City Council

Agenda Item

Subject: Approval of the Professional Services Agreement for Design and Bidding Services Associated with the Wastewater Treatment Facility and Collection System Project No. 2117, with HDR, in the Amount of $3,774,342.50.

Meeting: City Council - Aug 15 2022

From: Heath VonEye, Public Works Director

BACKGROUND INFORMATION:

In April 2021, the City Council approved an agreement for professional services with HDR Engineering to perform an engineering evaluation of the Watertown Wastewater Treatment Facility (WWTF). The purpose of the WWTF evaluation is to assess the wastewater treatment facility physical condition and process capacities. From the evaluation, recommendations were provided for improvements necessary to meet the service area needs of the WWTF for the next 20 years.

In 2019/2020, the City also contracted with HDR to perform a Sanitary Sewer System Capacity Study and Model. This study helped to identify areas of the wastewater collection system that have current and future capacity issues.

From these two studies, the City has a comprehensive list of Wastewater Treatment Facility and Collection System needs. Those projects were summarized and used in the application for funding through the SDDANR Clean Water State Revolving Fund (SRF) program. The estimated cost of these projects are $35.714 million. The South Dakota Department of Agriculture and Natural Resources (SD DANR) has received American Rescue Plan Act (ARPA) funds and awarded a portion of these funds to the City of Watertown. This motion is the required resolution to accept these funds.

FINANCIAL IMPACT:

The engineering services contract will be paid for out of the Wastewater CIP fund with various revenue sources offsetting the expense. The City has been awarded $15,894,200 in grants ($3.7M in ARPA, additional $3.7 matching ARPA, and $8.5M additional grants), and awarded $19,819,800 in loans at 2.125% for 30 years. There is a $7.55 per month surcharge and user fees are expected to increase approximately $4.025 per month.

SUGGESTED MOTION:

I move to approve the Professional Services Agreement for Design and Bidding Services Associated with the Wastewater Treatment Facility and Collection System Project No. 2117, with HDR, in the Amount of $3,774,342.50.

STAFF REFERENCE(S):

Justin Petersen, Mike Boerger

ATTACHMENT(S):

Agreement

Fee and Labor Estimate

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

AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared by

As Modified by the Parties Hereto (all changes shown in redline/strike-out format)

EJCDC® E-500, Agreement between Owner and Engineer for Professional Services.
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AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

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AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

This is an Agreement between **City of Watertown, South Dakota** (Owner) and **HDR Engineering, Inc.** (Engineer). Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as **Wastewater Treatment Plant and Collection System Improvements Project** (Project). Other terms used in this Agreement are defined in Article 7.

Engineer's services under this Agreement are generally identified as by following project items to be completed as two design-bid-build construction projects.

1. Project ID #1: Wastewater Treatment Plant Improvements
2. Project ID #2: Collection System Improvements

Owner and Engineer further agree as follows:

ARTICLE 1—SERVICES OF ENGINEER

1.01 Scope

A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

B. All phases of service will include Management of Engineering Services as shown in Exhibit A.

ARTICLE 2—OWNER'S RESPONSIBILITIES

2.01 Project Information

A. To the extent Owner has not already provided the following, or has new, additional, or revised information from that previously provided, Owner shall provide Engineer with information and data needed by Engineer in the performance of Basic and Additional Services, including Owner's:

1. design objectives and constraints;
2. space, capacity, and performance requirements;
3. flexibility and expandability needs;
4. design and construction standards;
5. budgetary limitations; and
6. any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.

B. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, Owner shall obtain, furnish, or otherwise make available (if necessary through retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services; or, with consent of Engineer, Owner may authorize the Engineer to obtain or provide all or part of such additional information as Additional Services. Such additional information or data may include the following:

1. Property descriptions.
2. Zoning, deed, and other land use restrictions.

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3. Surveys, topographic mapping, and utility documentation.

4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.

5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; appropriate professional interpretation of such information or data.

6. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.

7. Data or consultations as required for the Project but not otherwise identified in this Agreement.

C. Owner shall examine all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.

D. Owner shall furnish to Engineer data as to Owner's anticipated costs for services to be provided to Owner by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) so that Engineer may assist Owner in collating the various cost categories that comprise Total Project Costs.

E. Owner shall advise Engineer if any invention, design, process, product, or device that Owner has requested, required, or recommended for inclusion in the Drawings or Specifications will be subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights.

F. Owner shall inform Engineer as to whether Engineer's assistance is requested with respect to Owner's evaluation of the possible use of Project Strategies, Technologies, and Techniques, as defined in Exhibit A.

G. Owner shall inform Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.

2.02 Owner's Instructions Regarding Bidding/Proposal and Front-End Construction Contract Documents

A. Owner shall give instructions to Engineer regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable) and Owner's construction contract practices and requirements, and furnish to Engineer (or give specific directions requesting Engineer to use copies already in Engineer's possession) the following:

1. Owner's standard contract forms, general conditions (if other than the current edition of EJCDC® C-700, Standard General Conditions of the Construction Contract), supplementary conditions, text, and related documents and content for Engineer to

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include in the draft Bidding/Proposal Documents, and in draft Front-End Construction Contract Documents;

2. insurance and bonding requirements;

3. protocols for electronic transmittals during bidding and construction;

4. Owner's safety and security programs applicable to Contractor and other Constructors;

5. diversity and other social responsibility requirements;

6. bidding and contract requirements of funding, financing, or regulatory entities;

7. other specific conditions applicable to the procurement of construction or contract documents;

8. any other information necessary for Engineer to assist Owner in preparing its Bidding/Proposal Documents and Front-End Construction Contract Documents.

B. Owner shall have responsibility for the final content of (1) such Bidding/Proposal Documents, and (2) such Front-End Construction Contract Documents, other than content furnished by Engineer concerning the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters.

1. Owner shall seek the advice of Owner's legal counsel, risk managers, and insurance advisors with respect to the drafting and content of such documents.

C. If there will be an advertisement soliciting bids for construction, Owner shall place and pay for such advertisement.

2.03 Owner-Furnished Services

A. Recognizing and acknowledging that Engineer's services and expertise do not include the following services, Owner shall obtain, as required for the Project:

1. Accounting, bond and financial advisory services (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.

2. Legal services, including attorney review of proposed Construction Contract Documents, legal services required by Owner, legal services needed as a result of issues raised by Contractor, and Project-related legal services reasonably requested by Engineer.

3. Auditing services, including those needed by Owner to ascertain how or for what purpose Contractor has used money paid to it.

B. Owner shall provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Construction Contract Documents (other than those required to be furnished or arranged by Contractor), or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof. Owner shall provide Engineer with the findings and reports generated by testing laboratories, including findings and reports obtained from or through Contractor.

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C. Owner shall acquire or arrange for acquisition of the Site(s) and any temporary or permanent rights of access, easements, or property rights needed for the Project.

D. With respect to the portions or phases of the Project designed or specified by Engineer, Owner shall provide, obtain, or arrange for:

1. all required reviews, approvals, consents, and permits from governmental authorities having jurisdiction, and

2. such reviews, approvals, and consents from others as may be necessary for completion of each portion or phase of the Project.

E. Owner may delegate to Contractor or others the responsibilities set forth in Paragraphs 2.03.C and D.

2.04 Owner's General Responsibilities

A. Owner shall inform Engineer of the policies, procedures, and requirements of Owner that are applicable to Engineer's performance of services under this Agreement.

B. Owner shall provide Engineer with Owner's budget for the Project, including type and source of funding to be used, and will promptly inform Engineer if the budget or funding sources change.

C. Owner shall inform Engineer in writing of any safety or security programs that are applicable to the personnel of Engineer, its Subconsultants, and Engineer's Subcontractors, as they visit the Site or otherwise perform services under this Agreement.

D. Owner shall arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under this Agreement.

E. Owner shall provide necessary direction and make decisions, including prompt review of Engineer's submittals, and carry out its other responsibilities in a timely manner so as not to delay Engineer's performance of its services.

F. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.

G. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:

1. any development that affects the scope or time of performance of Engineer's services;

2. the presence at the Site of any Constituent of Concern; or

3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.

H. Owner shall advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project,

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including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.

I. If Owner designates a construction manager, site representative, or any individual or entity other than, or in addition to, Engineer to represent Owner at the Site, Owner shall define and set forth as an exhibit to this Agreement the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.

J. Owner shall:

1. Attend and participate in the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job-related meetings, and Site visits to determine Substantial Completion and readiness of the completed Work for final payment.

2. Primarily communicate with Engineer's Subcontractors and Subconsultants through the Engineer.

a. Promptly inform Engineer of the substance of any communications between Owner and Engineer's Subcontractors or Subconsultants.

b. Refrain from directing the services of Engineer's Subcontractors or Subconsultants.

3. Authorize Engineer to provide Additional Services as set forth in Article 2 of Exhibit A of the Agreement, as required.

2.05 Payment

A. Owner shall pay Engineer as set forth in Article 4 and Exhibit J.

ARTICLE 3—SCHEDULE FOR RENDERING SERVICES

3.01 Commencement

A. Engineer is authorized to begin rendering services as of the Effective Date.

3.02 Time for Completion

A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit B, and are hereby agreed to be reasonable.

B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, will be adjusted equitably.

C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, will be adjusted equitably.

D. If Engineer fails, for reasons within control of Engineer, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages to the extent, if any, resulting from such failure by Engineer.

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ARTICLE 4—INVOICES AND PAYMENTS

4.01 Invoices

A. Preparation and Submittal of Invoices: Engineer shall prepare invoices in accordance with its standard invoicing practices, the progress reporting and special invoicing requirements (if any) in Exhibit A Paragraph 1.01.A, and the terms of Exhibit J. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

4.02 Payments

A. Application to Interest and Principal: Payment will be credited first to any interest owed to Engineer and then to principal.

B. Disputed Invoices: If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so; may withhold only that portion so disputed; and must pay the undisputed portion, subject to the terms of Paragraph 4.01. After a disputed item has been resolved, Engineer shall include the agreed-upon amount on a new invoice.

C. Failure to Pay: If Owner fails to make any undisputed payment due Engineer within 30 days after receipt of Engineer's invoice, then:

1. amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day, and

2. Engineer may, after giving 7 days' written notice to Owner, suspend services under this Agreement until Owner has paid in full amounts due. Owner waives any and all claims against Engineer for any such suspension.

D. Sales or Use Taxes: If after the Effective Date any governmental entity takes an action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement will be in addition to the compensation to which Engineer is entitled under the terms of Exhibit J.

ARTICLE 5—OPINIONS OF COST

5.01 Opinions of Probable Construction Cost

A. Engineer's opinions of probable Construction Cost (if any) are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate.

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5.02 Opinions of Total Project Costs

A. The services, if any, of Engineer with respect to Total Project Costs will be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6—GENERAL CONSIDERATIONS

6.01 Standards of Performance

A. Standard of Care: The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.

B. Technical Accuracy: Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.

C. Engineer's Subcontractors and Subconsultants: Engineer may retain such Engineer's Subcontractors and Subconsultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.

D. Reliance on Others: Subject to the standard of care set forth in Paragraph 6.01.A, Engineer may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

E. Compliance with Laws and Regulations, and Policies and Procedures

1. Engineer and Owner shall comply with applicable Laws and Regulations.

2. Engineer shall comply with the policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.

3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:

a. changes after the Effective Date to Laws and Regulations,

b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures, and

c. changes after the Effective Date to Owner-provided written policies or procedures.

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F. General Conditions of Construction Contract: The general conditions for any Construction Contract Documents prepared hereunder are to be the current edition of EJCDC® C-700, Standard General Conditions of the Construction Contract, prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise.

G. Copies of Drawings and Specifications: If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one complete electronic copy of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations, and one complete printed copy, duly signed and sealed.

H. Engineer shall not be required to sign any document, no matter by whom requested, that would result in Engineer having to certify, guarantee, or warrant conditions whose existence Engineer cannot ascertain within the authorized scope of Engineer's services. Owner agrees not to make resolution of any dispute with Engineer or payment of any amount due to Engineer in any way contingent upon Engineer signing any such document.

I. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor will Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.

J. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform the Work in accordance with the Construction Contract Documents.

K. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer.

L. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.

M. Engineer's services do not include providing legal advice or representation.

N. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.

O. While at the Site, Engineer, its Subconsultants, and Engineer's Subcontractors, and their employees and representatives will comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

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6.02 Ownership and Use of Documents

A. All Documents are instruments of service, and Engineer owns the Documents, including all associated copyrights and the right of reuse at the discretion of the Engineer, subject to the following provisions:

1. Upon receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents and subject to the express exclusions that follow, Engineer and any Subconsultants will grant to Owner the ownership of the Documents, including all associated copyrights and the right of reuse.

