Rock River Water Reclamation District
Rockford, Illinois

Bidding Requirements and Contract Forms

for

Polymer Tank Replacement

Capital Project No. 1850

Bid Doc. No. 18-413

Rock River Water Reclamation District
Rockford, Illinois

Bidding Requirements and Contract Forms
and
General Provisions and Technical Specifications
for
Sanitary Sewer Construction

for

Polymer Tank Replacement
Capital Project No. 1850

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Section I

Bidding Requirements

Article 1 — Notice to Bidders

The Rock River Water Reclamation District will receive sealed and signed bids for the Polymer Tank Replacement, Capital No. 1850, sewerage improvements at the Rock River Water Reclamation District offices, 3501 Kishwaukee Street, Rockford, Illinois until 2:00 p.m. on September 13, 2018 at which time and place all responsive / responsible bids will be publicly opened and read aloud.

The Polymer Tank Replacement, Capital No. 1850 consists of the installation of a 5,000 gallon (minimum) HDPE polymer storage tank, removal of existing metal catwalk, concrete slab modification, tank mixing system and all other appurtenances as indicated on the plans and in the specifications.

Bidder's attention is called to Article 2 – Instructions to Bidders 3.8 requirements for Statement of Qualifications. Bidder must have a permanent business office within forty (40) miles of the District office at 3501 Kishwaukee Street in Rockford, IL.

All work shall be completed by January 18, 2019. Liquidated damages shall be $300.00 per calendar day.

Copies of the specifications may be obtained by depositing Fifty Dollars ($50.00) with the Rock River Water Reclamation District. The amount of the deposit for each set of specifications will not be refunded.

All construction will be done in accordance with specifications on file with the Rock River Water Reclamation District, including the *General Provisions and Technical Specifications for Sanitary Sewer Construction* (Current Edition) by the Rock River Water Reclamation District of Rockford.

Each proposal must be accompanied by the District Bid Bond form with an acceptable Bid Security attached, in the amount of ten percent (10%) of the total bid price. This sum is a guarantee that, if the Proposal is accepted, a contract will be entered into and its performance properly secured.

A Mandatory Pre-Bid Meeting for this project will be held on August 30, 2018 at 2:00 p.m. at the RRWRD Board Room, 3501 Kishwaukee Street, Rockford, Illinois. All contractors that intend to bid on this project must attend the pre-bid meeting.

Bid documents may be obtained by contacting the Engineering Department at the Rock River Water Reclamation District, (815) 387-7660, 3501 Kishwaukee St. For more information, visit the District web site at www.rrwrd.dst.il.us. Plans and specifications are also available for viewing through the Northern Illinois Building Contractors Association, whose office is located at 1111 S. Alpine Rd, Rockford, IL.

The successful bidder will be required to furnish a satisfactory performance bond in the full amount of the bid or proposal. No bid shall be withdrawn without the consent of the District for a period of sixty (60) days after the scheduled time of receiving bids.

The Rock River Water Reclamation District reserves the right to reject any or all bids, or any part thereof, or to accept any bid or any part thereof, or to waive any formalities in any bids, deemed to be in the best interest of the Rock River Water Reclamation District.

Dated this 13th day of August, 2018.

BY: Chris Black, Business Manager

Article 2 — Instructions to Bidders

1 General

1.1 Scope and Intent

This section of the contract documents is concerned with furnishing detailed information and requirements for preparing bids to prospective bidders, bidders' responsibility, the preparation and the submission of bids, basis for awarding the contract and other general information concerned with bidding and executing the contract.

1.2 Contradictions

If in the case of apparent contradiction between or among the Contract Documents, the Contract Documents shall be consulted in the following order: Addenda, Agreement, Supplementary Drawings, Instructions to Bidders, Detailed Specifications, Plans, District General Provisions and Technical Specifications for Sanitary Sewer Construction. The language in the first such document in which language regarding the conflict, error or discrepancy occurs shall control.

2 Legal Requirements

2.1 Illinois Regulations

1. The undersigned, as Bidder, declares he will comply with prevailing wages in accordance with the Illinois Department of Labor Standards. The State of Illinois requires contractors and subcontractors on public works projects (including Rock River Water Reclamation District) to submit certified payroll records on a monthly basis, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing false records is a Class B Misdemeanor.

   The certified payroll records must include the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending time of work each day, for every worker employed on the project. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B Misdemeanor. Certified payroll reports shall be submitted on standard IDOT forms.

2. Public Act 83–1030 entitled "Steel Products Procurement Act" requires that steel products used or supplied in performance of this contract or subcontract shall be manufactured or produced in the United States with three exceptions.

The provisions of this Section shall not apply:

   a. Where the contract involves an expenditure of less than $500.
   b. Where the executive head of the public agency certifies in writing that
      i. the specified products are not manufactured or produced in the United States in sufficient quantities to meet the agency's requirements, or
      ii. obtaining the specified products, manufactured or produced in the United States would increase the cost of the contract by more than 10%.
   c. When its application is not in the public interest.

3. Public Act 96-929 (30 ILCS 570) provides that Illinois residents be employed on Illinois public works projects, provided there has been a period of excessive unemployment (5%) in the State

of Illinois as defined in the Act; and, further, that Illinois workers are available and capable of performing the particular type work involved.

4. Public Act 99-0933 requires that any party to a contract adopt and promulgate written sexual harassment policies that include, as a minimum, the following information:

    a. the illegality of sexual harassment
    b. the definition of sexual harassment under Illinois State law
    c. a description of sexual harassment, utilizing examples
    d. my (our) organization's internal complaint process including penalties
    e. the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Illinois Human Rights Commission
    f. directions on how to contact the Department and the Commission
    g. protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act

    Upon request, this information shall be provided to the Illinois Department of Human Rights and the District.

5. With regard to nondiscrimination in employment, the Contractor for this project will be required to comply with the Illinois Fair Employment Practices Commission's Rules and Regulations.

6. The Contractor for this project shall comply with the Occupational Safety and Health Act.

7. The Contractor for this project shall comply with the Federal Drug-Free Workplace Act.

8. Public Act 96-1416 requires the Certification of Clean Construction and Demolition Debris (CCDD) and uncontaminated soil prior to disposal at a CCDD fill site. The Contractor for this project shall comply with Public Act 96-1416 and be responsible for the certifications and any fees associated with the disposal at a CCDD fill site.

    a. In the event that contaminated soil is uncovered on the project, the Contractor shall notify the District immediately. Any extra costs resulting from the presence of contaminated soil shall be evaluated in accordance with District General Provisions & Technical Specs for Sanitary Sewer Construction; General Conditions: Article 5 – Time Provisions and Article 8 – Changes.

2.2 Americans with Disabilities Act

The Contractor for this project will comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA). The Contractor will hold harmless and indemnify Rock River Water Reclamation District (District) and their representatives from all:

1. suits, claims, or actions
2. costs, either for defense (including but not limited to reasonable attorney's fees and expert witness fees) or for settlement
3. damages of any kind (including but not limited to actual, punitive, and compensatory damages)

relating in any way to or arising out of the ADA, to which said firm is exposed or which it incurs in the execution of the contract.

3 General Instructions

3.1 Bidder's Responsibility

Bidders are cautioned not to submit proposals until having carefully examined the entire site of the proposed work and adjacent premises and the various means of approach and access to the site, and having made all necessary investigations to inform themselves thoroughly as to the facilities for delivering, placing and handling the materials at the site, and having informed themselves thoroughly as to all difficulties involved in the completion of all the work under this Contract in accordance with its requirements.

Bidders must examine the Plans, Specifications and other Contract Documents and shall exercise their own judgment as to the nature and amount of the whole of the work to be done and for the bid prices must assume all risk of variance, by whomsoever made, in any computation or statement of amount or quantities necessary to complete fully the work in strict compliance with the Contract Documents. The Bidder must satisfy himself by making borings or test pits, or by such methods as he may prefer, as to the character and location of the materials to be encountered or work to be performed. No pleas of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this Contract, as a result of failure to make the necessary examinations and investigations, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill, in every detail, all of the requirements of the Contract Documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time.

The Contractor is responsible for verifying the location of all existing utilities in the project areas.

The Bidder, therefore, shall satisfy himself by such means as he may deem proper as to the location of all structures that may be encountered in construction of the work.

3.2 Addenda and Interpretations

No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any bidder orally. Every request for such interpretation must be in writing addressed to the Rock River Water Reclamation District, 3501 Kishwaukee Street, Rockford, Illinois. To be given consideration, such request must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be sent by email, fax, or certified mail with acknowledgement of receipt requested, to all prospective bidders, at the respective addresses furnished for such purposes, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addenda or interpretation shall not relieve said bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

3.3 Laws and Regulations

The prospective bidder is warned that he must comply with all laws of the United States Government, State of Illinois, all ordinances and regulations of the District in the performance of the work under this contract. The Bidder's attention is specifically called to that provision of the General Conditions regarding the rate of wage to be paid on the work.

3.4 Quantities Estimated Only

Bidders are warned that the estimate of quantities of the various items of work and materials, as set forth in the proposal form, is approximate only and is given solely to be used as a uniform basis for the comparison of bids. The quantities actually required to complete the contract work may be less or more than so estimated, and if awarded a contract for the work specified, the Contractor further agrees that he will not make any claim for damages or for loss of profits or for an extension of time because of a difference between the quantities of the various classes of work assumed for comparison of bids and quantities of work actually performed.

3.5 Form, Preparation, and Presentation of Proposals

For particulars as to the quantity and quality of the supplies, materials and equipment to be furnished, and the nature and extent of the work or labor to be done, prospective bidders are referred to the Contract Documents, which may be examined or obtained at the office of the District.

Each bid will be submitted upon the prescribed proposal form. All blank spaces for bid prices must be filled in, in ink, with the unit or total sum or both for which the proposal is made. If the proposal contains any omissions, erasures, alterations, additions or items not called for in the itemized proposal, or contains irregularities of any kind, such may constitute sufficient cause for rejection of bid. In case of any discrepancy in the unit price or amount bid for any item in the proposal, the unit price as expressed in figures will govern. In no case is the agreement form to be filled out or signed by the bidder.

