness will be measured in accordance with SSPC PA2 standards.

The color of the finish coat will be selected by the Owner from a color chart supplied by the Contractor prior to the start of work.

The manufacturer's recommended cure/drying time and application procedure will be strictly adhered to. Special attention shall be given to all seams and the finish coat is to be uniform in appearance, with full gloss retention and a minimum of runs and sags.

Manufacturer's Product Data Sheets are to be incorporated as part of this specification and the Material Safety Data Sheets (MSDS) on all applicable paint materials and solvents shall be available and posted prior to commencement of work.

All painting practices shall be in complete accordance with the normal standards of good painting practice as outlined by the Steel Structures Painting Council in the SSPC Manuals Volume 1 and 2.

Any areas not finished to the complete satisfaction of the Contractor, or Owner's representative shall either be removed and re-applied (all coats) or shall be given extra coats at his direction, to bring the total film thickness up to the required minimum dry mils thickness. The Contractor is cautioned to minimize the application of excess paint, which could result in heavy runs and sags. The Owner or Engineer reserves the right to direct the Contractor to remove excess runs and sags by whatever means necessary followed by the reapplication of one or more of the specified coats of paint, if required, at no additional cost to the Owner.

In-place quality assurance procedures including the use of NACE Certified inspectors to ensure the quality of the preparation and coatings application during the course of the projects.

END OF SECTION

SECTION 11730
SUBMERSIBLE MIXER

PART 1 – GENERAL

1.1 SCOPE

A. This section covers submersible tank mixing systems up to 0.5 HP in size intended for continuous use while submersed in potable water storage tank. Each mixer shall have the ability to function continuously on a year-round basis, regardless of drain and fill cycles. Each mixer shall consist of a low-voltage, water-filled submersible motor, an impeller and a non-submersible control center that houses all control electronics.

1.2 THE REQUIREMENT

A. Contractor shall furnish and install submersible mixing system together with all drives, motors, controls, and accessories necessary for a complete and operable system.

B. Contractor shall furnish electrical conduit with 110-120 VAC, GFCI-protected disconnect switch or circuit breaker up to the point of installation of the mixing system control center. Contractor shall also provide conduit from control center to tank penetration for submersible motor cable and watertight pressure entrance penetration through tank for same cable.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Comply with the applicable reference specifications as specified in the General Requirements including, but not limited to:

- NSF National Sanitation Foundation
- NEC National Electrical Code
- AWWA American Water Works Association

1.4 CONTRACTOR SUBMITTALS

A. NSF Certification

1. Copies of the NSF-61 certified listing for the proposed mixing equipment.

B. Design Calculations

1. Based on models calibrated with experimental data from laboratory-scale and real scale representative systems for similarly sized reservoirs, manufacturer shall show completely mixed conditions for equipment configuration. The manufacturer shall provide documentation of the Computational Fluid Dynamics (CFD) model parameters and assumptions, tank geometry and dimensions considered, mesh information, and CPU time required.

2. Analysis should include the following sections:

- a. VeloVillage vectors plot at different cross-sections
- b. The average flow induced throughout the tank
- c. The corresponding average turnover for the tank (in hours)
- d. The corresponding average power consumption of the mixer

C. Installation, Operations, and Maintenance Manuals shall be obtained from the equipment manufacturer and submitted. The following sections shall be included:

1. General equipment specifications and data sheets
2. Installation, start-up, operation, and maintenance instructions
3. Factory-recommended maintenance schedule and list of recommended spare parts.

4. Wiring diagrams specifying what electrical wiring needs to be done onsite during and prior to the installation, and by which responsible party.
5. List of equipment or tooling necessary for diagnostics, troubleshooting, repair or general maintenance.

1.5 QUALITY ASSURANCE

A. Each mixing system shall be tested prior to deployment according to standard engineering practices at the factory testing facilities. Certification of this completed testing shall accompany mixer installation documentation.

1.6 WARRANTY

A. For the period of one year from the date of substantial completion, the mixer system shall be warranted to be substantially free from defects in material and workmanship.