2. When requested by Owner, Engineer will perform any clerical or administrative acts reasonably necessary to confirm or record the transfer of Engineer's interests in the Documents to the Owner, and Owner will reimburse the Engineer for its costs to comply with the transfer request.

3. Engineer shall have and retain the ownership, title, and property rights, including copyright, patent, intellectual property, and common law rights, in any design elements (including but not limited to standard details, drawings, plans, specifications, methodologies, and engineering computations) used in the Documents, but developed by Engineer or its Subconsultants previous to or independent of this Agreement ("Previously/Independently Created Works"). Engineer shall provide appropriate verification of such previous or independent development upon Owner's request.

4. Upon receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, Engineer will issue to Owner a royalty-free, nonexclusive and irrevocable license to use such Previously/Independently Created Works on the Project or on any extension of the Project.

5. Owner acknowledges that the Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer.

6. Any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants.

7. Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Subconsultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer.

8. Such limited license to Owner shall not create any rights in third parties.

9. Nothing herein limits the Engineer's right of use or reuse of Previously/Independently Created Works or any of Engineer's non-Document work product.

B. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

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C. Engineer shall inform Owner if Engineer is aware of any invention, design, process, product, or device specified in the Drawings, Specifications, or other Documents that is subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights. If Engineer's good-faith inclusion in the Drawings, Specifications, or other Documents of new, innovative, or non-standard technologies, for the benefit of Owner and the Project, results in third-party claims of infringement or violation of intellectual property rights, then Owner and Engineer shall share equally the costs of defending against, settling, or paying such claims.

D. Engineer will obtain Owner's consent, which will not be unreasonably withheld, prior to releasing any publicity, including news and press releases, promotional publications, award and prize competition submittals, and other advertising regarding the subject matter of this Agreement. Nothing herein will limit the Engineer's right to include information in statements of qualifications and proposals to others accurately describing its participation and participation of employees in the Project.

6.03 Electronic Transmittals

A. To the fullest extent practical, Owner and Engineer agree to transmit, and accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with Exhibit F, Electronic Documents Protocol (EDP).

1. Compliance with the EDP by Engineer shall be considered a Basic Service and no direct or separate compensation will be paid to Engineer for such compliance, unless provisions for separate compensation are expressly set forth in the EDP.

2. Engineer's costs directly attributable to changes in Engineer's Electronic Documents obligations, after the effective date of this Agreement, necessitated by revisions to Exhibit F, delayed adoption of Exhibit F, or implementation of other Electronic Documents protocols, will be compensated as Additional Services.

B. If this Agreement does not include Exhibit F or otherwise does not establish or include protocols for transmittal of Electronic Documents by Electronic Means, then Owner and Engineer may operate without specific protocols or may jointly develop such protocols at a later date.

C. Except as stated otherwise in Exhibit F (if included in this Agreement), when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents, or from those established in applicable protocols.

D. This Agreement (including the EDP) is not intended to create obligations for Owner or Engineer with respect to transmittals to or from third parties, except as expressly stated in the EDP.

6.04 Insurance

A. Engineer shall procure and maintain insurance as set forth in Exhibit G.

B. Additional Insureds: The Engineer's commercial general liability, automobile liability, and umbrella or excess liability policies, must:

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1. include and list as additional insureds Owner, and any individuals or entities identified as additional insureds in Exhibit G;

2. include coverage for the respective officers, directors, members, partners, and employees of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations); and

4. not seek contribution from insurance maintained by the additional insured.

C. Owner shall procure and maintain insurance as set forth in Exhibit G.

D. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer, its Subconsultants, and Engineer's Subcontractors to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project. Owner shall give Engineer access to any certificates of insurance and copies of endorsements and policies obtained by Owner from Contractor.

E. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates must be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.

1. Upon request by Owner or any other insured, Engineer shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subconsultants and Engineer's Subcontractors. In any documentation furnished under this provision, Engineer may redact (a) any confidential premium or pricing information and (b) any wording specific to projects or jurisdictions other than those applicable to this Agreement.

F. All construction contracts entered into by Owner with respect to the Project must require builder's risk or similar property insurance.

G. All policies of property insurance relating to the Project, including but not limited to any builder's risk or similar policy, must allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insured thereunder or against Engineer, its Subconsultants, or Engineer's Subcontractors. Owner and Engineer waive all rights against each other, Contractor, Engineer's Subcontractors and Subconsultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any such builder's risk or similar policy and any other property insurance relating to the Project. Owner and Engineer shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.

H. All policies of insurance must contain a provision or endorsement that the coverage afforded will not be canceled, and that renewal will not be refused, until at least 10 days' prior written

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notice has been given to the primary insured. Upon receipt of such notice, the primary insured must promptly forward a copy of the notice to the other party to this Agreement and replace the coverage being cancelled or reduced to conform to the requirements of this Agreement.

I. At any time, Owner may request that Engineer, or Engineer's Subcontractors or Subconsultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require Engineer's Subcontractors or Subconsultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit G will be supplemented to incorporate these requirements.

6.05 Suspension and Termination

A. Suspension

1. By Owner: Owner may suspend Engineer's services for up to 90 days upon 7 days' written notice to Engineer.

2. By Engineer: Engineer may, after giving 7 days' written notice to Owner, suspend services under this Agreement:

a. if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraphs 4.02.B and 4.02.C;

b. in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.09.D; or

c. if persistent circumstances beyond the control of Engineer have prevented it from performing its obligations under this Agreement.

B. Termination for Cause

1. Either party may terminate the Agreement for cause upon 30 days' written notice in the event of substantial failure by the other party to perform in accordance with the terms of the Agreement, through no fault of the terminating party.

a. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1 if the party receiving such notice begins, within 7 days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30-day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein will extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. In addition to its termination rights in Paragraph 6.05.B.1, Engineer may terminate this Agreement for cause upon 7 days' written notice:

a. if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional;

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b. if Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control; or

c. as the result of the presence at or adjacent to the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.09.E.

3. Engineer will have no liability to Owner on account of any termination by Engineer for cause.

C. Termination for Convenience: Owner may terminate this Agreement for convenience, effective upon Engineer's receipt of notice from Owner.

D. Extension of Effective Date of Termination: If Owner terminates the Agreement for cause or convenience, Owner may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files. Engineer shall be entitled to compensation for such tasks.

E. Payments Upon Termination: In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all reimbursable expenses incurred through the effective date of termination. Upon making such payment, Owner will have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.02.A.

1. If Owner has terminated the Agreement for cause and disputes Engineer's entitlement to compensation for services and reimbursement of expenses, then Engineer's entitlement to payment and Owner's rights to the use of the Documents will be resolved in accordance with the dispute resolution provisions of this Agreement or as otherwise agreed in writing.

2. If Owner has terminated the Agreement for convenience, or if Engineer has terminated the Agreement for cause, then Engineer will be entitled, in addition to the payments identified above, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Subcontractors or Subconsultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit J.

6.06 Successors, Assigns, and Beneficiaries

A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.06.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, claims arising out of this Agreement or money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless

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specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

2. Nothing in this Agreement will be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.

3. Owner agrees that the substance of the provisions of this Paragraph 6.06.C will appear in the Construction Contract Documents.

6.07 ~~Dispute Resolution~~

A. ~~Unless otherwise required by Exhibit H, Owner and Engineer shall resolve all disputes in the following manner:~~

1. ~~Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice, prior to invoking mediation.~~

2. ~~Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("Disputes") to mediation. Owner and Engineer agree to participate in the mediation process in good faith. The process will be conducted on a confidential basis, and must be completed within 120 days.~~

3. ~~If the parties fail to resolve a Dispute through negotiations under Paragraph 6.07.A.1 or mediation under Paragraph 6.07.A.2, then:~~

a. ~~either or both may invoke the applicable dispute resolution procedures of Exhibit H for final resolution of Disputes.~~

b. ~~If Exhibit H is not included, or if no final dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.~~

6.08 Controlling Law; Venue

A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located.

B. Venue for any exercise of rights at law will be the state court having jurisdiction at the location of the Project; or at the choice of either party, and if federal jurisdictional requirements can be met, in federal court in the district in which the Project is located.

6.09 Environmental Condition of Site

A. Owner represents to Engineer that, as of the Effective Date, to the best of Owner's knowledge, no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.

B. Undisclosed Constituents of Concern: For purposes of this Paragraph 6.09, the presence at or adjacent to the Site of Constituents of Concern that were not disclosed to Engineer pursuant to Paragraph 6.09.A, in such quantities or circumstances that such Constituents of

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Concern may present a danger to persons or property exposed to them, will be referred to as "undisclosed" Constituents of Concern.

1. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of this Agreement or the Construction Contract, are not undisclosed Constituents of Concern.

2. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under this Agreement are not undisclosed Constituents of Concern.

3. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under another professional services contract for Owner, or as part of the work under a construction or remediation contract, are not undisclosed Constituents of Concern if Engineer has been informed of the general scope of such contract.

C. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate authorities having jurisdiction if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.

D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, or if encountered, uncovered, or revealed Constituents of Concern are present in substantially greater quantities or substantially different locations than disclosed or anticipated, or if investigative or remedial action, or other professional services, are necessary or required by applicable Laws and Regulations with respect to such Constituents of Concern, then Engineer may, at its option and without liability for direct, consequential, or any other damages, suspend performance of services on the portion of the Project adversely affected thereby until such portion of the Project is no longer so affected; and Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.

E. If the presence at the Site of undisclosed Constituents of Concern, or of Constituents of Concern in substantially greater quantities or in substantially different locations than disclosed or anticipated, adversely affects the performance of Engineer's services under this Agreement, then:

1. if the adverse effects do not preclude Engineer from completing its Project services in general accordance with this Agreement on unaffected or marginally affected portions of the Project, Engineer may accept an equitable adjustment in its compensation or in the time of completion, or both; and the Agreement will be amended to reflect changes necessitated by the presence of such Constituents of Concern; or

2. if the adverse effects are of such materiality to the overall performance of Engineer that it cannot complete its services without significant changes to the scope of services, time of completion, and compensation, then Engineer may terminate this Agreement for cause on 7 days' written notice.

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F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and will not be required to become an "owner," “arranger,” “operator,” “generator,” or “transporter” of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer’s activities under this Agreement.

6.10 Indemnification and Mutual Waiver

A. Indemnification by Engineer: To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner’s officers, directors, members, partners, agents, and employees, from losses, damages, and judgments (including reasonable consultants’ and attorneys’ fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by any negligent act or omission of Engineer or Engineer’s officers, directors, members, partners, agents, employees, Subconsultants, or Engineer’s Subcontractors. This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, “Limitations of Liability."

B. Environmental Indemnification: To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer, its Subconsultants, Engineer’s Subcontractors, and their officers, directors, members, partners, agents, employees, and subconsultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants’ and attorney’s fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that:

1. any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and

2. nothing in this paragraph obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

C. No Defense Obligation: The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.

D. Percentage Share of Negligence: To the fullest extent permitted by Laws and Regulations, a party’s total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, will not exceed the percentage share that the party’s negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

E. Mutual Waiver: To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other’s officers, directors, members, partners, agents, employees, subconsultants, and insurers, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes. Such excluded damages

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include but are not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and cost of capital.

6.11 Records Retention

A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, or such other period as required by Laws and Regulations, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.12 Miscellaneous Provisions

A. Notices: Any notice required under this Agreement will be in writing, and delivered: in person (by commercial courier or otherwise); by registered or certified mail; or by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line. All such notices are effective upon the date of receipt.

B. Survival: Subject to applicable Laws and Regulations, all express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

C. Severability: Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Engineer.

D. No Waiver: A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Agreement.

E. Accrual of Claims: To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement will be deemed to have accrued, and all statutory periods of limitation will commence, no later than the date of Substantial Completion; or, if Engineer's services do not include Construction Phase services, or the Project is not completed, then no later than the date of Owner's last payment to Engineer.

F. Operational Technology Systems: Owner agrees that the effectiveness of operational technology systems ("OT Systems") and features designed or recommended by Engineer are dependent upon Owner's continued operation and maintenance of the OT Systems in accordance with all standards, best practices, laws, and regulations that govern the operation and maintenance of the OT Systems. Owner shall be solely responsible for operating and maintaining the OT System in accordance with applicable industry standards (i.e. ISA, NIST, etc.) and best practices, which generally include but are not limited to, cyber security policies and procedures, documentation and training requirements, continuous monitoring of assets for tampering and intrusion, periodic evaluation for asset vulnerabilities, implementation and update of appropriate technical, physical, and operational standards, and offline testing of all software/firmware patches/updates prior to placing updates into production. Additionally, Owner recognizes and agrees that OT Systems are subject to internal and external breach, compromise, and similar incidents. Security features designed or recommended by Engineer are intended to reduce the likelihood that OT Systems will be compromised by such incidents. However, Engineer does not guarantee

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that Owner's OT Systems are impenetrable and Owner agrees to waive any claims against Engineer resulting from any such incidents that relate to or affect Owner's OT Systems.