Should the Contractor desire to have an electronic proposal form e-mailed to him, the Contractor should contact the District's Engineering Department at (815) 387-7660. This form must be attached to the hard copy proposal form and appropriately signed and executed with the bid.

The bid must be verified and be presented on the prescribed form in a sealed envelope on or before the time and at the place stated in the Advertisement for Bids, endorsed with the name of the person, firm or corporation presenting it, the date of presentation, and the title of the work for which the bid is made. If forwarded by mail, the sealed envelope containing the proposal and marked as directed above, must be enclosed in another envelope addressed to Clerk of the Rock River Water Reclamation District, 3501 Kishwaukee Street, Rockford, Illinois, 61109 and be sent preferably by certified mail. The District will not accept facsimile generated bids.

3.6 Bid Security

Each proposal must be accompanied by the District Bid Bond form with an acceptable Bid Security attached, in the amount specified in Article One, Notice to Bidders. This sum is a guarantee that, if the Proposal is accepted, a contract will be entered into and its performance properly secured. The District's Bid Bond Form included in the bid packet must be used. No other Bid Bond form may be substituted.

Within ten (10) days after the opening of bids, the deposits of all but the three lowest bidders will be returned. The deposits of the remaining two unsuccessful bidders will be returned within three (3) days after the execution of the contract, or, if no such contract has been executed, within sixty (60) days after the date of opening bids. The deposit of the successful bidder will be returned only after he has duly executed the contract and furnished the required bond and insurance.

3.7 Affidavit of Compliance

Each proposal must be accompanied by an executed Affidavit of Compliance. A separate Affidavit of Compliance form is enclosed with the Proposal packet. Failure to submit an executed Affidavit of Compliance with the proposal may constitute sufficient cause for rejection of the bid.

3.8 Statement of Qualifications

Each proposal must be accompanied by a Statement of Qualifications certifying that the bidder is registered to do business in the State of Illinois, has a permanent business office within forty (40) miles of the District office at 3501 Kishwaukee Street in Rockford, IL, and provides documentation that the bidder possesses the appropriate financial, material, equipment, facility and personnel resources and expertise necessary to meet all contractual obligations. The bidder shall document no less than three (3) similar projects within the past five (5) years having equal or greater value to the bid being submitted. The District reserves the right to request additional information as needed to evaluate bids prior to making an award.

3.9 Comparison of Proposals

Bids on item contracts will be compared on the basis of a total computed price arrived at by taking the sum of the estimated quantities of each item, multiplied by the corresponding unit prices and including any lump sum bids on individual items, in accordance with the estimate of quantities set forth in the proposal form. Bids on lump sum contracts will be considered upon the basis of the lowest sum bid.

3.10 Acceptance of Bids and Basis of Award

No bidder may withdraw his bid after the scheduled closing time for receipt of bids, for at least sixty (60) days.

The contract will be awarded, if at all, to the lowest responsive, responsible bidder. The Rock River Water Reclamation District also reserves the right to reject any or all bids.

The bidder whose proposal is accepted shall enter into a written contract for the performance of the work and furnish the required bonds and insurance certificate within ten (10) days after written notice by the Engineering Manager of the District has been served on such bidder personally or by mailing a postpaid wrapper to such bidder at the address given in his proposal. If the bidder to whom the contract is awarded refuses or neglects to execute it or fails to furnish the required bond and insurance within five (5) days after receipt by him of the notice, the amount of his deposit shall be forfeited and shall be retained by the District as liquidated damage and not as a penalty. It being now agreed that said sum is a fair estimate of the amount of damages that the District will sustain in case said bidder fails to enter into a contract and furnish the required bond and insurance. No plea of mistake in the bid shall be available to the bidder for the recovery of his deposit or as a defense to any action based upon the neglect or refusal to execute a contract.

3.10.1 Evaluation of Responsiveness

The responsiveness of bidders will be judged on the basis of the completeness of the bid submitted. To be responsive, a Bid must be submitted on the forms provided as part of the Bid Documents and comply with all the requirements of the Instruction to Bidders.

3.10.2 Evaluation of Responsibility

To be judged as responsible, the bidder shall:

a. Have adequate financial resources for performance, the necessary experience, organization, technical qualifications, and facilities, or a firm commitment to obtain such by subcontracts;
b. Be able to comply with the required completion schedule for the project;
c. Have a satisfactory record of integrity, judgment, and performance, including, in particular, any prior performance on contracts from the District;
d. Have an adequate financial management system and audit procedures, that provide efficient and effective accountability and control of all property, funds, and assets;
e. Conform to the civil rights, equal employment opportunity and labor law requirements of the Bid Documents.
f. Have satisfactorily completed no less than three (3) similar projects within the past five (5) years of equal or greater value to the bid being submitted.

3.11 The Rejection of Bids

The District reserves the right to reject any bid if the evidence submitted in the statement of the bidder's qualifications, or if investigation of such bidder fails to satisfy the District that such bidder is properly qualified to carry out the obligations and to complete the work contemplated therein. Any or all proposals will be rejected if there is reason to believe that collusion exists among the bidders. Conditional bids will not be accepted. The District reserves the right to reject any and all bids and to accept the bid which they deem most favorable to the interest of the District after all proposals have been examined and canvassed.

3.12 Insurance and Bonding

Contractor shall provide all necessary insurance and bonds required to complete the project. No more than ten (10) calendar days subsequent to the District's issuance of an award letter, the Contractor shall provide documentation to prove that he has obtained all required insurance and bonds. The District shall be the sole judge as to the acceptability of any such proof.

Contractor shall provide and maintain all insurance and bonds as required by the District.

3.12.1 General

The Contractor shall ensure that:

1. All insurance policies shall be specific to the project.

2. The insurance certificate shall state: This certifies that the insurance coverage meets or exceeds that required for Polymer Tank Replacement Capital Project No. 1850.

3. The District shall be named as Additional Insured in all policies; this shall include the Owners Contractors Protective Policy option.

4. All completed operations coverages and bonds shall remain in force for a period of two (2) years following acceptance of the project and completed operations shall stay in force for two (2) years following completion of the project.

3.12.2 Insurance

The Contractor shall, for the duration of the contract and for two (2) years following project acceptance, maintain the following:

1. General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit. The Contractor shall provide "XCU" coverage.

2. Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage including coverages for owned, hired or non‒owned vehicles, as applicable.

3. Workers' Compensation and Employers Liability: Workers' Compensation limits as required by statute and Employers Liability limits of $500,000 per accident and $500,000 per disease.

4. Umbrella: $2,000,000 per occurrence/aggregate for contracts valued at $500,000 or over, or $1,000,000 for contracts below $500,000. $10,000 is maximum allowable self-retained limit.

5. Errors and Omissions: If the Contractor performs professional services, he shall maintain errors and omissions insurance with a limit no lower than $1,000,000 for the duration of the contract.

The policies shall contain, or be endorsed to contain, the following provisions in the General Liability and Automobile Liability Coverage's:

a. Unless otherwise provided in paragraph "c" of this section, the District, its officers, officials, employees and volunteers shall be covered as additional insureds as respects liability arising out of activities performed by or on insured's general supervision of the Contractor, products and completed operations of the Contractor, premises owned, occupied or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officers, officials, employees, volunteers, or agents.

b. Unless otherwise provided in paragraph "c" of this section, the Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, volunteers, and agents. Any insurance or self-insurance maintained by the District, its officers, officials, employees, volunteers, or agents shall be excess of the Contractor's insurance and shall not contribute with it.

c. As an acceptable alternative to provisions "a" and "b" of this section, the Contractor may provide owner's and contractor's protective liability insurance with coverage

limits, named insureds, and in conformity with all applicable specifications of this section.

d. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officers, officials, employees, volunteers, or agents.

e. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

f. All Coverages — Each insurance policy required by this clause shall not be suspended, voided, canceled by either party, reduced in coverage, or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

3.12.3 Best's Ratings

The District shall be the sole judge of whether or not said insurer's ratios are satisfactory. The District's decision shall be final and the District's bidding procedures contain no appeal provision.

1. Alphabetical Rating: For purposes of this Request for Bids, "insurer" shall mean any surety, insurance carrier, or other organization which proposes to provide an insurance policy or bond for the Contractor. No insurer or surety rated lower than "A-, Excellent" in the current *Best's Key Rating Guide* shall be acceptable to the District.

2. Financial Size Rating: Provided an insurer's alphabetical rating is satisfactory, the District will examine said insurer's financial size rating.

    a. If Best classifies the insurer XII or larger, said insurer shall be acceptable to the District.

    b. If Best classifies the insurer as smaller than XII, but larger than VI, said insurer shall be submitted to the District's Business Manager and/or the District's insurance consultant for review.

Financial Size ratings less than VII are not acceptable and will disqualify the Contractor.

3.12.4 Performance Bond and Labor & Materials Payment Bond Form

The Contractor shall provide a Performance Bond and Labor & Materials Payment Bond form acceptable to the District. The performance bond shall be for either 100% of the contract price or for the Contractor's unit price times the estimated number of units, as applicable.

This Request for Bids contains a Performance Bond and a Labor & Material Bond form for the Contractor's use.

If the Contractor fails to provide acceptable bonds within the specified time, he shall be in default.

3.12.5 Correction of Contractor's Insurance or Bond Deficiencies

If the District determines that the Contractor's insurance or bond documentation does not conform to these specifications, the District shall inform said Contractor of the non-conformity. If said Contractor fails to provide conforming insurance or bond documentation within five (5) calendar days of the District's deficiency notice, he shall be in default.

3.12.6 Indemnification Clause

Contractor shall protect, indemnify, hold and save harmless and defend the District, its officers, officials, employees, volunteers, and agents against any and all claims, costs, causes, actions and expenses, including but not limited to attorney's fees incurred by reason of a lawsuit or claim for compensation arising in favor of any person, including the employees, officers, independent contractors, or subcontractors of the Contractor or District, on account of personal injuries or death, or damages to property occurring, growing out of, incident to, or resulting directly or indirectly from the performance by the Contractor or subcontractor, whether such loss, damage, injury or liability is contributed to by the negligence of the District or by premises themselves or any equipment thereon whether latent or patent, or from other causes whatsoever, except that the successful bidder shall have no liability for damages or the costs incident thereto caused by the sole negligence of the District.