B. Warranty does not cover damage due to:

- (i) lightning, flood or other acts of nature, or failure of or inappropriate application of peripheral devices including lightning or surge protectors;
- (ii) negligence of Owner, or;
- (iii) vandalism or any other misuse or mistreatment of the product.

PART 2 – PRODUCTS

2.1 PERFORMANCE

A. Mixing system shall completely mix reservoir according to the following minimum performance requirements. These requirements can be measured and validated after installation by operators with readily available tools such as temperature probes and total chlorine grab samplers.

1. Temperature Uniformity

For tank larger than 80 feet in height or 3 million gallons in volume: All temperatures shall converge to within 1.0°C within 72 hours after mixer is installed and activated. During continuous operation of the mixer, all temperatures will converge to within 1.0°C at least once every 24 hours.

2. Disinfectant Residual Uniformity

For tank larger than 80 feet in height or between 3 and 7 million gallons in volume: Disinfectant residual within top five feet of tank and bottom five feet of tank will converge to within 0.20 ppm within 7 days after mixer is installed and activated. During continuous operation of the mixer, disinfectant residual will converge to within 0.20 ppm at least once every 72 hours.

2.2 GENERAL

A. Mixing system consists of an impeller mounted on a submersible motor and supported approximately three feet in height from the tank floor in order for it to launch a jet of water from the bottom of the tank up toward the surface of the water. Floating devices shall not be acceptable. Mixer duty cycle shall be variable with the size and volume of the tank. Mixer control and operation shall be independent of tank drain and fill cycles to ensure constant mixing. Wet-side of Mixer shall weigh less than 75 pounds (~34 kg) and dry-side shall weigh less than 50 pounds (~22 kg). Both wet-side and dry-side shall be able to be hoisted, installed, and/or removed by on-site personnel without additional equipment needed, and so that there is no crush hazard or entanglement hazard present, and so that weight of mixer on tank floor does not cause damage to interior coating.

B. Power source for mixer shall be 110VAC grid power.

2.3 CONSTRUCTION

A. Components – wet-side: shall be NSF/ANSI Standard 61 certified.

Equipment entering tank shall not adhere to, scratch or otherwise cause damage to internal tank coating or put undue stress on the materials of the tank construction. Equipment shall fit through a standard hatch of size 18x18 or larger. A pressure entrance fitting is to be installed in the bottom shell ring to allow motor cable entry into the tank for ease of installation and protection against freezing/ice damage. The pressure entrance fitting shall consist of a maximum 1.5-in Schedule 80 steel coupling rated at 3,000 pounds and a stainless-steel sealing gland. The fitting shall be manufactured to prevent leakage or water migration through the inside wires.

An inverted V shaped ice guard constructed of ½” thick mild steel is to be welded on the interior surfaces approximately 6 inches above the sealing gland penetration. The ice guard is to be cleaned and painted as required for adjacent tank surfaces.

Each submersible mixer shall consist of the following components, regardless of the power source selected:

1. Impeller

AISI Type 316 Stainless Steel
Balanced to within 0.5 gram-inches
Passivated per ASTM A380 to minimize corrosion
Not more than 6 inches in overall height
Not more than 4.5 inches in diameter
Not more than 2.2 lbs in weight
Shall not create cavitation at any rotational speed up to 1500 RPM

2. Motor

AISI Type 316 Stainless Steel body
Chlorine/Chloramine resistant rubber seals
Fully submersible
Low Voltage (10-45V)
High Voltage 110 VAC motor not permitted
Low power (0.5 HP maximum)
Water-filled motor
Water-lubricated motor
Variable RPM (500-1200 RPM)

3. Mounting Bracket

Anchoring plate and bracket welded to the floor as necessary
Built-in attachments secure motor cable away from impeller
Overall weight of wet-side unit not to exceed 75 lbs to avoid damaging tank floor
Overall height of unit not to exceed 4 ft.