ARTICLE 7—DEFINITIONS

7.01 Defined Terms

A. Wherever used in this Agreement (including the exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:

1. Addenda—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.

2. Additional Services—The services to be performed for or furnished to Owner by Engineer in accordance with Article 2 of Exhibit A of this Agreement.

3. Agreement—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.

4. Application for Payment—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Construction Contract.

5. Basic Services—The services to be performed for or furnished to Owner by Engineer in accordance with Article 1 of Exhibit A of this Agreement.

6. Bidding/Proposal Documents—Documents related to the selection of the Contractor, including advertisements or invitations to bid; requests for proposals; instructions to bidders or proposers, including any attachments such as lists of available Site-related documents; bid forms; bids; proposal forms; proposals; bidding requirements; and qualifications documents.

7. Change Order—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.

8. Change Proposal—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.

9. Constituents of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations

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regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

10. Construction Contract—The entire and integrated written contract between Owner and Contractor concerning the Work.

11. Construction Contract Documents—Those items designated as "Contract Documents" in the Construction Contract, and which together comprise the Construction Contract. See also definition of "Front-End Construction Contract Documents" below.

12. Construction Contract Price—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.

13. Construction Contract Times—The number of days or the dates by which Contractor must: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.

14. Construction Cost—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner's costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.

15. Constructor—Any person or entity (not including the Engineer, its employees, agents, representatives, or Subconsultants, or Engineer's Subcontractors), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner's work forces, utility companies, other contractors, construction managers, design-builders, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.

16. Contractor—The entity or individual with which Owner enters into a Construction Contract.

17. Documents—All documents expressly identified as deliverables in this Agreement, whether in printed or Electronic Document form, required by this Agreement to be provided or furnished by Engineer to Owner. Such specifically required deliverables may include, by way of example, Drawings, Specifications, data, reports, building information models, and civil integrated management models.

18. Drawings—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. Effective Date—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.

20. Electronic Document—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

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21. Electronic Means—Electronic mail (e-mail), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Agreement. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. Engineer—The individual or entity named as such in this Agreement.

23. Engineer's Subcontractor—An individual, firm, vendor, or other entity having a contract with Engineer to furnish general services, equipment, or materials with respect to the Project as an independent contractor.

24. Field Order—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.

25. Front-End Construction Contract Documents—Those Construction Contract Documents whose primary purpose is to establish legal and contractual terms and conditions, typically including the Owner-Contractor agreement, bonds, general conditions, and supplementary conditions. The term excludes the Drawings and Specifications, and any Construction Contract Documents delivered or issued after the effective date of the Construction Contract.

26. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

27. Owner—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.

28. Project—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.

29. Record Drawings—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.

30. Resident Project Representative—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of the RPR.

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31. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

32. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.

33. Site—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.

34. Specifications—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

35. Subconsultant—An individual, design firm, consultant, or other entity having a contract with Engineer to furnish professional services with respect to the Project as an independent contractor.

36. Subcontractor—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

37. Submittal—A written or graphic document, prepared by or for Contractor, which the Construction Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Construction Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Construction Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

38. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

39. Supplier—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

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40. Total Project Costs—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties and private utilities (including relocation if not part of Construction Cost), Owner's costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.

41. Underground Facilities—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

42. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.

43. Work Change Directive—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

B. Terminology

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

ARTICLE 8—EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits to Agreement

The following exhibits are incorporated by reference and included as part of this Agreement:

A. Exhibit A, Engineer's Services.

B. Exhibit B, Deliverables Schedule- **Not used**

C. Exhibit C, Amendment to Owner-Engineer Agreement (form).

D. Exhibit D, Duties, Responsibilities and Limitations of Authority of Resident Project Representative. – **Not used**

E. Exhibit E, EJCDC® C-626, Notice of Acceptability of Work (form). – **Not used**

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F. Exhibit F, Electronic Documents Protocol (EDP).

G. Exhibit G, Insurance.

H. Exhibit H, Dispute Resolution. **– Not used**

I. Exhibit I, Limitations of Liability.

J. Exhibit J, Payments to Engineer for Services and Reimbursable Expenses.

8.02 Total Agreement

A. This Agreement (which includes the exhibits listed above) constitutes the entire contractual agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit C to this Agreement.

8.03 Designated Representatives

A. With the execution of this Agreement, Engineer and Owner shall each designate a specific individual to act as representative under this Agreement. Such an individual must have authority to transmit instructions, receive information, and render decisions with respect to this Agreement on behalf of the party that the individual represents.

8.04 Engineer's Certifications

A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the selection process or in the Agreement execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;

3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.

8.05 Conflict of Interest

A. Nothing in this Agreement will be construed to create or impose any duty on the part of Engineer that would be in conflict with Engineer’s paramount obligations to the public health, safety, and welfare under the professional practice requirements governing Engineer, its Subconsultants, and all licensed professionals employed by Engineer or its Subconsultants.

B. If during the term of this Agreement a potential or actual conflict of interest arises or is identified:

1. Engineer and Owner together will make reasonable, good faith efforts to avoid or eliminate the conflict of interest; to mitigate any adverse consequences of the conflict of interest; and, if necessary and feasible, to modify this Agreement to address the

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conflict of interest and its consequences, such that progress under the Agreement may continue.

2. Such efforts will be governed by applicable Laws and Regulations and by any pertinent Owner's policies, procedures, and requirements (including any conflict of interest resolution methodologies) provided to Engineer under Paragraph 2.04.A of this Agreement.

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This Agreement's Effective Date is **06/10/2022**

Owner:	Engineer:
City of Watertown, South Dakota	HDR Engineering, Inc.
(name of organization)	(name of organization)
By:	By:
(individual's signature)	(individual's signature)
Date:	Date: 06-10-2022
(date signed)	(date signed)
Name:	Name: Jason Kjenstad
(typed or printed)	(typed or printed)
Title:	Title: Vice President
(typed or printed)	(typed or printed)
Attach evidence of authority to sign.	Attach evidence of authority to sign.
Attest:	Attest:
(individual's signature)	(individual's signature)
Title:	Title: Office Manager
(typed or printed)	(typed or printed)
Address for giving notices:	Address for giving notices:
	101 S. Phillips Ave
	Suite 401
	Sioux Falls, SD 57104
Designated Representative:	Designated Representative:
Name:	Name: Allan Erickson
(typed or printed)	(typed or printed)
Title:	Title: Project Manager
(typed or printed)	(typed or printed)
Address:	Address:
	101 S. Phillips Ave
	Suite 401
	Sioux Falls, SD 57104
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EXHIBIT A
SCOPE OF SERVICES

City of Watertown

Wastewater Treatment Plant Improvement and Collection System Improvement Projects

Background Information

A comprehensive condition assessment of the City of Watertown WWTP facility was completed in 2022. Portions of this facility are approaching the end of the respective service lives. There have also been significant technology improvements in the various types of equipment since the original construction. This City of Watertown WWTP project includes the design, bidding, and construction services for the Bid Packages outlined in this section.

The project has been divided into two design packages. Further discussions are required between HDR and the City to determine the exact split between the two design packages.

Design Package 1 – Wastewater Treatment Plant Improvements

- Preliminary Treatment
  - Equipment Rehab and Coatings
- Primary Clarifier and Sludge Pumping
  - Sludge Pump Building Improvements
  - New Sludge Recirculation Pumps
  - New Sludge Conveyance Pumps
  - Primary Clarifier Scraper Mechanism Rehab
  - Miscellaneous Primary Treatment Improvements
- Trickling Filters and Pumping
  - Trickling Filter Pumping Equipment Rehab and Coatings
  - Trickling Filter Miscellaneous Improvements
- Activated Sludge System
  - New Activated Sludge Tankage
  - Replace Activated Sludge Air Diffusers
  - Upgrade Aeration Controls
  - New Blowers and Drives
  - Aeration Basin Inspection
    - Aeration basin cleaning is to be performed by the City
- Final Clarifiers
  - New Final Clarifier and Splitter Structure

EJCDC® E-500, Agreement between Owner and Engineer for Professional Services.
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    - Rehab and Recoat Scraper Drives and Mechanisms
    - Drain Valve Replacement
    - Instrumentation Upgrades

- Solids Handling
    - Upgrade Pumps, Thickening, and Polymer Equipment
    - Plumbing Improvements
    - Overhead Door Replacement

- Digesters and Sludge Storage
    - Replace Recirculation Pumps
    - New Feed Line to Boiler No. 2
    - Miscellaneous Plumbing and Rehabilitation

- Biosolids Dewatering
    - Replace Heating Boilers
    - Add Second Dewatering Screw Press
    - Solids Conveyor Rehab or Replacement
    - Eliminate/Repurpose Holding Tanks and Mixing Building
    - Water Feed Plumbing Improvements

- Effluent Pumping
    - Replace Pump Motor Drives (VFDs)
    - Upgrade Electronics

- Site and Plant-Wide Improvements
    - HVAC Improvements
    - Electrical Improvements
    - Roadway Improvements
    - Fencing Improvements
    - Drainage Improvements
    - Storage Building
        - Potential relocation of existing storage building, or new pre-engineered building of similar design to existing.

Refer to the Condition Assessment Report in Appendix A for additional information on proposed improvements.

Design Package 2 – Collection System Improvements

- Lift Station Improvements
    - Capacity Improvements:
        - Lift Station No. 3
        - Lift Station No. 4
        - Lift Station No. 5
        - Lift Station No. 6
        - Lift Station No. 12
        - Lift Station No. 21

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        - Lift Station No. 23
    - Structural Improvements
        - Lift Station No. 9
        - Lift Station No. 10
        - Lift Station No. 11
        - Lift Station No. 15
        - Lift Station No. 22

    It is assumed that lift station improvements will be limited to pump, valve and piping replacement, and that all lift station improvements will fit within the footprint of the existing lift station structures.

- Sanitary Sewer Replacement and Rehabilitation
    - 8-inch Sewer Replacement: 4,100 Feet
    - 21-inch Sewer Replacement: 1,000 Feet
    - 8-inch through 15-inch CIPP Liner: 9,700 Feet

- Manhole Replacement and Rehabilitation
    - Manhole Replacement, 5 each
    - Manhole Rehabilitation, 11 each

Refer to the Condition Assessment Report in Appendix A for additional information on proposed improvements.

	TASK SERIES 100 - PROJECT MANAGEMENT SERVICES	TASK SERIES 200 - PREDESIGN SERVICES	TASK SERIES 300 -50% DESIGN	TASK SERIES 400 -FINAL DESIGN	TASK SERIES 500 -BIDDING ADMIN.	TASK SERIES 600 - CONSTRUCTION ADMIN. & TASK SERIES 700 - PROJECT STARTUP, O&M AND TRAINING
Package 1 WWTP Improvements	☑	☑	☑	☑	☑	☑
Package 2 Collection System Improvements	☑	☑	☑	☑	☑	☑

Interim Dates for Completions:

<u>Wastewater Treatment Plant Improvements Project:</u>

o SRF Funding Obtained	March 2022
o Proceed with Design	June 2022
o Final Construction Documents	September 2023
o Advertise for Bids	October 2023
o Bid Opening	November 2023

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- Contract Award/NTP — December 2023
- Construction Complete — December 2025

Collection System Improvements Project:

- SRF Funding Obtained — March 2022
- Proceed with Design — June 2022
- Final Contract Documents — March 2023
- Advertise for Bids — April 2023
- Bid Opening — May 2023
- Contract Award/NTP — June 2023
- Construction Complete — June 2024

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TASK SERIES 100 – PROJECT MANAGEMENT

HDR will work with the City throughout the project to obtain consensus on design issues and other issues and objectives for the project. Specific tasks include:

Task 110 Management Plan / Initiation Meeting

Subtask 111 – Project Manual. A project manual will be developed to present procedures and scope, schedule, contacts and responsibilities for the project.

- Schedule: comprehensive including procurement, bid dates complete with construction schedule.

Subtask 112 – Initiation Meeting and review meetings. A meeting will be held with key HDR personnel and the City to discuss the project team, proposed schedule and discuss issues to clarify and establish direction for the individual tasks. The Project Manual review comments will be taken and updates to the Project Manual will be distributed. Progress review meetings will be held on a bi-weekly basis.