The indemnification shall not be limited by a limitation on amount or type of damages payable by or for the Contractor or its subcontractor under any employee benefits act including, but not limited, to the Workers Compensation Act.

No inspection by the District, its employees, or agents shall be deemed a waiver by the District of full compliance with the requirements of the Contract. This indemnification shall not be limited by the required minimum insurance coverages in the Contract.

3.13 Tax Exemption

The District is exempt, by law, from paying bidder Federal Excise Tax and Illinois Retailers' Occupational Tax. Therefore, the bidder shall exclude those taxes from his bid. The District's tax exemption number is E9992-3696-06. The bidder shall include all applicable taxes in his bid price.

Article 3 – Detailed Specifications

1 General Requirements

1.1 General

This article contains detailed specifications relating to proposal items. The work to be done under each item is discussed along with units for payment and measurement for payment. However, the descriptions given do not necessarily outline all the work to be done under any item. In addition, work shall conform to the following Technical Specifications: *Standard Specifications for Water and Sewer Main Construction in Illinois*, current edition, and Rock River Water Reclamation District (District) *General Provisions and Technical Specifications for Sanitary Sewer Construction*. The term "IDOT Standard Specifications" shall mean the Illinois Department of Transportation's *Standard Specifications for Road and Bridge Construction*, current edition. When referenced in applicable sections, work shall conform to the IDOT Standard Specifications.

Throughout these specifications, the term "Owner", "District", and "Engineer" shall be synonymous.

In case of apparent contradictions between *Article 3 - Detailed Specifications* and the *General Provisions and Technical Specifications for Sanitary Sewer Construction*, these Detailed Specifications shall govern.

Utility locations shown on the plans are based on the best information available at the time of design and are not guaranteed. The location and/or elevation of existing underground utilities, such as gas mains, water mains, electric lines, field tiles, irrigation pipes, etc., shall be determined by the Contractor. The Contractor shall assume full responsibility for location of all utilities.

Any construction not supervised by a District Inspector shall not be accepted.

No work shall be permitted on Sundays without prior approval by District Engineering Manager.

There shall be an implied warranty by suppliers that their products and all product components are suitable and appropriate for the intended used, and that they are free from all material, design, or workmanship defects. Said warranty shall run to the benefit of the District. The foregoing shall apply whether the products or product components are specified in the Contract Documents or are of supplier's design.

The District will not supervise, direct, control, have authority over or be responsible for the Contractor's means, methods, techniques, sequences, procedures of construction, safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The District will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

After the award of the contract and prior to starting work, the Contractor shall submit to the Engineer a satisfactory progress schedule or critical path schedule which will show the proposed

sequence of work, and how the Contractor proposes to complete the various items of work by the completion date specified in this contract.

1.2 Submittals

The Contractor shall submit to the Engineer the items under 'Required Submittals' of each special provision prior to beginning any work. The Contractor shall perform the following:

A. Review each submittal.
B. Verify field dimensions.
C. Verify compliance with Contract documents.
D. Sign and seal submittals to certify the Contractor's review/approval.
E. Transmit reviewed submittals to the Engineer for approval.

The Contractor shall allow a minimum of two (2) weeks for the Engineer's review of most submittals. The Engineer reserves the right to withhold action on a submittal that requires coordination with other submittals, until all related submittals are submitted. No extension of time to perform the Contract will be authorized because of the Contractor's failure to make submissions to the Engineer in time for the Engineer to execute a thorough review.

The Engineer's approval of a submittal shall not be considered an order for additional, extra, or differing work, and shall not guarantee the accuracy of information or the effectiveness of the products provided in the submittal.

No work shall be fabricated by order of the Contractor, unless at the Contractor's risk, until review of submittals has been completed by the Engineer.

When the Contract Documents call for work to be performed in accordance with the manufactures' instructions, the manufacturers' instructions shall also be considered required submittals.

Should any material be installed in the Work for which a Material Safety Data Sheet (MSDS) is required to be retained by the District under State or Federal regulations, the installing subcontractor shall submit applicable MSDS forms to the Contractor for submission to the District upon completion of the project. Three (3) MSDS forms shall be submitted for each item. Only official OSHA MSDS forms shall be used; copies will not be accepted. The Contractor shall compile the MSDS forms and bind them into the Owners Manuals.

1.3 Pre-Bid Meeting (Mandatory)

A mandatory Pre-Bid Meeting will be held at the RRWRD Board Room, 3501 Kishwaukee St., Rockford IL 61109 on August 30, 2018 at 2:00 a.m. Bids will not be accepted from Contractors who are not in attendance.

1.4 Required Submittals

A. Project Schedule

2 Notification, Access, & Special Considerations

2.1 General

Special Considerations:

A. The Contractor shall notify Warren Adam, Plant Maintenance Supervisor, (815)-871-0787, a minimum of forty-eight (48) hours in advance of construction.
B. The Contractor shall protect all existing equipment from damage of any kind, including but not limited to, dust control and water damage. Any damage occurring as a result of the Contractor's actions or negligence shall be corrected at no additional cost to the District.
C. Contractor staging and temporary storage of equipment and materials shall be as shown on Plan Sheet 2, specifically in the area indicated to northeast of the Dewatering Building. The designated staging/storage areas shall be the only staging/storage areas utilized by the Contractor. Deliveries to the work site shall be accepted by the Contractor at the East treatment plant entrance (Guard Shack west of Kishwaukee Street). The District will not coordinate or be responsible for any deliveries that are inadvertently delivered to the District inventory shop.
D. The Contractor shall be allowed reasonable use of available on-site 120-V electrical power sources for hand held tools, ancillary lighting, etc., as long as it does not interfere with the normal functioning of District operations and as long as the usage is not abused. Any power needs greater than 120-V shall be the Contractor's responsibility.
E. The Contractor shall provide sanitary facilities for use by all employees.
F. The Contractor's proposed sequence of work shall be submitted prior to beginning any work with the Project Schedule. The Contractor is responsible for developing the means, methods, and procedures for installation and is solely responsible for compliance with all OSHA and EPA regulatory requirements.

2.2 Required Submittals

Site Safety Plan indicating all safety measures the Contractor will employ to comply with all pertinent OSHA and EPA requirements.

2.3 Measurement and Payment

No payment will be made for costs associated with notification, access, and special considerations.

3 Polymer Fill Line, 4" PVC Pipe, Complete

3.1 General

This work shall consist of furnishing and installing the 4-inch polymer fill line, pipe supports, PVC ball valve, and PVC fittings as needed to connect to existing polymer fill line and the proposed polymer storage tank as shown on the plans. All work shall be in accordance with local and State plumbing codes.

3.2 Materials

The material for the polymer fill line shall be Schedule 80 PVC pipe, valves and fittings. Pipe hangers and supports shall be galvanized steel.

3.3 Required Submittals

A. PVC Pipe, Valves, and Fittings
B. Pipe Hangers and Supports
C. Proposed Piping Plan for the Polymer Fill Line showing all valves, fittings, and pipe hangers/supports

3.4 Measurement and Payment

Payment for this work shall be based on the quantity installed at the Contract unit price per LF for Polymer Fill Line, 4" PVC Pipe, Complete.

4 Polymer Feed Line, 1" PVC Pipe, Complete

4.1 General

This work shall consist of furnishing and installing the polymer 1-inch polymer feed line, core drilling the existing wall, flexible connector, pipe supports, PVC ball valve, and PVC fittings as needed to connect to existing polymer fill line and the proposed polymer storage tank as shown on the plans.

4.2 Materials

The material for the polymer feed line shall be Schedule 80 PVC pipe, valves and fittings. Pipe hangers and supports shall be galvanized steel.

4.3 Required Submittals

A. PVC Pipe, Valves, and Fittings
B. Pipe Hangers and Supports
C. Proposed Piping Plan for the Polymer Feed Line showing all valves, fittings, and pipe hangers/supports

4.4 Measurement and Payment

Payment for this work shall be based on the quantity installed at the Contract unit price per LF for Polymer Feed Line, 1" PVC Pipe, Complete.

5 Removal and Disposal of Catwalk System, Complete

5.1 General

This work shall consist of the complete removal of existing catwalk in the location shown on the plans. This work shall include the proper disposal of all materials generated by the removal of the catwalk.

The Contractor shall be responsible for restoring the area to the District's satisfaction. The guard rail that is salvaged from the catwalk removal shall be used to fill in the opening in the existing guard rail resulting from the removal of the catwalk.

5.2 Required Submittals

None

5.3 Measurement and Payment

No measurement will be made for this item. This work will be paid for at the Contract Lump Sum unit price for Removal and Disposal of Catwalk System, Complete.

6 Cast-In-Place Concrete - Section 03300

PART 1 - GENERAL

1.1 Related Documents

A. Drawings and general provisions of the Contract, including Sections 1 & 2 of General Provisions and Technical Specifications for Sanitary Sewer Construction, apply to this Section.

1.2 Summary

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
   1. Slab-on-slab: The slab shall be placed as shown on the Plans. The Contractor shall install fiber expansion strips along the outside perimeter of the proposed slab at the interface with the existing concrete slab edges.
   2. Support pad for the proposed polymer storage tank.

B. Related Sections include the following:
   1. General Provisions and Technical Specifications for Sanitary Sewer Construction, Section 1 Article 11, “Payment.”
   2. General Provisions and Technical Specifications for Sanitary Sewer Construction, Section 2 Article 3, “Working Drawings.”

1.3 Definitions

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.4 Submittals

A. Submit product data under provision of Section 2 Article 3, “Working drawings.”
B. Product Data: For each type of product indicated.
C. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
   1. Indicate amounts of mixing water to be withheld for later addition at Project site.
D. Steel Reinforcement Shop Drawings (Working Drawings): Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
E. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.

1.5 Quality Assurance

A. Installer Qualifications: A qualified installer who has completed concrete work similar in material, design, and extent to that for this Project and whose work has resulted in construction with a record of successful in-service performance.

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

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

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

1. ACI 301, "Specification for Structural Concrete,"
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.6 Delivery, Storage, and Handling

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.