B. Components – dry-side: Each 110VAC control center shall consist of the following components:

1. Enclosure

Lockable
Over-hanging lip as moisture seal
Vandal-resistant, 14 gauge, AISI Stainless Steel 304 construction

Overall weight of control center not to exceed 50 lbs

2. Power supply

48V DC power supply

Operating temperature range -40°C to +70°C

Automatic Thermal shut-off protection built-in

Power Factor meets EN61000-3-2

RoHS-compliant design

3. Motor Controller

Conformal-coated PC Board to control motor speed

Green and Red LED Indicator lights show motor status

Operating temperature range -40°C up to 85°C

Manual speed control located on board (potentiometer)

Thermal shut-off protection built-in

Current overload protection built-in

2.4 CONTROLS

A. Each unit shall be equipped with all necessary controls, interwired, to provide the following minimum functions:

1. On/Off switch to control power to mixer.
2. Any other controls shown on electrical and instrumentation drawings.

2.5 GFCI-PROTECTED DISCONNECT SWITCH

A. Each unit shall have a dedicated 15-Amp, 5mA trip level, GFCI circuit breaker for 120-volt, 60-Hz, single-phase grid power. Connection from circuit breaker to control center shall terminate in a disconnect switch located within 10 feet (3m) of mixer control center. Disconnect switch shall be housed in a lockable, waterproof (NEMA 3r minimum) housing.

2.6 ACCEPTABLE MANUFACTURERS:

A. PAX Water Technologies (San Rafael, California), or equivalent
(contact: 1-866-PAX-Mixer, or via www.paxwater.com)

PART 3 – EXECUTION

3.1 INSTALLATION

A. The Contractor shall furnish services of a factory-trained installation Contractor or crew having experience with installation procedures and operation and maintenance requirements for the type of equipment installed under these specifications. Mixer must be able to be installed through a 24-inch shell hatch. Wet-side of Mixer shall weigh less than 75 pounds (~34 kg) and dry-side shall weigh less than 50 pounds (~22 kg). Both wet-side and dry-side shall be able to be hoisted, installed, and/or removed by on-site personnel without additional equipment needed, and so that there is no crush hazard or entanglement hazard present, and so that weight of mixer on tank floor does not cause damage to interior coating.

B. Tank penetration is to be below the water line, typically through the bottom shell ring.

1. A water-tight pressure entrance fitting is to be installed in the bottom shell ring at a location to be determined in the field. The pressure entrance fitting is to be installed to allow motor cable entry into the tank for ease of installation and protection against freezing/ice damage. The pressure

entrance fitting shall consist of a maximum 1.5-in Schedule 80 steel coupling rated at 3,000 pounds and a stainless-steel sealing gland. The fitting shall be manufactured to prevent leakage or water migration through the inside wires.

C. Installation of the in-tank (“wet-side”) components may be performed in any of the following ways

1. Installation by personnel with confined space training while the tank is drained and empty.

D. Installation of the outside-of-tank (“dry-side”) components may be performed by:

1. Third party representatives or Contractor according to the manual provided.

E. GFCI-Protected Disconnect switch shall be installed by:

1. Licensed electrical Contractor per arrangement with Contractor.

F. The mixer and control center shall be installed in accordance with approved procedures submitted and as shown, unless otherwise approved in writing from the Factory.

3.2 TRAINING

A. Mixer Manufacturers Representative will instruct designated Water Department personnel in the safe and proper operation of the PAX Water Mixer. This training will reference the operations manual provided with equipment and show how to check for proper functioning of the equipment.

END OF SECTION

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SECTION 13800
MISCELLANEOUS WORK

GROUT REPAIRS

PART 1:

1.01 SCOPE OF WORK

The Contractor shall remove and repair any damaged and/or defective concrete grout at the base plate to foundation junction of the tank.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

The Contractor will use a non-shrink hydraulic cement grout to replace the damaged grout to be removed as outlined below.

- 10 linear feet of hydraulic cement based on the material being placed 1-2 inches wide and up to 3-4 inches deep, per tank.