Subtask 113 – Project Management. Project management activities listed to be provided for the duration of pre-design and design activities:

- Provide project monitoring and reporting
- Provide resource management and allocation based on project schedules and activities
- Provide budget and invoice management
- Provide coordination with owner and subconsultants
- Conduct periodic team meetings for project coordination
- Conduct up to two council information meetings for projects

Deliverable:

- Meeting minutes will be prepared and distributed to City by HDR.
- Council PowerPoint presentations

Task 120 Geotech Coordination

This task includes the preparation of the scope of services for the selection of Geotechnical services. A Geotechnical firm will be contacted to provide services as relevant for the Bid Packages as a subcontractor to HDR.

Geotechnical Information to include:

- Rock Profile
- Rock Hardness
- Soil Profile
- Groundwater Elevation
- Request for Construction Recommendation
- Foundation Recommendations
- Soil Corrosivity
- N Values

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TASK SERIES 200 – PREDESIGN SERVICES

HDR will conduct preliminary design and conceptual layouts. The City will review and comment on this information.

Task 210 Preliminary Design

Subtask 211 – Basis of Design: A basis of design will be developed for all portions of the WWTP and Collection System Improvement Projects.

Subtask 212 – Aeration Basin Tank Sizing: Consultant will determine the required volume of the new aeration basin tank. Approximate dimensions will be developed.

Subtask 213 – Final Clarifier Sizing: Consultant will determine the required volume of the new final clarifier. Approximate dimensions will be developed.

Subtask 214 – Preliminary WWTP Site Layout: Consultant will provide horizontal layouts of the new aeration basin, final clarifier, storage shed and access road alignment. Conceptual layouts will be developed for the dewatering building. Prior to completing layouts, consultant will meet with City staff to get input on needs for preferred layout. This meeting will also include discussions on type of surfacing, desired road widths and layout of drop off area.

Subtask 215 – Preliminary WWTP Hydraulic Profile: A preliminary hydraulic profile will be developed.

Subtask 216 – Bidding Document Table of Contents: A table of contents for the specifications will be compiled along with a sheet list for the plans.

Deliverables:

- Preliminary hydraulic profile
- Preliminary aeration basin sizing
- Preliminary final clarifier sizing
- Preliminary WWTP site layout
- Preliminary dewatering building layout
- Basis of design for WWTP Improvements
- Basis of design for Collection System Improvements
- Specification Table of Contents
- Plan sheet list

Assumptions:

- Three Webex meetings to receive input on layouts.
- Key Understandings:
  - Drawings will be prepared in AutoCAD format (as agreed to by the City). All other documents will be transmitted to the City in PDF, MSWord, MS Excel formats or other standard business software, as appropriate.

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TASK SERIES 300 – 50% DESIGN

Objective: HDR will prepare 50% design documents and construction cost opinion for the City's review and comment.

Task 310 Design Drawing Development

Subtask 311 – General Drawings. The drawings will include the index, symbols, legend, location, and general details for the project.

Subtask 312– Site Piping/Civil: Site Piping, Site Access, civil, landscaping and process schematic sheets will be prepared for site layout, piping and grading improvements.

Subtask 313 – Process Design: Drawings for units, piping, equipment, valves, including plan view, and sections, will be developed for the projects defined.

Subtask 314 – Structural Design: Structural drawings for required modifications and new structures will be developed will be developed. Plans and sections will be prepared.

Subtask 315 – Architectural/Mechanical Design: Architectural drawings for the buildings, including plans, sections and details will be developed. Mechanical drawings, including HVAC, plumbing, and waste piping for the various units will be developed.

Subtask 316 – Electrical and I/C: Electrical and instrumentation and control drawings will be prepared to define the power and I/C requirements. Instrumentation design will be compatible with requirements outlined in the ongoing City SCADA system master plan.

Task 320 Preliminary Specifications

Subtask 321 – Specification Front-End and Technical Documents. The sections outlining the bidding requirements and general conditions will be developed.

Task 330 Construction Cost Opinion

Subtask 331 – Construction Cost Opinion. An opinion of probable construction cost will be prepared based upon the preliminary drawings and specifications developed in the previous tasks.

Task 340 City Review

Includes meeting to review with the City.

Subtask 341 – Review. The documents and construction cost opinion will be reviewed with the City. City comments will be reviewed and incorporated into the documents.

Deliverables for Each Design Package:

- Six half-scale sets of drawings (11" x 17" format) for City review
- Four sets of specifications for City review
- Electronic files for drawings and specifications.

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TASK SERIES 400 – FINAL DESIGN

Objective: HDR will finalize documents and incorporate the City's review comments. The documents will be submitted for regulatory review.

Task 410 Final Documents

Subtask 411 – Final Drawings. The final drawings to be used for bidding will be developed.

Task 420 Technical Specifications

Subtask 421 – Final Technical Specifications. Final technical specifications for the various components of the project will be prepared.

Subtask 422 – Contract Documents. The bidding requirements, general conditions, specification conditions, and contracting requirements will be prepared. It is anticipated there will be three separate equipment procurement documents and 6 sets of contract documents.

Task 430 Construction Cost Opinion

Subtask 431 – Cost Opinion. Final opinion of probable construction cost will be prepared based upon the final drawings and specification developed in the previous tasks.

Task 440 City & Regulatory Reviews

Subtask 441 – HDR Review. HDR will conduct an internal QA / QC review by senior personnel.

Subtask 442 – City Review. HDR will submit the final drawings, specifications, and contract documents to the City for review and comment. Following City review, a meeting will be held to review documents and address comments.

Subtask 443 – Review. HDR will submit documents for regulatory agency reviews.

Task 450 Final Document Submittal

Subtask 451 – Final Deliverables. After resolution of review comments, HDR will incorporated the comments into the final documents and submit the final drawings, specifications, and contract documents to the City.

Subtask 452 – SD DANR Deliverables. HDR will submit the final drawings, specifications, and contract documents to the SD DANR will be invited to interim design meetings so they can become familiar with the project and weigh in on any concerns early.

Deliverables for Each Design Package:

- Five half-size sets of drawings (11" x 17" format) for City review.
- Three copies of Construction Cost Opinion.
- Three sets of drawings and specifications for State review.
- Electronic files for drawings and specifications.

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TASK SERIES 500 – BIDDING ADMINISTRATION

Objective: Bidding phase services by HDR include activities such as printing, document distribution, clarifications, addenda development and distribution, attend bid opening, and making a recommendation of award.

Task 510 Bid Advertisement and Bid Documents

HDR will assist the City in advertising for and obtaining bids for materials, equipment and services to be performed by a contractor for the construction contract.

Task 520 Addenda and Bid Assistance

HDR shall receive and respond to contractor questions during the bid phase of the contract. HDR will assemble addenda as appropriate to interpret, clarify or expand the Contract Documents and distribute addenda to plan holders via Quest CDN. Contract Documents will be available for download on QuestCDN.

Task 530 Pre-Bid Conference

HDR will prepare an agenda and conduct a pre-bid conference to be attended by the City, interested Contractors, and HDR personnel. The meeting will include a presentation given by the HDR Project Manager, and a tour of the work site.

Task 540 Bid Opening, Tabulation and Contract Award

HDR will attend the bid opening, prepare bid tabulation sheets, and assist the City in evaluating bids and awarding the construction contract.

Task 550 Pre-Construction Conference

HDR will prepare an agenda and administer a pre-construction conference to be attended by the City, Contractor, appropriate subcontractors, HDR's Project Manager and HDR's Resident Project Representative. This meeting will clarify communications channels, identify project procedures and clarify requirements.

Deliverables:

- Recommended bid advertisement, print-ready specifications and drawings, addenda, bid tabulation, recommendation of award, and pre-bid conference meeting minutes.
- Post on QuestCDN for bidding.

City Involvement:

- Advertise project for bid.
- Attend pre-bid conference.
- Administer bid opening.
- Attend pre-construction conference.

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Task Series 600 and 700 are not included at this time. These tasks will be negotiated after the design projects have been identified and the Contractors' proposed schedules have been provided.

TASK SERIES 600 – CONSTRUCTION ADMINISTRATION

TASK SERIES 700 – PROJECT STARTUP AND O&M MANUALS

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AMENDMENT TO OWNER-ENGINEER AGREEMENT

Amendment No. **[Enter Amendment Number]**

Owner: **City of Watertown, South Dakota**
Engineer: **HDR Engineering, Inc.**
Project: **Wastewater Treatment Plant Improvement Project**
Effective Date of Owner-Engineer Agreement: **[Effective Date of Agreement]**
Nature of Amendment: (Check those that apply)

- ☐ Additional Services to be performed by Engineer
- ☐ Modifications to services of Engineer
- ☐ Modifications to responsibilities of Owner
- ☐ Modifications of payment to Engineer
- ☐ Modifications to time(s) for rendering services
- ☐ Modifications to other terms and conditions of the Agreement

Description of Modifications:

[Here describe the modifications, in as much specificity and detail as needed. Use an attachment if necessary. Include cost breakdown and documentation, if applicable.]

Agreement Summary:
Original agreement amount: $
Net change for prior amendments: $
This amendment amount: $
Adjusted Agreement amount: $
Change in time for services (days or date, as applicable):

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. The Effective Date of the Amendment is **[Enter Effective Date of Amendment]**.

Owner	Engineer
_____ (typed or printed name of organization)	_____ (typed or printed name of organization)
By: _____ (individual's signature)	By: _____ (individual's signature)
(Attach evidence of authority to sign.)	(Attach evidence of authority to sign.)
Date: _____ (date signed)	Date: _____ (date signed)
Name: _____ (typed or printed)	Name: _____ (typed or printed)
Title: _____ (typed or printed)	Title: _____ (typed or printed)

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EXHIBIT F—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

ARTICLE 1—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

Paragraph 6.03 of the Agreement is supplemented by the following Exhibit F Paragraph 1.01 and Exhibit F—Attachment 1: Software Requirements for Electronic Document Exchange:

1.01 Electronic Documents Protocol

A. Electronic Transmittals: The parties shall conform to the following provisions together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. Basic Requirements

a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents by Electronic Means using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Agreement.

b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.

c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Agreement.

d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between the Owner and Engineer and any third party for any portion of the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with Owner, Engineer, or any Contractor or other entity directly contracted with the Owner to furnish Program-related services. Nothing herein will modify the requirements of the Agreement and applicable Construction Contract Documents regarding communications between and among the individual third parties and their respective subcontractors and consultants, except to the extent that any respective subcontractor or consultant exchanges Electronic Documents with the Owner or Engineer.

e. When transmitting Electronic Documents, the transmitting Party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving Party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

f. Nothing herein negates any obligation (1) in the Agreement to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; (2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or

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(3) to comply with any notice requirements limiting or otherwise modifying the acceptance of Electronic Documents for such notice.

2. System Infrastructure for Electronic Document Exchange

   a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP and any explicit system requirements specified by attachment to this EDP, it will be the obligation of each party to determine, for itself, its own System Infrastructure.

      1) The maximum size of an e-mail attachment for exchange of Electronic Documents under this EDP is 20 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.

      2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.

   b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

   c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it will not be liable to the other party for any breach of system security.

   d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties will cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Engineer, not reasonably anticipated under the original EDP, Engineer shall be entitled to compensation as Additional Services for its costs associated with the revisions to the EDP, delayed adoption of Exhibit L or implementation of other Electronic Documents protocols.

   e. Each party is responsible for its own back-up and archive of documents sent and received during the term of any Project contract/agreement under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the Parties may

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rely for document archiving during the specified term of operation of such project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of project documents, as each party deems necessary for its own purposes, after the term of contract, or termination of the project document archive, if one is established.

f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.

g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

h. The Engineer will operate a Project information management system (also referred to in this EDP as "Project Website") for use of Owner, Engineer, Contractors, during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the Parties as described in this paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. The following conditions and standards will govern use of the Project Website:

1) Describe the types and extent of services to be provided at the Project Website (such as large file transfer, email, communication and document archives, etc.).

2) Operation of the Project Website by the Engineer shall be part of Engineer's Basic Services and compensation, including expenses associated with operation for a period of 600 days, is included in the Lump Sum fee detailed in Exhibit C.

B. Software Requirements for Electronic Document Exchange; Limitations

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.

a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.

2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

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3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in the following Attachment 1 to this EDP, including software version, if listed.

C. Format and Distribution of Deliverables

1. By definition, "Documents" as used in this Agreement are documents expressly identified as deliverables from Engineer to Owner. Exhibit A of the Agreement identifies various Documents that Engineer is required to deliver to Owner as part of Engineer's services; Exhibit B is a schedule of such Documents. Engineer will transmit such Documents to Owner in the formats identified in Attachment 1 to this Protocol. If no specific format is identified for a deliverable Document, the format will be Portable Document Format (PDF).