PART 2 - PRODUCTS

2.1 Manufacturers

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 Form-Facing Materials

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

1. Plywood, metal, or other approved panel materials.

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

C. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch.

D. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
   1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
   2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.

2.3 Steel Reinforcement

A. Epoxy-Coated Reinforcing Bars: ASTM A 615, Grade 60, deformed bars, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.
B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

2.4 Reinforcement Accessories

A. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating; compatible with epoxy coating on reinforcement and complying with ASTM A 775.
B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
   1. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer-coated wire bar supports.
C. Coating for Existing Reinforcement to Remain in Repairs and Reconstruction: Zinc-rich primer as noted on drawings.

2.5 Concrete Materials

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
   1. Portland Cement: ASTM C 150, Type I, gray, with maximum C3A content of 10 percent. Supplement with the following:
      a) Fly Ash: ASTM C 618, Class C or F. Fly ash percentage by weight of cementitious materials shall be 22 to 25 percent.
B. Normal-Weight Aggregates: ASTM C 33, Class 4S coarse aggregate or better, graded. Provide aggregates from a single source.
   1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
   2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
C. Water: ASTM C 94 and potable.

2.6 Admixtures

A. Air-Entraining Admixture: ASTM C 260.

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

1. Water-Reducing Admixture: ASTM C 494, Type A

2.7 Curing Materials

A. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

1. Products:
   a) Burke by Edoco; Cureseal 1315 WB.
   b) ChemMasters; Polyseal WB.
   c) Conspec Marketing & Manufacturing Co., Inc., a Dayton Superior Company; Sealcure 1315 WB.
   d) Euclid Chemical Company (The); Super Diamond Clear VOX.
   e) Kaufman Products, Inc.; Sure Cure 25 Emulsion.
   f) Lambert Corporation; UV Safe Seal.
   g) L&M Construction Chemicals, Inc.; Lumiseal WB Plus.
   h) Meadows, W. R., Inc.; Vocomp-30.
   i) Metalcrete Industries; Metcure 30.
   j) Symons Corporation, a Dayton Superior Company; Cure & Seal 31 Percent E.
   k) Tamms Industries, Inc.; LusterSeal WB 300.
   l) Unitex; Hydro Seal 25.
   m) US Mix Products Company; US Spec Radiance UV-25.
   n) Vexcon Chemicals, Inc.; Vexcon Starseal 1315.

2.8 Related Materials

A. Premolded Joint Filler (PJF) Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

2.9 Concrete Mixtures, General

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

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Provide percentage, by weight, of cementitious materials other than Portland Cement in concrete as follows:

1. Fly Ash: shall be 22 to 25 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing or high-range water-reducing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

2.10 Concrete Mixture

A. Walls, slabs, walkways, etc.: Proportion normal-weight concrete mixture as follows:
   1. Minimum Compressive Strength: 4,500 psi at 28 days
   2. Maximum Water-Cementitious Materials Ratio: 0.40
   3. Slump Limit: 4 inches
   4. Slump Limit: 7 inches for concrete containing high range, water reducing admixtures (concrete shall have a slump between 2 and 4 inches before admixture is added)
   5. Air Content: 6.5 percent, plus or minus 1.5 percent at point of delivery

2.11 Fabricating Reinforcement

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

2.12 Concrete Mixing

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.
   1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Not allowed.

PART 3 – EXECUTION

3.1 Formwork

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

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

C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
   1. Class A, 1/8 inch for smooth-formed finished surfaces.
   2. Class B, 1/4 inch for rough-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
   1. Install keyways, reglets, recesses, and the like, for easy removal.
   2. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

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

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 Embedded Items

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

3.3 Removing and Reusing Forms

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
   1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 90 percent of its 28-day design compressive strength.
   2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Owner’s Representative.

3.4 Shores and Reshores

A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.
   1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.
B. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.5 Steel Reinforcement

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
   1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars. 100% of every intersection shall be tied.
D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.
F. Epoxy-Coated Reinforcement: Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963. Use epoxy-coated steel wire ties to fasten epoxy-coated steel reinforcement.

3.6 Joints

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated on the Construction Drawings or as approved by the Owner's Representative.
C. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints to the dimensions indicated in the Construction Drawings and as follows:
    1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
    2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks. Random contraction cracks usually occur between 4 to 12 hours after the concrete is placed, depending on the actual environmental conditions. Timing of the saw cutting shall solely be the Contractors responsibility.
D. Isolation Joints: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
    1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
    2. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

3.7 Concrete Placement

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
    1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
   1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
   2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
   3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

D. Deposit and consolidate concrete for walkways and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
   1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
   2. Maintain reinforcement in position on chairs during concrete placement.
   3. Screed slab surfaces with a straightedge and strike off to correct elevations.
   4. Slope surfaces uniformly to drains where required.
   5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
   2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:
   1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
   2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.8 Finishing Formed Surfaces

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

B. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete: Select one or more rubbed finishes from three subparagraphs below.

1. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

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

3.9 Finishing Slabs and Pads

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

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

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Owner's Representative before application.

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

3.10 Concrete Protecting and Curing

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

B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
   1. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.11 Joint Filling

A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
   1. Prior to sealant installation, allow concrete to cure for a period of time as recommended by the sealant manufacturer. Don not fill joints until construction traffic has permanently cease.
B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.12 Concrete Surface Repairs

A. Defective Concrete: Repair and patch defective areas when approved by the Owner's Representative. Remove and replace concrete that cannot be repaired and patched to Owner's Representative approval.
B. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
   1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete, but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
   2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
   3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Owner's Representative.

C. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
   1. Slabs that have surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions shall be removed and replaced from construction joint to construction joint.
   2. Slabs constructed to high or to low shall be removed and replaced from construction joint to construction joint.

3.13 Field Quality Control

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

B. Inspections:
   1. Steel reinforcement placement.
   2. Verification of use of required design mixture.
   3. Concrete placement, including conveying and depositing.
   4. Curing procedures and maintenance of curing temperature.
   5. Verification of concrete strength before removal of shores and forms from slab and pad.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
   1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
   2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
   3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
   4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
   5. Compression Test Specimens: ASTM C 31.
   a) Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
   6. Compressive-Strength Tests: ASTM C 39; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
   7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
   8. Test results shall be reported in writing to Owner’s Representative, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete

placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Owner's Representative but will not be used as sole basis for approval or rejection of concrete. This additional testing will be performed at the Contractor's expense.
10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Owner's Representative. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by the Owner's Representative. These additional tests will be performed at the Contractor's expense
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements at the Contractor's expense.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

PART 4 – PAYMENT

4.1 Measurement and Payment: Payment for this work shall be based on the quantity of concrete placed at the Contract unit price per CY for Cast-In-Place Concrete.

END OF SECTION 03300

7 Double Walled Polymer Storage Tank

1. Scope

Contractor shall furnish and install all materials, equipment, appurtenances, specialty items, and services required to provide an upright, double wall, flat bottom, closed top, polyethylene storage tank for polymer storage. The tank shall be molded in one-piece seamless construction in accordance with ASTM D 1998 (laminated or fabricated tanks will not be accepted) and shall be capable of storing the chemical application at atmospheric pressure.

The Contractor shall furnish and install one (1) double walled, polyethylene tank for use as a polymer storage tank. The minimum volume shall be 5,000 gallons. The Contractor shall be responsible for selecting tank with dimensions that will fit within the available space while meeting the specified minimum storage volume.

2. General

2.1 This specification covers upright, double wall, flat bottom storage tank assemblies. The assembly consists of one cylindrical inner primary tank and one blended form octagonal outer secondary tank. The tank shall be molded in one-piece seamless construction by rotational molding (laminated or fabricated tanks will not be accepted). The tank is designed for above-ground, vertical installation and is capable of containing chemicals at atmospheric pressure. The assembly shall be designed to prevent rainwater from entering the containment tank during shipping and storage. The design shall allow direct primary tank base retention for up to seismic conditions per IBC code requirements. The containment tank shall be designed to hold a minimum of 115% of the normal fill capacity of the primary tank. Included in this specification are requirements for material properties, design, construction, dimensions, tolerances, workmanship, and appearance.

2.2 This specification does not cover the design of vessels intended for use at pressures above or below atmospheric conditions. It is also not for vessels intended for use with liquids heated above their flash points, temperatures above 140 degrees Fahrenheit for Type I materials, or temperatures above 130 degrees Fahrenheit for Type II materials. (Note: See 9.1.2 for chemicals being stored above 100 degrees F)

3. Manufacturer

3.1 Tanks shall be as manufactured by Snyder Industries, Inc., Assmann Corporation of America, Poly Processing, or approved equal.

4. Applicable Documents

4.1 ASTM (American Society for Testing and Materials) Standards:

- D618 Conditioning Plastics and Electrical Insulating Materials for Testing
- D638 Tensile Properties of Plastics
- D790 Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- D883 Definitions of Terms Relating to Plastics
- D1505 Density of Plastics by the Density-Gradient Technique
- D1525 Test Method for Vicat Softening Temperature of Plastics
- D1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics
- D1998 Standard Specification for Polyethylene Upright Storage Tanks
- D2765 Degree of Crosslinking in Crosslinked Ethylene Plastics as Determined by Solvent Extraction
- D2837 Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
- D3892 Practice for Packaging/Packing of Plastics
- F412 Definitions of Terms Relating to Plastic Piping Systems

4.2 ARM (Association of Rotational Molders) Standards: Low Temperature Impact Resistance (Falling Dart Test Procedure)

4.3 ANSI Standards: B-16.5 Pipe Flanges and Flanged Fittings

4.4 OSHA Standards: 29 CFR 1910.106 Occupational Safety and Health Administration, Flammable and Combustible Liquids

4.5 UBC CODE: Uniform Building Code 2006 Edition

5. Submittals

5.1 Drawings and Data: The manufacturer's shop drawings shall be approved by the Engineer prior to manufacturing the tank. Data and specifications for the equipment shall include, but shall not be limited to the following submittals:

5.2 Contractor shall submit for review sufficient literature, detailed specifications, and drawings to show dimensions, materials used, design features, internal construction, weights and any other information required by the ENGINEER for review of storage tank and accessories.