PART 3: EXECUTION

3.01 PREPARATION

All defective/damaged grout at the concrete base plate to foundation junction of the tank is to be removed and properly disposed.

The steel surfaces of the adjacent base plates are to be subjected to abrasive blasting operations followed by the application of the coating system as outlined in Section 09960.

All work is to be performed at the direction of the onsite inspector.

3.02 PAINTING

The exterior concrete surfaces adjacent to the grout is to be abrasive blast cleaned and painted as outlined in sections 09960 above prior to the installation of the grout.

PART 4.0: COST

The cost for the work outlined above is to be included in the base price as outlined in the RFP

PART 5: GROUT REPAIR SUPPLEMENTAL

This section not used.

END OF SECTION

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SECTION 13830
FINIAL VENT REPLACEMENT

PART 1:

3.03 SCOPE OF WORK

The existing finial vent cap, cap supports, and screen assembly are to be completely removed from the existing vent stub and discarded. The Contractor is to modify the vent stub by installing a mounting flange plate properly sized to fit to the tank roof and attach the new vent as outlined. The Contractor is to base his cost on the installation of a 24" diameter vent.

The new vent is to be aluminum freeze resistant vacuum/pressure type vent assemblies as manufactured by Atlantic Tank Corporation, Elkton, MD, Advanced Tank Construction Co., Fort Collins, CO, or CB&I Constructors, Inc. Clive, IA. or equal, and are to be bolted in place to the mating flange upon completion of all abrasive cleaning and painting operations. The vent configuration is to comply with AWWA D100-05 Sec 7.5.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

The TANK ASSET MANAGEMENT FIRM is to supply and install (1) new aluminum freeze resistant vacuum/pressure relief type vent assembly and mild steel mounting flange to each tank as follows.

- The new aluminum vent opening is to conform to the size of the existing vent stub diameter (approximately 24") with an appropriately sized steel mating flange. The Contractor is cautioned to measure the existing stub opening to ensure proper sizing of the new vent and the flange assembly to be welded to the stub.
- All steel flanges are to be a minimum of ¼" thick.
- The flange is to have a minimum inside diameter conforming to the size of the existing opening with an outside diameter sized according to the size of the aluminum flange attached to the vent assembly.
- All flanges will have (8) 7/16" diameter bolt holes on a 30 ¼" bolt circle as per the vent manufactures requirements.
- A 1/8th inch thick red rubber gasket with (8) ½" diameter bolt holes on a 30 ¼" bolt circle is to be installed between the mating flanges.
- The vent is to be fastened with (8) 3/8" x 1 ½" 304 stainless steel bolts with HH nuts and 16 flat washers.
- The vent shall open downwards and be fitted with a 24 mesh non-corrodible screen in combination with an automatically resetting pressure/vacuum relief mechanism.

PART 3: EXECUTION

3.01 PREPARATION

The existing vent assembly is to be removed and discarded.

Cutting, fitting and placement of the new vent flange assembly is to be performed so that the work is square, plumb and true, accurately fitted and with tight joints and intersections.

3.02 WELDING

The Contractor shall submit the actual welding procedures to be used on this work to the Owner prior to beginning of construction. The welding procedure shall be specifically for the portion of the work to be modified under this contract. All welding is to be performed in accordance with AWWA D-100 Standards latest revision thereof and all work is to be performed by a certified welder. The Contractor is cautioned to schedule the installation of the vent assembly so as to not interfere with other work to be performed on the tank.

All joints shall have at least a full ¼” fillet weld on the inner and outer face for the entire length of the joint.

3.03 PAINTING

The interior and exterior surfaces of the new steel mounting flange assembly are to be abrasive blast cleaned and painted as outlined in sections 09950 and 09960 above. No paint is to be applied to the aluminum vent assembly.

Prior to returning the tank to active service the Contractor will secure the aluminum vent to the vent flange by means of (8) 3/8th inch x 1-1/2” Stainless Steel Type 304 bolts with HH nuts and 16 washers.

END OF SECTION