2. If a Document will be distributed to third parties, such as prospective bidders and contractors, reviewing agencies, or lenders, the transmittal format for distribution will be as identified in Attachment 1 to this Protocol; provided, however, that if a format for distribution of a specific Document is expressly stated in Exhibit A, then the Exhibit A format will take precedence. If no specific format is identified for distribution of a deliverable Document to third parties, the format will be Portable Document Format (PDF).

a. If a format for Document distribution other than Portable Document Format (PDF) is specified, Owner shall first obtain a written, signed release from each third party to which the deliverable Document is distributed, establishing agreement to the following conditions:

1) The content included in the Electronic Documents prepared by or for Engineer and covered by the request was prepared as an internal working document for Engineer's purposes solely, and is being provided to the third party on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, the third party is advised and acknowledges that the content may not be suitable for the third party's application, or may require substantial modification and independent verification by the third party. The content may include limited resolution of models; not-to-scale schematic representations and symbols; use of notes to convey design concepts in lieu of accurate graphics; approximations; graphical simplifications; undocumented intermediate revisions; and other devices that may affect subsequent reuse.

2) Electronic Documents containing text, graphics, metadata, or other types of data that are provided to the Requesting Party are only for the convenience of the third party. Any conclusion or information obtained or derived from such data will be at the third party's sole risk and the third party waives any and all claims against Engineer or Owner arising from the use of the Electronic Documents covered by the request, or of any data contained in such Electronic Documents.

3) The third party shall indemnify and hold harmless Owner, Engineer, and Engineer's Subcontractors and Subconsultants, from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out

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of or resulting from the third party's use, adaptation, or distribution of any Electronic Documents provided under the request.

4) The third party agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the request and is limited to the third party's subcontractors and consultants. The third party warrants that subsequent use by the third party's subcontractors and subconsultants will comply with all terms of the Construction Contract Documents and any specific instructions or conditions established by Owner.

b. If Engineer is required to assist or participate in obtaining such releases from third parties, such services will be categorized as Additional Services.

D. Requests by Project-Related Parties for Electronic Documents in Other Formats

1. Owner may release (or direct Engineer to release) an Electronic Document version of a Document prepared by or for Engineer, including but not limited to a deliverable Document as set forth in Exhibit F Paragraph 1.01.C, in a format other than those identified in Exhibit F Paragraph 1.01.B or 1.01.C of the Electronic Documents Protocol, or elsewhere in the Agreement, only if (a) a Contractor or other Project-related party (Requesting Party) makes a good faith request for such release, (b) Owner determines in its sole discretion that such release is prudent and will be beneficial to the Project, and (c) Owner obtains Requesting Party's written consent to the four conditions set forth in Exhibit F Paragraph 1.01.C.2.a.1-4 above.

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EXHIBIT F—ATTACHMENT 1: SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices, and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas; meeting minutes; RFI's and Responses to RFI's; and Construction Contract administrative forms.	Email w/Attach	PDF	(2)
a.3	Contractor's Submittals (Shop Drawings, "Or Equal" requests, Substitute requests, documentation accompanying Sample submittals and other Submittals) to Owner and Engineer; and, Owner's and Engineer's Responses to Contractor's Submittals, Shop Drawings, Correspondence, and Applications for Payment	Newforma	PDF	
a.4	Correspondence; Interim and Final Versions of reports, layouts, Specifications, Drawings, maps, calculations and spreadsheets, Construction Contract, Bidding/Proposal Documents, and Front-End Construction Contract Documents.	Email w/ Attach or LFE	PDF	(3)
a.5	Layouts, plans, maps, and Drawings to be submitted to Owner by Engineer for future use and modification	Email w/ Attach or LFE	DWG	
a.6	Correspondence, reports, and specifications to be submitted by Engineer to Owner for future word processing use and modification	Email w/ Attach or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner by Engineer for future data processing use and modification	Email w/ Attach or LFE	EXC	
a.8	Database files and data to be submitted to Owner for future data processing use and modification	Email w/ Attach or LFE	DB	

Notes	
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of the Agreement and Construction Contract.
(2)	Transmittal of written notices is governed by requirements of the Agreement and Construction Contract.
(3)	Transmittal of Bidding/Proposal Documents and Front-End Construction Contract Documents will be in manner selected by Owner in Exhibit A, Paragraph 1.05.A.1.a. Unless otherwise expressly stated, these documents and the Construction Contract will be transmitted in PDF format, including transmittals to bidders and Contractor.
Key	
EMAIL	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies.
LFE	Agreed upon Large File Exchange method (OneDrive).
PDF	Portable Document Format readable by Adobe® Acrobat Reader Version **[number]** or later.
DWG	Autodesk® AutoCAD. dwg format Version **[number]**.
DOC	Microsoft® Word. docx format Version **[number]**.
EXC	Microsoft® Excel .xlsx or .xml
DB	Microsoft® Access .mdb

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EXHIBIT G—INSURANCE

ARTICLE 1—INSURANCE

Paragraph 6.04 of the Agreement, Insurance, is supplemented to include the following Exhibit G Paragraphs 1.01 and 1.02:

1.01 Insurance Policies and Limits

A. In accordance with Paragraph 6.04.A of the Agreement, the insurance that Engineer must procure and maintain, and the policy limits of such insurance, are as follows:

Coverage	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Employer's Liability	
Policy limit	$250,000
Commercial General Liability	
General Aggregate	$1,000,000
Automobile Liability	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$1,000,000
Professional Liability	
Each Claim	$1,000,000
Unmanned Aerial Vehicle Liability Insurance	
General Aggregate	$1,000,000

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1.02 Additional Insureds

A. Owner shall cause Engineer, its Subconsultants, and its Engineer's Subcontractors to be listed as additional insureds on any of Owner's general liability policies that are applicable to the Project. The following individuals or entities are to be listed on Owner's general liability policies of insurance (and on Contractor's policies required under Paragraph 6.04.D of the Agreement) as additional insureds:

Name of Additional Insured	Address
HDR Engineering, Inc.	**1917 S 67th St, Omaha, NE 68106**

B. During the term of this Agreement the Engineer shall notify Owner of any other Subconsultant or Engineer's Subcontractor to be listed as an additional insured on Owner's and applicable Contractor's general liability policies of insurance.

C. The Owner must be listed on Engineer's general liability policy as provided in Paragraph 6.04.B.

D. For applicable Contractor's general liability policies of insurance, the additional insured endorsements will include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

E. For applicable Contractor's general liability policies of insurance, Contractor shall provide ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent for Engineer, Subconsultants, and other design professional additional insureds.

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EXHIBIT I—LIMITATIONS OF LIABILITY

ARTICLE 1—LIMITATIONS OF LIABILITY

Paragraph 6.10 of the Agreement is supplemented to include Exhibit I Paragraph **1.01, Limitation of Engineer's Liability:**

1.01 Limitation of Engineer's Liability

A. Engineer's Liability Limited to Amount of Insurance Proceeds: Engineer shall procure and maintain insurance as required by and set forth in Exhibit G to this Agreement. Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by Laws and Regulations, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, members, partners, agents, employees, Subconsultants, and Engineer's Subcontractors to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever (including but not limited to direct, indirect, special, incidental, punitive, exemplary, or consequential damages) arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability, breach of contract, indemnity obligations, or warranty express or implied, of Engineer or Engineer's officers, directors, members, partners, agents, employees, Subconsultants, or Engineer's Subcontractors (hereafter "Owner's Claims"), will be limited to (1) responsibility for payment of all or the applicable portion of any deductibles, either directly to the Engineer's insurers or in settlement or satisfaction, in whole or in part, of Owner's Claims, and (2) total insurance proceeds paid on behalf of or to Engineer by Engineer's insurers in settlement or satisfaction of Owner's Claims under the terms and conditions of Engineer's applicable insurance policies up to the amount of insurance required under this Agreement.

1. Such limitation will not be reduced, increased, or adjusted on account of legal fees paid, or costs and expenses of investigation, claims adjustment, defense, or appeal.

2. If no such insurance coverage is provided with respect to Owner's Claims, then the total liability, in the aggregate, of Engineer and Engineer's officers, directors, members, partners, agents, employees, Subconsultants, and Engineer's Subcontractors, to Owner and anyone claiming by, through, or under Owner, for any and all such uninsured Owner's Claims will not exceed $**1,000,000.**

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EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

COMPENSATION PACKET BC-2: BASIC SERVICES—STANDARD HOURLY RATES

ARTICLE 1—COMPENSATION PACKET BC-2: BASIC SERVICES—STANDARD HOURLY RATES

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraphs 1.01, 1.02, and 1.03:

1.01 Compensation for Basic Services (other than Resident Project Representative)—Standard Hourly Rates Method of Payment

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A (except for Resident Project Representative services, if any) as follows:

1. An amount equal to the cumulative hours charged to the Project by Engineer's personnel times Standard Hourly Rates for the applicable billing class, plus Reimbursable Expenses, plus Engineer's Subcontractors' and Subconsultants' charges, if any.

2. The Standard Hourly Rates charged by Engineer constitute full and complete compensation for Engineer's services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or Engineer's Subcontractor's and Subconsultants' charges.

3. Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit J as Appendices 1 and 2.

4. The total compensation for such services is estimated to be $3,774,342.50 based on the following estimated distribution of compensation:

a.	Study and Report Phase	Not applicable
b.	Preliminary Design Phase	$265,760.00
c.	Final Design Phase	$3,409,382.50
d.	Bidding/Proposal Phase	$99,200.00
e.	Construction Phase	Not applicable
f.	Post-Construction Phase	Not applicable
g.	Testing	Not applicable

5. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but compensation will not exceed the total estimated compensation amount unless approved in writing by Owner. See also Exhibit J Paragraph 1.03.C.2 below.

6. The total estimated compensation for Engineer's services included in the breakdown by phases incorporates all labor, overhead, profit, Reimbursable Expenses, and Engineer's Subcontractor's and Subconsultants' charges.

7. The amounts billed for Engineer's services under Exhibit J Paragraph 1.01 will be based on the cumulative hours charged to the Project during the billing period by Engineer's

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employees times Standard Hourly Rates for the applicable billing class, plus Reimbursable Expenses and Engineer's Subcontractor's and Subconsultants' charges.

B. **Contract Authorization: Upon notice to proceed, Engineer is authorized to proceed with Preliminary Design Phase of the WWTP Improvements Project for a fee of $265,760.00. The Owner will provide subsequent authorizations in January 2023 to proceed with the Final Design for the WWTP Improvements and Collection System Improvements Design Projects in the amount of $3,508,582.50. The subsequent authorizations described above will be made in writing from the City of Watertown.**

1.02 Compensation for Reimbursable Expenses

A. Owner shall reimburse Engineer for Reimbursable Expenses directly related to the provision of Basic Services, using the rates set forth in Appendix 1 to this Exhibit J when applicable.

B. Reimbursable Expenses include the expenses identified in Appendix 1 and the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.

C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of **1.10**.

1.03 Other Provisions Concerning Payment

A. Whenever Engineer is entitled to compensation for the charges of Engineer's Subcontractors and Subconsultants, such compensation will be the amounts billed to Engineer by Engineer's Subconsultants times a factor of 1.10.

B. Factors: The external Reimbursable Expenses and Engineer's Subcontractors' and Subconsultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.

C. Estimated Compensation Amounts

1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.

2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's services for Owner's convenience. Upon notice, Owner and Engineer will promptly review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount,

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or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Owner decides not to suspend the Engineer's services during the negotiations and Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, then Engineer will be paid for all services rendered hereunder.

D. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually January 1 to reflect equitable changes in the compensation payable to Engineer.

E. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

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EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES

ARTICLE 2—COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 3.01:

2.01 Compensation for Additional Services—Standard Hourly Rates Method of Payment

A. Owner shall pay Engineer for Additional Services, if any, as follows:

1. For services of Engineer's personnel engaged directly on the Project pursuant to Exhibit A Paragraph 2.01 or 2.02, except for services as a consultant or witness under Exhibit A Paragraph 2.02.A.28 (which if needed will be separately negotiated based on the nature of the required consultation or testimony), an amount equal to the cumulative hours charged by each class of Engineer's personnel providing such Additional Services times Standard Hourly Rates for each applicable billing class, plus Additional Services-related Reimbursable Expenses and Additional Services-related Engineer's Subcontractors' and Subconsultants' charges, if any.

B. Compensation for Reimbursable Expenses

1. For those Reimbursable Expenses that are directly related to the provision of Additional Services, and are not already accounted for in the compensation for Basic Services or RPR-related services, Owner shall reimburse Engineer, using the rates set forth in Appendix 1 to this Exhibit J when applicable.

2. Such Reimbursable Expenses include, to the extent Additional Services-related, the expenses identified in Appendix 1 and the following categories: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar items. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.