5.3 As a minimum, shop drawings for the tank shall include the following information:

a. Service Conditions: Chemical environment and temperature.
b. Statement that fabrication shall be in accordance with ASTM D 1998, where applicable.
c. Sizing and description of the fittings and accessories for each tank that are to be supplied by the tank manufacturer.
d. Layouts and assembly schedules for each tank identifying the location and elevation from the bottom of the tank for all connections and appurtenances supplied by the tank manufacturer.
e. Resin - A copy of the resin data sheet from the resin manufacturer for the tank is to be supplied and the tank manufacturer is to certify that it will be the resin used in the manufacture of the tank.
f. Wall thickness - Prior to the manufacture of the tank the designed wall thickness audit is to be supplied based upon 600 psi hoop stress (ASTM D 1998) @ 100 degrees F.
g. Supporting information on fittings and accessories to be supplied.

5.4 Technical Manuals: The tank manufacturer's "Guideline for Use & Installation" shall be submitted for review.

5.5 Installation certificate: Upon completion of installation, the Contractor shall certify, in writing, that the tank system has been installed in accordance with the manufacturer's written recommendations for installation.

5.6 Manufacturer's Warranty

5.7 Manufacturer Qualifications: The manufacturer shall have 10 years minimum of prior experience in the manufacture of rotationally molded polyethylene tanks in accordance with ASTM D 1998 utilizing Type I and Type II resins.

5.8 Factory Test Report: Upon completion of the manufacturing of the tank, the manufacturer's inspection report is to be supplied. The report shall include, at a minimum, the following information:

a. Verification of wall thickness (See 10.5)
b. Impact test (See 10.3.1)
c. Hydrostatic test (See 10.6)
d. Verification of fitting placement (See 10.2)
e. Visual inspection (See 10.7)
f. Verification of materials

6. Not Used

7. Not Used

8. Materials – Resin Classification

8.1 The polymer storage tank shall be constructed of either of the two following resin types.
8.1.1 Type I – Tanks molded from cross-linkable polyethylene resin.
8.1.2 Type II - Tanks molded from linear polyethylene resin (not cross-linkable resin).
8.2 The material used shall be virgin polyethylene resin as compounded and certified by the manufacturer. Type I tanks shall be made from crosslinked polyethylene (XLPE) resin as manufactured by ExxonMobil Chemical, or resin of equal physical and chemical properties. Type II tanks shall be made from high density linear polyethylene (HDLPE) resin as manufactured by ExxonMobil Chemical, or resin of equal physical and chemical properties.
8.3 All polyethylene resin material shall contain a minimum of a U.V. 15 stabilizer as compounded by the resin manufacturer.
8.4 Mechanical Properties of Type I tank material: Cross-linked (XLPE)

PROPERTY	ASTM	VALUE
Density (Resin)	D1505	0.942 -0.946 g/cc
Tensile (Yield Stress 2"/min)	D638	2700 - 2900 PSI
Elongation at Yield (2.0in/min (50 mm/min)	D638	10%
ESCR (100% Igepal, Cond. A, F50)	D1693	>1000 hours
ESCR (10% Igepal, Cond. A, F50)	D1693	>1000 hours
Flexural Modulus	D790	110,000 PSI

8.5 Mechanical Properties of Type II tank material: High Density Linear (HDLPE)

PROPERTY	ASTM	VALUE
Density (Resin)	D1550	0.941-0.945 g/cc
Tensile (Yield Stress 2"/min)	D638	2800 - 3220 PSI
Elongation at Yield (2"/min.)	D638	10% - 18%
ESCR (100% Igepal, Cond. A, F50)	D1693	560 - 720 hours
ESCR (10% Igepal, Cond. A, F50)	D1693	40 - 48 hours
Flexural Modulus 1% Secant	D790B	130,000 PSI

9. Design Requirements

9.1 The minimum required wall thickness of the cylindrical shell at any fluid level shall be determined by the following equation, but shall not be less than 0.187 in. thick.

$$T = P \times O.D./2\,SD = 0.433 \times S.G. \times H \times O.D./2\,SD$$

T = wall thickness
SD = hydrostatic design stress, PSI
P = pressure (.433 x S.G. x H), PSI
H = fluid head, ft.
S.G. = specific gravity, g/cm^3
O.D. = outside diameter, in.

9.1.1 The hydrostatic design stress shall be determined by multiplying the hydrostatic design basis, determined by ASTM D2837 using rotationally molded samples, with a service factor selected for the application. The hydrostatic design stress is 600 PSI at 73 degrees Fahrenheit for Type II materials. In accordance with the formula in 7.1, the tank shall have a stratiform (tapered wall thickness) wall.

9.1.2 The hydrostatic design stress shall be derated for service above 100 degrees Fahrenheit and for mechanical loading of the tank.

9.1.3 The standard design specific gravity shall be 1.5 or 1.9.

9.2 The minimum required wall thickness for the cylinder straight shell must be sufficient to support its own weight in an upright position without any external support. Secondary containment tanks shall be designed per the manufacturer's standard containment thickness requirements. The secondary containment shall be configured to allow shipment of the primary tank inside of the secondary tank. The shipment shall be done without the aid of additional spacer blocks which can be lost during shipment causing tank damage.

9.3 The top head must be integrally molded with the cylinder shell. The minimum thickness of the top head shall be equal to the top of the straight wall. The primary tank top shall be configured to prevent rain water from entering the secondary containment tank. The top head of tank shall be designed to provide a minimum of 1300 square inches of flat area for fitting locations. The primary tank shall be keyed to the secondary tank preventing primary tank rotation. The secondary containment shall have 115% of the normal fill capacity of the primary tank.

9.4 The tank shall have a minimum of 3 lifting lugs integrally molded into the top head. The lifting lugs shall be designed to allow erection of empty primary and secondary tanks. Tanks shall be capable of being lifted into position as a unit (primary and secondary tanks).

9.5 The tank shall be designed to provide a minimum of 4 tie-down lugs integrally molded into the top head. The tie-down lugs shall be designed to allow tank retention in wind and seismic loading situations without tank damage. The primary/secondary tank unit shall be configured to allow direct primary tank base retention for seismic load conditions. The base retention unit shall be anchor bolted to an appropriate structure and not require additional spacer blocks.

10. Quality Assurance & Test Methods

10.1 The tanks of the same material furnished under this Section shall be supplied by a manufacturer who has been regularly engaged in the design and manufacturing of rotationally molded polyethylene chemical storage tanks using cross-linked and high density linear polyethylene tanks for over ten years.

10.2 Dimensions and Tolerances

10.2.1 All dimensions will be taken with the tank in the vertical position, unfilled. Tank dimensions will represent the exterior measurements.

10.2.2 The tolerance for the outside diameter, including out of roundness, shall be per ASTM D1998.

10.2.3 The tolerance for fitting placements shall be +/- 0.5 in. in elevation and 2 degrees radial at ambient temperature.

10.3 Test Methods

Test specimens shall be taken from fitting location areas.

10.3.1 Low Temperature Impact Test

10.3. 2 Test specimens shall be conditioned at (- 40) degrees Fahrenheit for a minimum of 2 hours.

10.3.3 The test specimens shall be impacted in accordance with the standard testing methods as found in ASTM D1998. Test specimens < ½" thickness shall be tested at 100 ft. lb. Test specimens > ½" thickness shall be tested at 200 ft. lb.

10.4 Degree of Crosslinking Test (% Gel – Type I Resin Only)

10.4.1 The test method used is to be the o-xylene insoluble fraction (gel test) per ASTM D2765 Method C. This test method is for determination of the ortho-xlene insoluble fraction (gel) of crosslinked polyethylene.

10.4.2 The percent gel level for Type I tanks on the inside 1/8 in. of the wall shall be a minimum of 65%.

10.5 Ultrasonic Tank Thickness Test

10.5.1 All primary tanks 2000 gallons or larger shall be measured for tank wall thickness at 6", 1ft., 2ft. and 3ft. on the tank sidewall height at 0° and 180° around the tank circumference with 0° being the tank manway and going counter-clockwise per ANSI standard drafting specifications. The Contractor shall obtain a copy of this test report prior to placing the original tank order. All tanks shall meet design thickness requirements and tolerances.

10.6 Hydrostatic Water Test

10.6.1 The hydrostatic water test shall consist of filling the primary tank to brim full capacity for a minimum of four hours and conducting a visual inspection for leaks. A hydrostatic water test shall be conducted in accordance with the manufacturer's recommendations.

10.7 Workmanship

10.7.1 The finished tank wall shall be free, as commercially practicable, of visual defects such as foreign inclusions, air bubbles, pinholes, pimples, crazing, cracking and delaminations that will impair the serviceability of the vessel. Fine bubbles are acceptable with Type II tanks to the degree in which they do not interfere with proper fusion of the resin melt.

10.7.2 All cut edges where openings are cut into the tanks shall be trimmed smooth.

Table III – Fitting and Accessory Schedule

Description	Quantity / Size	Type
Inlet nozzle	1/ 4-inch	Bulkhead
Drain (with transition fitting)	1/ 2-inch	Bolted
Vent	1/ 2-inch	Bulkhead
Future Connection	1/ 2-inch	Bulkhead
Overflow	1/ 2-inch	Bulkhead
Surge Protection Lid	1/ 18-inch	Hinged
Flexible Connectors	2/ 4-inch	Bolted
Ball Valves	2/ 4-inch	Bolted
Siphon Tube	1/ 2-inch	Bolted

11. Tank Fittings (Nozzles)

11.1 Fittings – Threaded Bulkhead

11.1.1 Threaded bulkhead fittings are available for above liquid installation depending on the tank diameter and the placement of the fitting in the tank. Fittings must be placed away from tank knuckle radii and flange lines. Contractor shall verify fitting placement with the manufacturer. The maximum allowable size for bulkhead fittings placed on a curved cylindrical section of tanks 48 in. to 142 in. in diameter is 2 inch. Tank wall thickness must be considered for bulkhead fitting placement. The maximum wall thickness for each fitting size is shown below.

Fitting Size	Maximum Wall Thickness
1/2 in.	2 in.
3/4 in.	2 in.
1 in.	2 in.
1 1/4 in.	2 in.
1 1/2 in.	2 in.
2 in.	2 in.
3 in.	2.125 in. (Flat Surface Only)

11.1.2 The bulkhead fittings shall be constructed of PVC, PP, or other District approved material. Gaskets shall be a minimum of 1/4" thickness and constructed of 40-50 durometer EPDM, 60-70 durometer Viton©, or other District approved material.

11.2 Fittings - Bolted Double 150 lb. Flange Fittings

11.2.1 Bolted double flange fittings are required for below liquid level installation for sizes 2 in. through 4 in. depending on the placement of the fitting in the tank. Fittings must be placed away from tank knuckle radius' and flange lines. Contractor shall verify fitting placement with the manufacturer. Allowable fittings sizes based on tank diameter for curved surfaces are shown below.

Tank Diameter	Maximum Bolted Fitting Size Allowable
48 in. - 86 in.	3 in.
90 in. - 102 in.	6 in.
120 in. - 142 in.	8 in.

The bolted double flange fittings shall allow tank wall thickness up to 2 1/2 in.

11.2.2 The bolted double flange fitting shall be constructed with 2 ea. 150 lb. flanges, 2 ea. 150 lb. flange gaskets, and the correct number and size of all-thread bolts for the flange specified by the flange manufacturer. The flanges shall be constructed of PVC Type I, Grade I, or other District approved material. Gaskets shall be a minimum of 1/4" thickness and constructed of 40-50 durometer EPDM, 60-70 durometer Viton© or other specified material. There shall be a minimum of 4 ea. full thread bolts. The bolts may have gasketed flanged metal heads or bolt heads encapsulated in Type II polyethylene material. The encapsulated bolt shall be designed to prevent metal exposure to the liquid in the tank and prevent bolt rotation during installation. The polyethylene encapsulation shall fully cover the bolt head and a minimum of 1/4" of the threads closest to the bolt head. The polyethylene shall be color coded to distinguish bolt material (white - 316 S.S., yellow - Hastelloy C276, green - Titanium). Each encapsulated bolt shall have a gasket to provide a sealing surface against the inner flange.

11.2.3 Standard orientation of bolted double flange fittings shall have bolt holes straddling the principal centerline of the tank in accordance with ANSI/ASME B-16.5 unless otherwise specified.

11.3 Fittings – Transition

11.3.1 The transition fitting shall provide a flexible containment seal between the inner primary tank and the outer secondary containment tank. This fitting outlet when used in combination with fittings as per Section 11.2 provides access for connecting piping to the inner primary tank while maintaining containment integrity between the inner primary tank and the outer secondary containment tank. This fitting outlet shall be used for 2, 3, and 4 in. fitting sizes. The transition fitting shall be as recommended by the tank manufacturer and approved by the District.

11.4 Fittings - Siphon Tube Fittings

11.4.1 A siphon tube shall be added to the drain fitting specified in Table III – Fitting and Accessory Schedule.

11.5 Vents

11.5.1 The tank must be properly vented for the type of material and flow rates expected. Vents must comply with OSHA 1910.106 (f) (2) (iii) or other accepted standard. All tanks must be vented for atmospheric pressure as well as any

pressure created by filling and emptying the tank. Venting equipment should be sized to limit pressure or vacuum in the tank to a maximum of 1/2" of water column (0.02 psi). The Contractor shall verify vent type and location with the manufacturer.

11.5.2 All u-vents shall be constructed of PVC or other specified materials.

11.5.3 When a tank is being filled from a pressurized tanker truck or rail car steps need to be taken to avoid pressurizing the tank. The tank shall be provided with a secondary surge protection lid to avoid any pressure build up. The surge protection lid shall be an 18" diameter, self-closing, hinged lid.

11.5.4 To avoid the air surge and over-pressurization from a tank being filled from a pressurized tanker truck or rail car, the 18" (26" x 11.7") polyethylene mushroom vent shall be provided. The mushroom vent is rotationally molded with Type II, HDLPE. The vent is to be attached to the tank with (8) screws and a bead of silicone sealant. The underside of the vent has 1/8" poly mesh insect screen. The mushroom vent requires a 19" diameter flat surface on the tank for installation.

11.6 Flange Adapters

11.6.1 Flange adapters shall be provided as needed to adapt threaded or socket fitting outlets to 150 lb. flange connections for connection to piping system components. Flange adapters shall be PVC. Flange adapter construction shall utilize Schedule 80 components.

11.7 Fittings - Self-Aligning Threaded Bulkhead

11.7.1 A Self-Aligning fitting shall be provided with the future bulkhead connection on the top of the tank. Fittings must be placed away from tank radius'. The maximum allowable size for self-aligning fittings placed on a spherical section of the tank is shown below.

Tank Diameter	Maximum Fitting Size Allowable
45 in. - 48 in.	2 in.
64 in. - 142 in.	3 in.

The Contractor shall coordinate tank thickness and fitting angle for self-aligning fitting placement with the tank manufacturer. The maximum thickness and installation angles for each fitting size are shown below.

Fitting Size	Maximum Angle	Maximum Thickness
1 in.	27 degrees	1.000 in.
2 in.	25 degrees	0.750 in.
3 in.	20 degrees	1.000 in.

11.7.2 The self-aligning fittings shall be constructed of PVC or CPVC. Gaskets shall be a minimum of 1/4" thickness and constructed of 40-50 durometer EPDM, 60-70 durometer Viton©, or other District approved material.

11.8 Flexible Connections

11.8.1 All tank fitting attachments shall be equipped with flexible couplers. The Contractor shall coordinate the type of flexible connector with the tank

manufacturer. Tank piping flexible couplers shall be designed to allow 4% design movement. Movement shall be considered to occur both outward in tank radius and downward in fitting elevation from the neutral tank fitting placement.

11.8.2 The flexible connection is to be manufactured of the same material as the tank or a compatible material approved by the District. If an elastomer flexible connection is used, control bolts shall be provided in accordance with the manufacturer's recommendations. The flexible connection is to be designed for a minimum of 4% movement. The flexible connection is to be designed with 150 lb. flange connections to allow for attachment to the tank and the piping system. The flexible connection is to be attached as close as possible to the tank to reduce stress. The District shall approve the location of the flexible connectors during shop drawing review.

12. Tank Attachments

12.1 Manways and Fill Caps

12.1 Surge Protection Lid

12.1.1 The hinged lid is to be manufactured of polyethylene. The lid will be 18" diameter with 15" access opening. The opening of the lid is to be restricted by a tether. The lid is to be designed so that it will close when the pressure has been released.

12.2 Down Pipes and Fill Pipes

12.2.1 External fill pipes shall be prepared per the District approved drawings and specifications. All external fill pipes shall be supported at 3 ft. maximum intervals with a support structure independent of the tank (ground supported). All designs shall be done according to the specific needs of the District.

12.2.3 All external fill pipes shall be constructed of PVC or other specified

13. Warranty

13.1 The tank shall be warranted for three years against defects in materials and workmanship. The warranty on fittings and accessories supplied by the tank manufacturer will be for one year. The warranty will begin upon District approval of installed tank.

14. Marking, Packing and Packaging

14.1 The tanks shall be marked to identify the product, date (month and year) of manufacture, capacity, and serial number. The tank shall be shipped with a 3 of 9, HRI bar code label containing tank description, manufacturing order number, part number, serial number, manufacturer, and date.

14.2 All packing, packaging, and marking provisions of ASTM Practice D3892 shall apply to this standard.

14.3 Tank shrink wrapping and bagging shall be provided by the tank manufacturer.

14.4 All fittings that do not interfere with tank shipment shall be installed at the factory unless otherwise specified. Fittings and accessories that interfere with tank shipment or could be broken during shipment shall be shipped separately. The Contractor shall coordinate all separate shipments with the manufacturer prior to installing the separately shipped fittings and accessories.

15. Shipping

15.1 The manufacturer shall provide written recommendations for installation that provide clear unloading, storage, and installation instructions for the tank.

15.2 Upon receipt of the tank and accessories, the Contractor shall be responsible for inspection for damage and shall verify that the system is complete. The Contractor shall be responsible for coordinating with the manufacturer for the replacement of any missing or damaged parts.

16. Delivery & Storage

16.1 Installation

16.1.1 Transportation, handling, storage of the tanks, and installation shall be in accordance with the manufacturer's printed instructions.

16.1.2 The Contractor shall repair any damage to tank components or the insulation due to transportation or installation, at no additional cost to the District.

16.1.3 The Contractor shall certify in writing that the tank system has been installed in accordance with the tank manufacturer's written recommendations.

17. Measurement and Payment

17.1 No measurement will be made for this item. This work will be paid for at the Contract Lump Sum unit price for Double Wall Polymer Storage Tank.

Section II

Contract Forms

Proposal

Project: **Polymer Tank Replacement, Capital No. 1850**

Location: 3333 Kishwaukee St.
Rockford, IL 61109

Completion Date: January 18, 2019

Liquidated Damages: $300/calendar day per each completion date deadline

To: Board of Trustees
Rock River Water Reclamation District
3501 Kishwaukee Street
Rockford, IL 61109

From: _____
(Individual, Partnership or Corporation, as case may be)

_____

(Address of Individual, Partnership or Corporation)

Gentlemen:

I (We), the undersigned, hereby propose to furnish all materials, equipment, tools, services, labor, and whatever else may be required to construct and place in service the above subject Sanitary Sewer for the Rock River Water Reclamation District all in accordance with the plans and specifications, provided by the Rock River Water Reclamation District. The undersigned also affirms and declares:

1. That I (we), have, examined and am (are) familiar with all the related contract documents and found that they are accurate and complete and are approved by the undersigned.

2. That I (we), have carefully examined the site of the work, and that, from my (our) investigation, has satisfied myself (ourselves) as to the nature and location of the work, the character, quality, and quantity of materials and the kind and extent of equipment and other facilities needed for the performance of the work, the general and local conditions and all

difficulties to be encountered, and all other items which may, in any way, effect the work or its performance.

3. That this bid is made without any understanding, agreement or connection with any other person, firm, or corporation making a bid for the same purposes, and is in all respects fair and without collusion or fraud; and that I (we) are not barred from bidding as a result of a bid-rigging or bid-rotating conviction.