3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be the Additional Services-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such Additional Services, the latter multiplied by a factor of **1.10.**

C. Other Provisions Concerning Payment for Additional Services

1. Whenever Engineer is entitled to compensation for the charges of Engineer's Subcontractors and Subconsultants, such compensation will be the amounts billed by Engineer's Subcontractors and Subconsultants to Engineer times a factor of **1.10.**

2. Factors: The external Reimbursable Expenses and Engineer's Subcontractors' and Subconsultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.

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3. The Standard Hourly Rates and the Reimbursable Expenses Schedule will be adjusted annually January 1 to reflect equitable changes in the compensation payable to Engineer for Additional Services-related services and expenses.

4. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

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EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

APPENDIX 1: REIMBURSABLE EXPENSES SCHEDULE

Direct Expenses	
Traffic Counting Equipment	$120.00 per hour
Survey/GPS Equipment	$50.00 per hour
Robotic Total Station	$50.00 per hour
Side-by-Side Utility Vehicle	$25.00 per hour
Handheld GPS	$20.00 per hour
Mileage	$0.75 per mile
Printing:	
B&W 8.5x11	$0.041 each
Color 8.5x11	$0.138 each
B&W 11x17	$0.079 each
Color 11x17	$0.273 each
Plots Bond	$0.459 per sq. ft.

OTHER REIMBURSABLE EXPENSES

Reimbursable Expense shall mean the actual expenses incurred directly or indirectly in connection with the Project for transportation travel, subconsultants, subcontractors, computer usage, telephone, shipping, and express, and other incurred expense. Unless negotiated otherwise in the contract, HDR will add 10% to invoices received from subconsultants and subcontractors to cover administrative expenses and vicarious liability. Hourly equipment charges apply to specific equipment used on the project.

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EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

APPENDIX 2: STANDARD HOURLY RATES SCHEDULE

B. Standard Hourly Rates

1. The Standard Hourly Rates apply only as specified in Exhibit J.

C. Schedule: Hourly rates for services performed on or after the date of the Agreement are:

Enclosed are the 2022 Hourly Billing Rates for HDR Engineering. These rates shall be adjusted annually to reflect any salary adjustments incurred by employees. The rates listed below do not included reimbursable expenses or hourly rates for equipment as defined below.

Description	Billing Rate/Hour
Managing Principal	225
Senior Project Manager	215
Project Manager III	195
Project Manager II	180
Project Manager I	165
Engineer VI	195
Engineer V	180
Engineer IV	165
Engineer III	145
Engineer II	130
Engineer I	115
Senior ASME Engineer	195
ASME Engineer	180
System Integrator Engineer III	195
System Integrator Engineer II	155
System Integrator Engineer I	115
Engineering/Field Services Technician V	175
Engineering/Field Services Technician IV	155
Engineering/Field Services Technician III	125
Engineering/Field Services Technician II	105
Engineering/Field Services Technician I	95
Cadd/GIS Technician IV	135
Cadd/GIS Technician III	115

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Cadd/GIS Technician II	105
Cadd/GIS Technician I	95
Right of Way IV	195
Right of Way III	175
Right of Way II	155
Right of Way I	120
Right of Way Coordinator	95
Environmental Scientist V	180
Environmental Scientist IV	160
Environmental Scientist III	140
Environmental Scientist II	125
Environmental Scientist I	110
Senior Land Surveyor	155
Land Surveyor	135
Survey Technician III	125
Survey Technician II	110
Survey Technician I	95
Senior Construction Manager	195
Construction Engineer III	175
Construction Engineer II	155
Construction Engineer I	125
Construction Inspector	95
Strategic Communications/Graphic Designer IV	165
Strategic Communications/Graphic Designer III	145
Strategic Communications/Graphic Designer II	130
Strategic Communications/Graphic Designer I	100
Project Controller	95
Project Assistant	95
Admin Assistant	70

- HDR has technical experts in various geographic locations that may be utilized based on specific project need.

- Senior Process Engineers will be billed at a rate of $225 per hour.

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APPENDIX A
BREAKDOWN OF CONDITION ASSESSMENT ITEMS SCOPE

Watertown WWTF Assessment Report

Watertown, South Dakota

November 4, 2021

Contents

1 Electrical

1.1 Headworks

The Headworks building is approximately 10 years old. All electrical equipment and materials appear to be in very good condition. The main electrical service consists of a Square D Model 6 motor control center (MCC). Lighting consists of mainly 4-foot fluorescent fixtures (T8 or T5), that appear to be in generally good condition. Recommend maintaining existing fixtures, mainly due to the relatively high cost of replacing explosion-proof fixtures in classified areas.

1.2 Pretreatment Building/Dewatering Building

The Pretreatment Building has been repurposed to house a screw press with indoor loadout truck parking. The electrical service consists of an Eaton Cutler Hammer Freedom Unitrol MCC. These MCCs were manufactured from 1988 to 1994, so this unit is approximately 30 years old. The MCC appears to be in good condition given its age. Spare parts are still available from Eaton, but the cost of replacement parts is likely 2-3 times that of those for a new model MCC. Given its age, this MCC is nearing the end of its useful service life and replacement in the near (0-10 years) future is recommended. Replacement of the service conductors to the MCC is also recommended at the time the MCC is replaced. Lighting in the building appears to consist of 4-foot vapor tight fluorescent (T8 or T5) fixtures. Light fixtures appear to be in very good condition. Conduits, wire, panelboards, and other equipment appear to be in good to very good condition.

1.3 Splitter Box

Much of the conduit at the splitter box consists of PVC coated Rigid Galvanized Steel (PVC-RGS) conduit with galvanized steel fittings. PVC-RGS tends to rust from inside out when installed in a wastewater environment and can appear to be in good condition until the steel becomes so degraded that the conduit fails. Corrosion on the galvanized fittings likely indicates some internal corrosion of the conduits, but not to the point of imminent failure. Recommend maintaining the existing conduits until the next major rehabilitation of the splitter box.

1.4 Primary Clarifier

This is a very harsh environment for electrical equipment and materials. Conduits and enclosures are showing signs of corrosion, but not so much as to be of immediate concern. Recommend electrical upgrades be timed to correspond with next major clarifier rehabilitation.

1.5 Sludge Pump Building

This building was constructed in the 1930s and is served by an Eaton Cutler Hammer Freedom Unitrol MCC. Light fixtures are primarily 4-foot T12 fluorescent fixtures. Painted steel disconnect switches mounted on basement walls are severely corroded. Given the overall age and condition of this building and the equipment it contains, electrical upgrades in this building aren’t recommended until the entire building is refurbished or replaced.

1.6 Digestor Building

The Digester Building has no dedicated electrical room, and electrical equipment is distributed throughout the building. The single-walled digester complex was constructed before NFPA 820 was written and adopted. Current NFPA 820 requirements classify much of the building as a classified hazardous area, primarily because the control building shares single-walled construction with digesters. NFPA 820 does indicate that's it's not intended to be retroactive but does allow the Authority Having Jurisdiction (AHJ), usually the fire marshal, to apply retroactivity and calls for a risk assessment to be performed to evaluate whether retroactivity should be applied. HDR has done a significant number of digester projects in recent years. The AHJs typically don't fully apply retroactivity to these facilities, but sometimes require additional mitigation measures such as use of combustible gas detectors and alarm indication at exterior doors and interior spaces. Bringing the entire building into compliance with NFPA 820 would require a complete rewire of the building, along with construction of an electrical room that is physically separated from the digesters and control room.

The electrical service consists of a 480V distribution panel that serves freestanding VFDs in a local control panel (85-LCP-8-1), motor starters, and lighting panel located in various parts of the building. Much of the equipment in this building appears to have been installed in approximately 1996. The distribution and lighting panels, as well as most of the conduits in the building appear to be in good condition. Two Allen-Bradley (AB) thickener feed pump VFDs are housed in a control panel with AB Centerline MCC construction. Given their age, consideration should be given to replacing these VFDs. A complete lighting replacement is also recommended for this building.

1.7 Control Building

The Control Building is served by an Allen-Bradley Centerline MCC. The building also houses three vertical turbine pumps that are controlled by VFD. The rest of the building consists of currently unused office/lab/storage space. While the MCC appears to be in good condition, the age of the VFDs is a concern. The lighting in this building could use a refresh.

1.8 Alkalinity Feed Building

The Alkalinity Feed Building was constructed in 2015, and all electrical equipment and material appear to be in very good condition.

1.9 Sludge Thickening Building

The Sludge Thickener Building is fed from the RAS/WAS/Blower building with both generator backed and unbacked normal utility power. Normal power feeds motor control center 80-MCC-1. Standby power feeds distribution panel 80DP1. 80-MCC-1 is a Westinghouse (Advantage or Series 2100) MCC that's about 25 years old. 80DP1 supplies two WAS thickener pump AB VFDs located in 80-LCP-7-1, which are also about 25 years old. Equipment and conduits in this building appear to be in good condition, except age of the VFDs and MCC is of some concern.

1.10 Trickling Filters

This is a very harsh environment for electrical equipment and materials. Conduits and enclosures are showing signs of corrosion, but not so much as to be of immediate concern. Recommend electrical upgrades be timed to correspond with next major filter rehabilitation.

1.11 Trickling Filter Recirculation Pump Station Building

The Recirculation Pump Station electrical service consists of a 480V distribution panel that serves freestanding VFDs housed in a pump control panel (55-LCP-3-1) of AB Centerline construction. Conduits, wire, electrical equipment, and lighting in this building appear to be in good condition except the age of the VFDs is of concern.

1.12 Intermediate Screw Pump Building

The Intermediate Screw Pump Building is served by motor control center 32-MCC-1 that powers three intermediate screw pumps as well as lighting loads in the building. 32-MCC-1 is labeled as a Cutler Hammer Westinghouse Freedom motor control center and is about 25 years old. Spare parts are still readily available for the MCC. Lighting in this building appears to consist of mainly older 4-foot fluorescent fixtures that appear to be in fair condition.

1.13 Aeration Basins

Conduits and enclosures appear to be in generally good condition.

1.14 RAS-WAS Blower Building

The building serves as a power distribution hub for most of the plant and contains a mix of Cutler Hammer Freedom 2100 MCCs and AB VFDs in Centerline Construction. All the equipment in this building is about 25 years old. Lighting in basement is older style metal halide without Quartz restrike. Recommend replacement with modern LED type fixtures.

1.15 Lab/UV Disinfection Building

Equipment in this building appears to be about 25 years old and includes a Hammer Freedom 2100 MCC. Equipment is in generally good condition.

1.16 Storage and Maintenance Building

Equipment in this building appears to be about 25 years old and is in generally good condition.

1.17 Overall Facility Comments

Electrical equipment and materials throughout the facility appear to be in good overall condition. There are many Allen-Bradley 1336 VFDs installed in AB Centerline enclosures that are about 25 years old and should be considered for replacement. Staff indicated several of the VFD units and harmonic filters have already been replaced due to failures. This could be a sign that internal electronic components such as capacitors have aged to a point where failures will become common and costly to repair.

Most of the motor control centers in the facility are about 25 years old. These MCCs are still supported by the manufacturers, so immediate replacement is not a high priority. Still, the useful

service life for an MCC is generally considered to be about 30-40 years so it's likely time to start planning for their replacement.

Most of the conductors in the plant appear to be about 25 years old as well. The insulation in modern conductors tends to hold very well if not subject to overcurrent, overvoltage, or deteriorating agents, and should be capable of lasting 40-50 years without significant issues. Generally, recommend replacing conductors at the same time as the equipment they serve.

Conduits are in generally good condition throughout the plant, but there a few localized conduits that are showing signs of corrosion.

Lighting panels and light transformers throughout the facility appear to be in good condition. Recommend maintaining and/or replacing as needed. Most manufacturers make retrofit kits to fit new panelboard internals into existing enclosures.

Most of the lighting in the facility appears to be newer fluorescent type, so a complete lighting retrofit is not recommended at this time. A few buildings have older, less efficient fixtures; replacement is recommended for these fixtures.

One 350kW Onan diesel generator is about 25 years old. This generator could be a candidate for replacement, but it's not an immediate need. All of the other generators onsite appear to be newer and in very good condition.

Two single-walled diesel fuel storage tanks are showing moderate corrosion. Replacement of these tanks with double-walled tanks is recommended.

Summary of Replacement Priorities

- Short-term (0-5 years):
    - Allen Bradley VFDs & Harmonic Filters:
        - Digester Building
        - Control Building
        - Trickling Filter Recirculation Pump Station Building
        - Sludge Thickener Building
        - RAS/WAS/Aeration Building
    - Two diesel fuel tanks
- Mid-term (0-15 years):
    - Motor Control Centers
        - Pretreatment Building
        - Sludge Pump Building (If building not replaced).
        - Control Building
        - Sludge Thickener Building
        - RAS/WAS/Aeration Building
        - Intermediate Screw Pump Building
        - UV Disinfection Building
    - Recommend replacing aged wiring at the same time as the equipment is it associated with is replaced.
    - Lighting

        - Sludge Pump Building (If building not replaced)
        - Digester Building
        - RAS/WAS/Aeration Basement
        - Control Building
        - Intermediate Screw Pump Building
    - Onan 350kW generator

2 Structural

An overall assessment of Wastewater Treatment Facility was conducted by visual observations, discussions with facility staff and review of available drawings. The structural condition assessment focused on the structures listed below.

2.1 Headworks

This structure is a cast-in-place concrete structure with masonry walls above grade. The roof construction is a combination of precast planks and cast-in-place concrete beam framing system. Minor masonry cracking around window and door openings is visible but does not present a structural concern at this time, therefore no repair is needed at this time. Equipment support pads appear to be in good condition with minor shrinkage cracking only. In the lower levels of the structure the sealant around equipment, columns, and at walls appears to be aging and replacement is recommended.

The exterior of the structure is a brick veneer system that looks to be in good condition. Slight frost heave movement is visible at the exterior overhead door locations. The cast in place ramp and tank walls have hairline shrinkage cracking and discoloration due to seepage through the concrete cracks. These cracks can be filled with a flexible sealant to reduce leakage but is not necessary for continued operation of the facility. The exterior stairs out of this structure currently have plain grating. At the direction of the facility staff, this should be replaced with serrated grating to provide additional traction in any weather condition.

2.2 Pretreatment Building/Dewatering Building

The structure is a cast in place concrete building with precast double tee roof framing. This structure has been repurposed to house the screw press and complete the dewatering process on the site.

The exterior of the structure appears to be in good condition, with some concrete shrinkage cracking in the nearby retaining walls. This cracking does not appear to impact the structural integrity of the wall and no repairs are recommended at this time.

The second level of the structure houses a single screw press. Facility staff noted that a second screw press was desired in the future. This could be accommodated but would need structural design to ensure the slab would be adequate to support the screw press machinery.

At the west side of the structure, the steel stair and walkway appeared to have significant corrosion that has resulted in apparent section loss of the members. It is recommended that this stair and walkway be removed and replaced in kind with more corrosive resistant material. The grating for this new stir and walkway should have a serrated top for additional slip resistance.



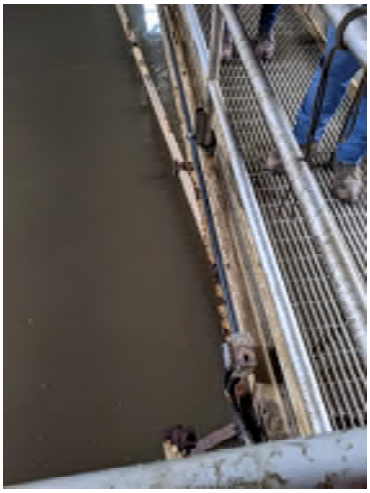
2.3 Primary Clarifier

The primary clarifier is a large cast-in-place concrete structure with an aluminum dome. Only the west primary clarifier was observed at this time as the east primary clarifier is currently being replaced. At the time of the observation, the clarifier was in service, so a tank inspection was not conducted.

From the visible elements of the clarifier, there appears to be periodic shrinkage cracking along the exterior of the structure with seepage from inside the tank. This seepage also was evident along the construction joints of the structure. There appeared to be some evidence of alkali silica reaction in the concrete, but no evident weakening of the concrete was observed.

The walkway and mechanism within the tank were observed to have corrosion along the lengths of the members. This corrosion could reduce the effectiveness of these elements and possible solutions include pressure washing the mechanism and walkway and recoating with corrosion resistant coating, or replacement of the clarifier. In order to discern what route is recommended, a more in-depth inspection of the tank would need to be conducted.

The aluminum dome of the clarifier was observed to be in excellent condition, with significant life span remaining.



2.4 Sludge Pump Building

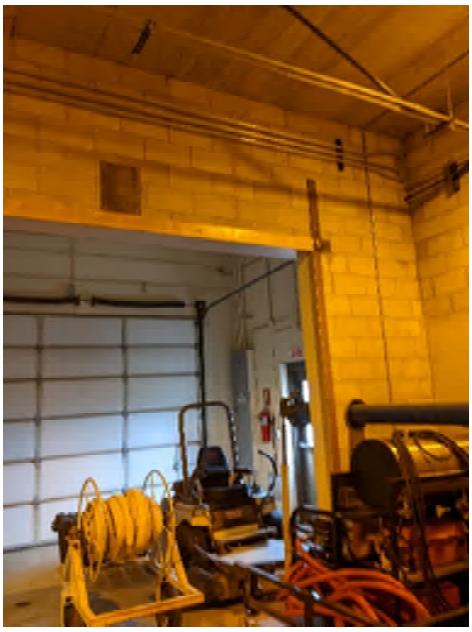
This stucco coated structure is one of the oldest on the facility and shows significant structural deterioration. The construction is cast-in-place concrete with brick walls above grade up to plywood roofing. At one point in this structure's life, a portion of the roof was replaced with a joist and metal deck system. Throughout the structure, multiple cracks, corrosion damage, and holes were observed in the structural elements of the building.

Facility Staff noted that only one element of the process equipment in the structure was still in service at the time of the assessment. It is the recommendation of HDR that this building be demolished, and the active process equipment be relocated or replaced as required.

2.5 Digestor Complex

The digestor complex is a large cast-in-place concrete construction structure with interior masonry partitions. The digestors within this complex were in service at the time of this assessment and were not entered. The portions of the complex that were observed appeared to be in excellent condition with minimal concrete degradation visible.

A masonry addition was added to the south side of the structure since the original construction. A new door opening was cut into the existing masonry walls with a new loose lintel. This loose lintel appeared to be insufficient for the span. It is the recommendation of HDR that this lintel be replaced in the near future. The rest of this addition appeared to be in good condition with only minor cracking at the corners of doors. There was significant corrosion present at the doors within this addition. It is recommended that these doors be replaced with more corrosion resistant doors.

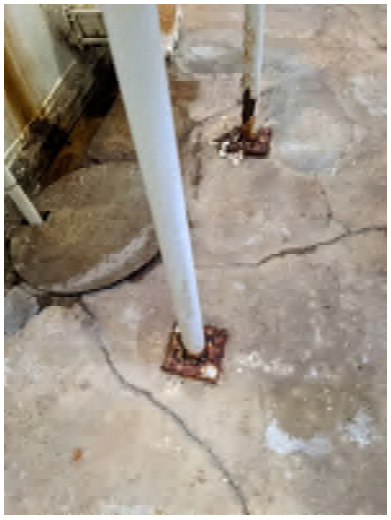


2.6 Effluent Pump Building

The structure of this building is cast-in-place concrete buried pump room with masonry walls above grade to a joist and metal deck roof system. The upper level of this building was originally used as the lab of the facility but has been repurposed as a file storage location.

The exterior stucco of the building shows signs of damage and has several locations where the base of the stucco has cracked off the wall. The interior of the upper portion of the building appears to be in good condition for its age, with only some minor leaks apparent in the roof seams.

The below grade pump room walls have only minor cracking, while the base slab showed significant damage and visible corrosion. The base slab has significant cracks and spalling that suggest it is nearing the end of its life span. The pumps and process piping connections to the base slab are also corroded and appear to have significant section loss. In order to extend the life of this pump room, the base slab will need to be replaced and process piping supports also replaced with a corrosion resistant coating.



2.7 Sodium Hydroxide Storage Building

The structure is masonry wall construction on cast in place concrete foundations. The roof consists of precast planks. This structure and equipment support pads were in excellent condition. At this time, no structural renovations are recommended at this structure.

2.8 Sludge Thickening Building

This Structure is concrete cast-in-place foundation with masonry walls above grade and a precast plank roof.

The exterior of the building appeared to be in good condition with only minor shrinkage cracking in the concrete and some cracking along the construction joints. Similar to other structures on site, the doors into this building appear to be corroding along the frames. It is recommended that the doors be replaced with doors that are more corrosion resistant.

The interior concrete of the structure was in good shape during the structural observations, with some corrosion visible, but this corrosion appeared to be from the surrounding piping, not from the reinforcing inside the concrete.

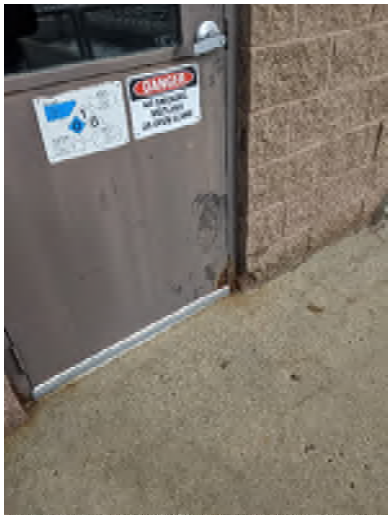
2.9 Trickling Filter Building

This structure is concrete cast-in-place foundations with masonry walls above grade and a precast plank roof. This structure appeared to be in good condition during the observations. No structural repairs recommended at this time.

2.10 CRE Pump Building

This structure is cast-in-place concrete foundations and up to the upper level. Masonry walls extended above the concrete with a precast plank roof. The north west side of the structure is an open top tank with metal grating above.

The exterior concrete of the structure had cracking with seepage observed adjacent to the open tanks. The exterior doors were corroded during the assessment and replacement with a less corrosion sensitive material door is recommended. Some minor masonry cracking was observed along masonry joints near door corners.



2.11 Aeration Basins

The Aeration Basin structures are open top water containing tanks with walkways and handrails along the exterior of the tanks. As noted in the previous site assessment, consistent cracking was observed throughout the concrete structure. These cracks appeared to be experiencing seepage from the inside of the tanks. These cracks appear to occur at construction joints and periodically around the structure most likely due to shrinkage cracking. The larger cracks could be filled with flexible sealant to allow the crack to move and expand with normal temperature changes of the concrete. Additionally, an interior coating on the tank could slow the seepage out of these walls.

It does appear that these aeration basins need structural repairs throughout the concrete to extend the service life of these structures. If the Basins continue to degrade, it may be more cost effective to remove and replace these structures in kind.

2.12 Final Clarifier

The final clarifier is a large cast-in-place concrete structure with an aluminum dome. Only the north final clarifier was observed at the time of the inspection. At the time of the observation, the clarifier water level was low, so the mechanism was visible, but the base slab was not visible.

From the visible exterior elements of the clarifier, there appears to be periodic shrinkage cracking along the exterior of the structure with seepage from inside the tank. This seepage also was evident along the construction joints of the structure.

The mechanism within the tank was observed to have lost most of the painted on protective coasting along the lengths of the members. This loss of coating could reduce the resistance to corrosion of these elements. HDR recommends to pressure wash the mechanism and recoat with corrosion resistant coating. In order to determine the status of the concrete within the Clarifier, a more in-depth inspection of the Clarifier would be required when the tank was out of service.

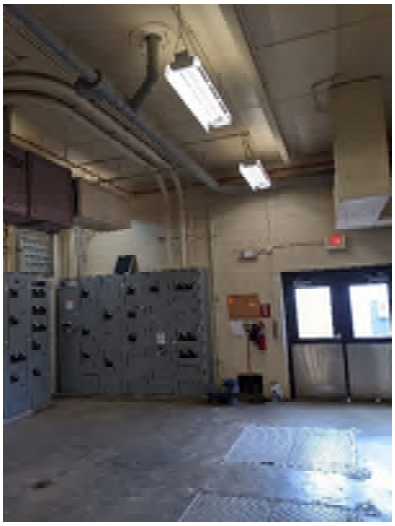
The aluminum dome of the clarifier was observed to be in excellent condition, with significant service life remaining. The facility staff noted the need to replace the threshold at the access door into the final clarifier.

2.13 RAS-WAS Blower Building

This structure consisted of a large underground pump room made up of concrete cast-in-place foundation and walls. The upper level is supported from masonry walls with a precast plank roof.

The building appeared to be in good condition with only minor shrinkage cracking observed in the concrete slab and walls. This shrinkage cracking does not appear to be significant and does not impede the operation of this structure.

It was noted that the doors at this structure were corroding similarly to other doors at the site and it is recommended that the doors be replaced with more corrosion resistant material doors.