4. That accompanying the Proposal is a Bidder's Bond in the amount specified in Article 1, Notice to Bidders, payable to the Board of Trustees of the Rock River Water Reclamation District, which it is agreed, shall be retained as liquidated damages by said Rock River Water Reclamation District if the undersigned fails to execute the Contract in conformity with the contract documents incorporated in the contract documents and furnish bond as specified, within ten (10) days after notification of the award of the contract to the undersigned.

5. The Bidder is of lawful age and that no other person, firm or corporation has any interest in this Proposal or in the Contract proposed to be entered into.

6. The Bidder is not in arrears to the Rock River Water Reclamation District, upon debt or contract, and is not a defaulter, as surety or otherwise, upon any obligation to the Rock River Water Reclamation District.

7. No officer or employee or person whose salary is payable in whole or in part by the District is, shall be or become interested, directly or indirectly as a contracting party, partner, stockholder, surety of otherwise, in this Proposal, or in the performance of the Contract, or in the work to which it is relates, or in any portion of the profits thereof.

8. The Bidder which I represent complies with all applicable requirements of the Americans with Disabilities Act (ADA) and the Occupational Safety and Health Act (OSHA) and that if said bidder is awarded a contract, it will complete all OSHA-required or ADA-required employee and customer training, will make available all required information, and will hold harmless and indemnify the District and the District's representatives.

In regard to participation in an approved Apprenticeship program, upon request, Contractor will be required to provide written proof of participation.

9. The undersigned, as Bidder, declares that he has adopted and promulgated written sexual harassment policies in accordance with Public Act 99-093 and will make this information available upon request.

10. The undersigned, as Bidder, declares he will comply with prevailing wages in accordance with the Illinois Department of Labor Standards. The State of Illinois requires contractors and subcontractors on public works projects (including the Rock River Water Reclamation District) to submit certified payroll records on a monthly basis, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing false records is a Class B Misdemeanor. The successful Bidder shall be responsible for verifying the prevailing wages each month and notifying all subcontractors of the appropriate monthly rates. Prevailing wage rates may be found on the Illinois Department of Labor website at http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx .

The certified payroll records must include the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending time of work each day, for every worker employed on the project. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B Misdemeanor. Certified payroll reports shall be submitted on industry standard forms such as IDOT Statement of Compliance (SBE 348) or other approved equal.

11. The undersigned, as Bidder, declares he will comply with the Federal Drug Free Workplace Act.

12. The undersigned, as Bidder, declares he will comply with Public Act 83-1030 entitled "Steel Products Procurement Act".

13. The undersigned, as Bidder, declares he will comply with Public Act 96-929 (30 ILCS 570) regarding Illinois residents employment.

14. The undersigned, as Bidder, declares he will comply with non-discrimination in employment in accordance with the Illinois Fair Employment Practices Commissions Rules & Regulations.

15. The undersigned, as Bidder, declares that he currently participates in an apprenticeship or training program that is registered with the United States Department of Labor's Bureau of Apprenticeship and Training or other acceptable State of Illinois Department of Labor monitored program.

In submitting this bid, it is understood that the right is reserved by the Rock River Water Reclamation District to reject any and all bids. It is agreed that this bid may not be withdrawn for a period of sixty (60) days from the opening thereof.

The undersigned further declares that he (they) has (have) carefully examined the following items of work and that the cost of all the work to complete this project is given in this Proposal.

Item No.	Quantity	Unit	Description	Unit Price (In Writing)	Unit Price (In Figures)	Total Price (In Figures)
1	1	EA	Double Walled Polymer Storage Tank			
2	5	CY	Cast-In-Place Concrete			
3	31.3	LF	Polymer Fill Line, 4" PVC Pipe, Complete			
4	7	LF	Polymer Feed Line, 1" PVC Pipe,Complete			
5	1	EA	Removal and Disposal of Catwalk, Complete			
			TOTAL BID PRICE:			
				(In Writing)		(In Figures)

The undersigned acknowledges receiving Addendum numbers _____, _____, _____, and realizes that all Addenda are considered part of the contract.

_____

By: _____

Name: _____ Title: _____ Date: _____

Fair Employment Practices Affidavit of Compliance

PROJECT: Polymer Tank Replacement, Capital Project No. 1850

NOTE: THE BIDDER MUST EXECUTE THIS AFFIDAVIT AND SUBMIT IT WITH ITS SIGNED BID. THE ROCK RIVER WATER RECLAMATION DISTRICT CANNOT ACCEPT ANY BID WHICH DOES NOT CONTAIN THIS AFFIDAVIT

_____, being first duly sworn, deposes and says that:
(Name of person making affidavit)

They are: _____ of _____
(Officer's Title) (Company Name)

that said company is and "Equal Opportunity Employer" as defined by Section 2000(e) of Chapter 21, Title 42 of the United States Code annotated and Federal Executive Orders #11375 which are incorporated herein by reference;

and that said company will comply with any and all requirements of Title 44 Admin. Code 750. APPENDIX A – Equal Opportunity Clause, Rules and Regulations, Illinois Department of Human Rights, which read as follows:

"In the event of the contractor's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), the contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance to this contract, the contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizen status, age, physical or mental handicap unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if he or she hires additional employees in order to perform this contract or any portion of this contract, he or she will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the areas from which he or she may reasonably recruit and he or she will hire for each job classification for which employees are hired in a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by him or her or on his or her behalf, he or she will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizenship status, age, physical or mental handicap unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service.
4. That he or she will send to each labor organization or representative of workers with which he or she has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the contractor in his or her efforts to comply with such Act and Rules and Regulations, the contractor will promptly so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations under the contract.
5. That he or she will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Departments Rules and Regulations.
6. That he or she will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
7. That he or she will include verbatim or by reference the provisions of this clause in every subcontract awarded under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply with the provisions. In addition, the contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contacts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

(Source: Amended at 32 I11. Reg. 16484, effective September 23, 2008)"

IL Dept of Human Rights Registration No.: _____ Expiration Date: _____

_____
Signature

Subscribed and sworn to before me this _____ day of _____, 20_____.

_____
Notary Public

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we:

_____ (hereinafter called the Principal) and

_____ (hereinafter called the Surety)

a Corporation chartered and existing under the laws of the State of _____ with its principal offices in the City of _____ and authorized to do business in the State of Illinois are held and firmly bound onto the Rock River Water Reclamation District of Winnebago County, Illinois (District), in the full and just sum of: **TEN PERCENT (10%) OF THE TOTAL BID PRICE** good lawful money of the United States of America, to be paid upon demand of the District, to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally and firmly by these presents.

WHEREAS, the Principal is about to submit, or has submitted to the District, a proposal for constructing Sanitary Sewers and Appurtenances.

WHEREAS, the Principal desires to file this bond, in accordance with law, to accompany this Proposal.

NOW THEREFORE, The conditions of this obligation are such that if the Proposal be accepted, the Principal shall, within ten days after the date of receipt of a written notice of award of Contract, execute a Contract in accordance with the Proposal and upon the terms, conditions, and prices set forth therein, in the form and manner required by the District, and execute a sufficient and satisfactory Contract Performance Bond payable to said District in an amount of one hundred percent (100%) of the Contract price (including alternates) in form and with security satisfactory to said District, then this obligation to be void, otherwise to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid District, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this ___ day of _____, 2018.

_____

Principal

(Seal) By _____

Name:_____

Title:_____

Date:_____

ATTEST:

_____

Secretary

_____

Surety

(Seal)

By_____

Name:_____

Title:_____

Date:_____

Agreement

1. General

THIS AGREEMENT, made and concluded this__ day of _____, 2018, between the Rock River Water Reclamation District, Rockford, Illinois (District), acting by and through the Board of Trustees, and _____, his/their executors, administrators, successors or assigns:

2. Scope of Work

WITNESSETH: That for and in consideration of the payments and agreements made in the Proposal attached hereto, to be made and performed by the District and according to the terms expressed in the Bond referring to these presents, the Contractor agrees with the District at his/their own proper cost and expense to do all the work, furnish all equipment, materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described, and in full compliance with all of the terms of this agreement and the requirements of the District and its representative.

And it is also understood and agreed that the Bidding Requirements, Detailed Specifications, Contract Forms, General Conditions, General Requirements, Technical Specifications, Plans, Addenda, and provisions required by law are all essential documents of the contract, and are a part hereof, as if herein set out verbatim or as if attached, except for titles, subtitles, headings, table of contents and portions specifically excluded.

3. Contract Price

The District shall pay to the Contractor, and the Contractor shall accept, in full payment for the performance of this Contract, subject to any additions or deductions provided for hereby, in current funds, the Total Contract Price of _____ and 00/100 ($_____).

Payments are to be made to the Contractor in accordance with and subject to the provisions of Section 7 of this Agreement, which is a part of this Contract.

4. Bond

The Contractor has entered into and herewith tenders a bond of even date herewith, in the penal sum of _____ and 00/100 ($_____) to insure the faithful performance of this Contract, which said bond is hereby made a part of this Contract by reference.

5. Maintenance and Guarantee

The Contractor shall promptly repair, replace, restore or rebuild any imperfections that may arise and shall maintain satisfactory to the District all work for a period three years from the date of final acceptance of the Contract for trench settlement and for a period of two years all other work, except where periods of maintenance and guarantee are provided for. The Contractor shall, for this period, indemnify and save harmless the District, its officers and agents from any injury done to property or persons as a direct or alleged result of imperfections in the Contractors' work, and shall immediately assume and take charge of the defense of such action or suits in like manner and to all intents and purposes as if said actions and suits had been brought directly against the Contractor.

If the Contractor shall fail to repair, replace, rebuild or restore such defective or damaged work promptly after receiving notice given by the District, the District shall have the right to have the work done by others and to call on the Contractor and his bondsman to pay the costs thereof.

6. Contract Execution

IT IS EXPRESSLY UNDERSTOOD AND AGREED that the entire improvement shall be done in a thorough and workmanlike manner, under the direction and to the satisfaction of the District and in full compliance with all the requirements of its representative under them. All loss or damage arising out of the nature of the work to be done, or from any detention of unforeseen obstruction or difficulty which may be encountered in the prosecution of the work, or from the action of the elements, shall be sustained by the Contractor.

The Contractor will be held responsible for all accidents, and hereby agrees to indemnify and protect the District from all suits, claims, and actions brought against it, and all cost, and damages which the District may be put to by reason of an injury or alleged injury, to the person or property of another in the execution of this contract, or the performance of the work, or in guarding the same, or for any material used in its prosecution or in its construction.

Any person employed on the work who shall refuse or neglect to obey the directions of the District or its representative, or who shall be deemed by the District to be incompetent, or who shall be guilty of any disorderly conduct, or who shall commit any trespass on any public or private property in the vicinity of the work, shall at once be removed from the work by the Contractor when so requested by the District.

Any request to extend the contract completion date must be considered by the Board at the Board meeting prior to the then-existing contract termination date. Any deviation from this action will result in the liquidated damage clause in the contract to be exercised.

7. Payments to Contractor

The District hereby covenants and agrees, in consideration of the covenants and agreements in this Contract, specified to be kept and performed by the Contractor and subject to the conditions herein contained, and if the District receives an acceptable invoice prior to the tenth day of the month and receives approval of the work by the District Engineering Manager, the District shall issue payment before the fifth day of the succeeding month. If the District receives an acceptable invoice on or after the tenth day of the month, the District shall issue payment before the fifth day of the second succeeding month.

The District reserves the right at all times to refuse to issue payment in case the Contractor has neglected or failed to pay any subcontractors, workmen or employee on the work.

8. Subcontracts

No part of the work herein provided for shall be sublet or subcontracted without the express consent of the District, to be entered in the records, and in no case shall consent relieve the Contractor from the obligation herein entered into, or change the terms of this Agreement.

9. Contractor's Responsibility

This Contract shall extend to and be binding upon the successors and assigns, and upon the heirs, administrators, executors, and legal representatives of the Contractor.

In consideration of and to induce the award of this Contract to him, the Contractor represents and warrants: that he is not in arrears to the District upon debt of the Contract and that he is not a defaulter, as surety, contractor or otherwise; that he is financially solvent and sufficiently experienced and competent to perform the work; that the work can be performed as called for by the Contract; that the facts stated in his proposal and the information given by him is true and correct in all respects, and that he is fully informed regarding all the conditions affecting the work to be done and labor and materials to be furnished for the completion of this Contract and that his information was secured by personal investigation and research.

The Contractor shall pay not less than the prevailing wage rate as determined by the Department of Labor, to all laborers, workmen and mechanics performing work under this Contract. Contractor shall comply with current revisions of the wage standards; as required by law. The Contractor shall be responsible for verifying the prevailing wages each month and notifying all subcontractors of the appropriate monthly rates. Certified payroll reports shall be submitted on industry standard forms such as IDOT Statement of Compliance (Form SBE 348).

In regard to nondiscrimination in employment, Contractor will be required to comply with the Illinois Fair Employment Practices Commission's Rules and Regulations as provided herein.

The Contractor shall comply with the American Disabilities Act of 1990 (ADA). The Contractor will hold harmless and indemnify the District and their representatives from all:

(a) suits, claims, or actions;
(b) costs, either for defense (including but not limited to reasonable attorney's fees and expert witness fees) or for settlement, and;
(c) damages of any kind (including but not limited to actual, punitive, and compensatory damages)

relating in any way to or arising out of the ADA, to which said firm is exposed or which it incurs in the execution of the contract.

Contractor shall also comply with Public Act 99-0933, which requires any party to a contract to adopt and enforce a written policy regarding sexual harassment that includes, as a minimum, the following information:

(a) the illegality of sexual harassment
(b) the definition of sexual harassment under Illinois State law;
(c) a description of sexual harassment, utilizing examples;
(d) my (our) organization's internal complaint process including penalties;
(e) through the Illinois Department of Human Rights and the Illinois Human Rights Commission;
(f) directions on how to contact the Department and the Commission; and
(g) protection against retaliation as provided by Section 6-101 of the Illinois Human Rights Act.

Upon request this information will be provided to the Illinois Department of Human Rights. Upon District award of a contract, the District will be provided this information described no more than ten working days after the District issues its award notification.

The Contractor shall comply with Article 2 of Public Act 83-1472 which provides that Illinois residents be employed on Illinois public works projects, provided there has been a period of excessive unemployment (5%) in the State of Illinois as defined in the Act; and further, that Illinois workers are available and capable of performing the particular type work involved.

The Contractor shall comply with all rules and regulations of OSHA during the execution of this Contract.

The Contractor shall comply with the Federal Drug Free Workplace Act.

The Steel Products Procurement Act, Illinois Public Act 83-1030, requires that steel products used or supplied in performance of this Contract or subcontract shall be manufactured or produced in the United States with three exceptions, as explained in the Instructions to Bidders.

The Contractor shall comply with Public Act 96-1416 regarding the disposal of CCDD and uncontaminated soil at CCDD fill sites as explained in the Instructions to Bidders.

10. Time

Work under this Agreement shall be commenced upon written Notice to Proceed. The completion date for this project shall be January 18, 2019.

11. Liquidated Damages

The amount of liquidated damages shall be $300.00 per calendar day.

12. Seals

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals, and such of them as are corporations have caused these presents to be signed by their duly authorized officers.

Rock River Water Reclamation District
Winnebago County, Illinois

(Seal)

By _____
President, Board of Trustees

ATTEST: _____
Clerk of the Board

Contractor

By _____
Contractor's Officer

(Corporate Seal)

Name: _____

Title: _____

Date: _____

ATTEST: _____

Performance Bond

KNOW ALL MEN BY THESE PRESENTS, that WHEREAS, the Rock River Water Reclamation District has awarded to: _____ hereinafter designated as the "Principal", a contract, dated, _____, for the Rock River Water Reclamation District.

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the faithful performance of said Contract (the "Bond");

NOW, THEREFORE, we the Principal and _____, as Surety, are firmly bound unto the Rock River Water Reclamation District in the penal sum of _____ Dollars ($_____) lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents for a performance bond. The conditions of this obligation is such that if the said Principal does well and faithfully performs all the conditions and covenants of said Contract, according to the true intent and meaning thereof, upon its part to be kept and performed, then the above obligation is to be null and void, otherwise to remain in full force and effect.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the said Contract, including the provisions for liquidated damages in the said Contract, any changes, additions or alterations thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Rock River Water Reclamation District, its officers and agents, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect. And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same and no inadvertent overpayment of progress payments shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications or of any inadvertent overpayment of progress payments. The Rock River Water Reclamation District shall be named as beneficiary on this Performance Bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their seal this _____day of _____, 2018 the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR
Contractor Firm Name:

By: _____

_____
Title

ATTEST:

_____
Corporate Secretary (Corporations only)

SURETY

By: _____ Signature
Attorney-in-Fact

_____
Resident Agent

Labor & Material Payment Bond

TO: _____Contractor Name

_____Contractor City, State

KNOW ALL MEN BY THESE PRESENTS

That _____(Contractor)

as Principal, and _____

a corporation of the State of _____ as Surety, are held and firmly bound unto the Rock River Water Reclamation District, as Obligee, for the use and benefit of claimants as hereinafter defined in the amount of

_____Dollars ($_____), for the payment where of Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____20___ Entered into a Contract with Obligee for _____ in accordance with contract documents prepared by the Rock River Water Reclamation District which Contract is by reference made a part hereof, and is hereinafter referred to as "the Contract".

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Principal shall promptly pay for all laborers, workers and mechanics engaged in the work under the Contract, and not less than the general prevailing rate of hourly wages of a similar character in the locality in which the work is performed, as determined by the State of Illinois Department of Labor pursuant to the Illinois Compiled Statutes 280 ILCS 130 / 1-12 et.seq. and for all 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.

1. A claimant is deemed as any person, firm, or corporation having contracts with the Principal or with any of Principal's subcontractors for labor or materials furnished in the performance of the Contract on account of which this Bond is given.
2. Nothing in this Bond contained shall be taken to make the Obligee liable to any subcontractor, material man or laborer, or to any other person to any greater extent than it would have been liable prior to the enactment of The Public Construction Bond Act, approved June 20, 1931, as amended; provided further, that any person having a claim for labor and materials furnished in the performance of the Contract shall have no right of action unless he shall have filed a verified notice of such claim with the Obligee within 180 days after the date of the last item of work or the furnishing of the last item of materials, which claim shall have been verified and shall contain the name and address of the claimant, the business address of the claimant within the State of Illinois, if any, or if the claimant be a foreign corporation having no place of business within the State the principal place of

business of the corporation, and in all cases of partnership the names and residences of each of the partners, the name of the Contractor for the Obligee, the name of the person, firm or corporation by whom the claimant was employed or to whom such claimant furnished materials, the amount of the claim and a brief description of the public improvement for the construction or installation of which the contract is to be performed. No defect in the notice herein provided for shall deprive the claimant of its right of action under the terms and provisions of this Bond unless it shall affirmatively appear that such defect has prejudiced the rights of an interested party asserting the same.

3. No action shall be brought on this Bond until the expiration of 120 days after the date of the last item of work or of the furnishing of the last item of material except in cases where the final settlement between Obligee and the Contractor shall have been made prior to the expiration of the 120 day period, in which case action may be taken immediately following such final settlement; nor shall any action of any kind be brought later than 6 months after the acceptance by the Obligee of the work. Such suit shall be brought only in the circuit court of this State in the judicial district in which the Contract is to be performed.
4. Surety hereby waives notice of any changes in the Contract, including extensions of time for the performance thereof.
5. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.
6. The Principal and Surety shall be liable for any attorneys fees, engineering costs, or court costs incurred by the Obligee relative to claims made against this Bond.

Signed and sealed this _____day of _____, 2018.

CONTRACTOR
Contractor Firm Name

By: _____
Signature

_____
Title Resident Agent

ATTEST:

_____
Corporate Secretary (Corporations only)

SURETY

By:_____
Attorney-in-Fact

Section III

General Provisions & Technical Specifications for Sanitary Sewer Construction

(Separate document incorporated by reference)