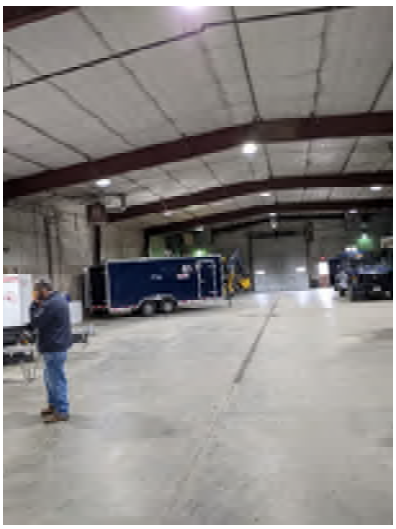


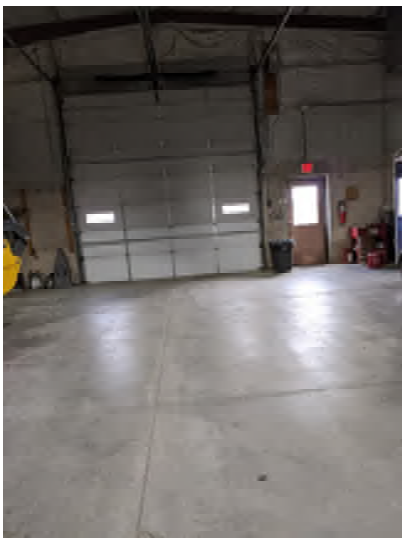
2.14 Lab/UV Disinfection Building

The structure is comprised of concrete cast-in-place foundations with masonry walls above grade and precast plank roof members. The lab portion of the structure was recently redone and appears to be in excellent condition. The UV Disinfection area appeared to have minor concrete cracking at reentrant corners. These cracks did not appear to impede the use of this space. The exterior doors of this structure did appear to show evidence of corrosion and HDR recommends replacing these doors along with the locks.

2.15 Storage and Maintenance Building

The structure is a Pre-Engineered Metal Building on cast in place concrete foundations and slab. Some minor cracking was observed around the slab trench drains but did not appear to impede the use of the facility. At this time, no structural renovations are recommended at this structure.





2.16 Overall Facility Comments

In summary, many structures had structural repairs that will increase the service life of the structure. These items have been listed below along with several items noted by the facility staff that would improve quality of life.

- Replacement of all smooth top metal grating with serrated top grating for better traction in any weather condition.
- Replacement of all door locks with better quality materials, as the current door locks jam.
- Replacement of all doors that show evidence of corrosion. These were evident at the doors of the Digestor Complex, Sludge Thickening Building, CRE Pump Building, and the RAS/WAS Blower Building.
- Demolition and replacement of the Sludge Pump Building.
- Blast and repaint or replacement of several exterior steel stairs that show significant corrosion deterioration.
- Replacement or repair of the base slab and equipment supports within the Effluent Pump Building.
- Repair of concrete cracking using flexible sealant at concrete water bearing structures.

3 HVAC/Plumbing

3.1 Headworks Building

3.1.1 Plumbing

All plumbing systems in this building seem to be in working order with no significant deficiencies.

3.1.2 HVAC

3.1.2.1 ELECTRICAL ROOM

The electrical room is heated by 2 natural gas unit heaters and cooled by 2 direct expansion ductless split systems. The unit heaters are in good working condition, no changes are recommended. The ductless split systems were likely installed at the same time as the unit heaters but appear to show more signs of destress. The outdoor unit shows signs of corrosion and weathering. It is likely that the ductless split system will need to be replaced within the next 5 years.

The electrical room is directly adjacent to a classified space (NFPA 820) but still maintains physical separation. It is recommended that the electrical room maintains a positive pressure of 0.1 in. of water column relative to the classified adjacent space. This may help with infiltration and prevent unwanted gasses from degrading the electrical equipment.

3.1.2.2 PROCESS AREA

The process area is served by a series of exhaust fans and an energy recovering make-up air unit. These systems seem to be in fair and working order. No improvements are recommended at this time.

3.2 Pretreatment/ Dewatering Building

3.2.1 Plumbing

All plumbing systems in this building seem to be in working order with no significant deficiencies.

3.2.2 HVAC

This building is served by a make-up air unit, exhaust fan, and hydronic unit heaters. These units were all installed recently and are in perfect working condition. The hydronic heating is provided by a boiler and pump system that is also located in this building. This system consists of two boilers, two inline pumps, and all of the associated hydronic equipment. These all seem to show significant signs of deterioration and are potentially nearing the end of their service life. It is recommended that this boiler and all of the associated appurtenances be replaced within the next 5 years.

3.2.2.1 HYDRONIC SYSTEM

3.3 Primary Clarifier

3.3.1 HVAC

This building has a supply and exhaust fan set that ventilate the space. These seem to be in fair condition and in working order. No recommendations are mentioned at this time.

3.4 Sludge Pump Building

3.4.1 Plumbing

This building has a single bathroom and other potable and non-potable water systems. At the time of assessment, it appeared that this system was no longer in use. It is not recommended to make any plumbing updates to this building.

3.4.2 HVAC

This building is served by a make up air unit and exhaust fan system. At the time of assessment, it appeared that this was not in working condition. This building also had a dual gas boiler that was not in operation upon arrival. It is not recommended to make any HVAC updates to this building.

3.5 Digester Building

3.5.1 Plumbing

The non-potable and potable water systems in the digester building show extreme signs of corrosion. This includes all valves, backflow preventers, and the visible/ uninsulated piping. An example of this corrosion can be seen in picture 3.5.1.1. It is recommended that all valves and backflow preventers be replaced. It is assumed that the non-visible piping has similar levels of destress and should also be replaced.

3.5.1.1 BACKFLOW PREVENTER AND VALVE CORROSION

3.5.2 HVAC

Per NFPA 820 – 2020, it is required that this entire building be continuously ventilated, at 12 air changes per hour, to prevent the buildup of digester gases. After inspection, this building is unlikely receiving the code required airflow. These gas buildups are likely the root cause of the piping corrosion as mentioned in section 3.5.1 and can cause other major corrosion.

The boiler room is ventilated by a supply and exhaust fan. At the time of inspection, these fans were not in operation. It is recommended that this system continuously ventilate the space to meet NFPA 820 requirements for classified spaces. If the current fans are incapable of meeting NFPA 820 requirements and are not repairable, it is recommended that this system be replaced.

The process room is served by an energy recovering ventilator. This system is in working order but not likely meeting code minimum requirements for ventilation. This system is also near the end of its service life and is recommended to be replaced.

3.6 Effluent Pump Building

3.6.1 Plumbing

This building has a restroom on the main floor that appears to no longer be in use. This facility shows significant signs of use and general age. Since this facility is not used frequently, remodeling this restroom is not a high priority.

3.6.2 HVAC

This building is served by a series of exhaust fans and make up air units. The former lab space is served by a residential type furnace that did not appear to be in use upon inspection. Since the lab is no longer in use, it is recommended replacing this system with unit heaters once it is no longer operable. This will provide freeze protection to the plumbing system.

3.7 Sodium Hydroxide Storage Building

3.7.1 Plumbing

This building has an emergency shower and eye wash station and all of the associated appurtenances. These are all new and seem to be in good working condition. No recommendations are made at this time.

3.7.2 HVAC

This building is served by an exhaust fan and gas fired unit heaters. These seem to be in excellent working condition. No recommendations are made at this time.

3.8 Sludge Thickening Building

3.8.1 Plumbing

This building has potable and non-potable water systems. This building also has a restroom and an emergency shower and eye wash station. The exposed piping and valves show significant amounts of corrosion from the gasses in the environment. It is recommended that the valves and piping in the basement be replaced and properly insulated to prevent corrosion on future piping. The emergency shower looks to be in good condition but is not up to modern code. The current shower setup provides cold water while code requires tepid water to be delivered. It is recommended that a water heater and mixing valve are added to support this fixture. There is a small water heater in the restroom that serves a service sink and a lavatory. This water heater shows significant amounts of corrosion and is likely going to need to be replaced within the next 5 years.

3.8.2 HVAC

This building is served by a series of exhaust fans, odor control, and a make up air unit. These units appear to be original to the building and show significant signs of corrosion and wear. The electrical room is served by a split system that also appears to be original to the building. It is recommended that all these units are replaced within the next 10 years.

Summary of Replacement Priorities

Immediate

- Digester building
  - Non-potable water backflow preventer and shutoff valves

5-Year

- Headworks Building
  - Electrical Room – Mini split replacement (replace in kind) / positive pressure unit

10-Year

- Digester Building
  - HVAC Replacement
  - Potable and Non-potable water piping replacement
- Pretreatment Building
  - Boilers and associated equipment replacement
- Sludge Thickening Building
  - Non-potable water line replacement
  - Electrical room HVAC replacement
  - Process room HVAC replacement
  - Emergency shower/ eyewash replacement and new tepid water loop

4 Process

4.1 Headworks Building:

- All equipment in building is approaching 10 years old.
- City has one spare grit pump on hand.
- Screw pump rehabilitation. Lakeside to inspect gear boxes and screws next year. City was quoted $200,000 to coat. Also, incorporate hardened edge, inspect, and repair grout.
- New starters on Grit Units.
- New LEL sensors.
- New conveyor.
- Maximum headworks - 140 lb set aside, 125 lb available left to allocate.

4.2 Biosolids Dewatering Building:

- New heating boilers.
- Larger feed pipe to improve water availability.
- Add second biosolids dewatering screw press unit.
    - There is room for second press. Existing runs at 60%-80% of capacity. Redundancy is to send sludge back to storage tank. Existing runs at 60 gpm for 4 to 6 hours a day; capacity of 120 gpm. Total solids out of digester is 1.5% - 2.0%. Thickened WAS is 3.5%.
- Replace or rehabilitate screw press conveyor.

4.3 Primary Clarifier #1:

- Sand blast, repair, and recoat drive and scraper mechanisms.
- New door hardware.
- Add checker plate cover by gate actuator to prevent SSO splashout.
- Complete primary clarifier #1 rehabilitation after PC #2 rehabilitation is complete.

4.4 Sludge Pump Building and Primary Scum Box:

Primary sludge pumps and associated equipment:

- All 3 primary sludge pumps are over 20 years old (2 installed in 1994, one in 1997). The rubber liner is failing on the pumps. The rubber lining is not replaceable without replacing the top and bottom of the pumps. All related pump equipment has been repaired several times.
    - Recommendation: Replace with air diaphragm pumps.
- The air compressor for the primary sludge pumps requires replacement. This may not be necessary if non-pneumatic pumps are installed.

- Another option may be new rotary lobe pumps? Small footprint for the four pumps if there is ever a future clarifier.

Sludge pump house recirculation pumps (backup pumps for digesters):

- The recirculation pumps are no longer serviced by the manufacturer. The City has some spare parts on hand and a few parts are still available through aftermarket. Both pumps require repair as of 3/26/2020. One pump leaks by the seals, the second has low flow.
  - Recommendation: Replace with new Vaughn pumps.

Sludge pump building general items:

- Piping is hard to access and there are insufficient clean outs and accesses to jet and clean out sludge, scum, and sewer lines. The sump system is insufficient to handle the debris generated when cleaning piping and performing maintenance on the pumps. This results in the staff having to jet and clean the sump discharge line after performing maintenance on the equipment.
- Basement staircase is skewed and tilting. Currently awaiting repairs but should still be examined and recommendations made. Building is from 1930 and the walls are also tipping a bit.
  - Recommendation: Construct a new separate building with new piping, pumping, and valves inside building.
- Hatch doors rattle and are loose. Hatch doors are very heavy and hard to move. Also, when the hatch doors are removed for use of the chain hoist, there is no security railing around the opening.
- Secondary boiler in PC building provides heat for the building. In 95’ or 97’ two new boilers were installed for heating digesters. However, the boiler in this building can also be used to heat either Digester.

Primary scum box and related equipment:

- The scum box requires City to remove a large amount of scum with the jetter truck twice or more per year to keep the lines and pumps operational. Due to the design of the pumps and the scum box most of what gets pumped to the digesters is water.
- A large portion of the primary scum box is above grade and exposed to freezing temperatures. This results in frozen scum on the sidewalls and surface of the scum box. This results in additional maintenance and work for staff.
  - Recommendation: New and deeper structure with new buried valves. Incorporate hot water or an automatic flush.

- Staff installs a heater and covers the primary scum valve box and check valve box with styrofoam and blocks to prevent the valves from freezing during the winter. The styrofoam and blocks must be moved daily to operate the valves in order to pump down the scum box.
- The sidewalk area between the primary scum box, primary splitter box, and primary clarifier #1 is the low point and snow melt and rain accumulate there making the area slippery and or deep water to wade through.

4.5 Digester Building:

- Digesters rehabilitated in 2017/2018. New rotary lobe transfer pumps installed in 2019. Existing are Vogelsang. Tri-lobes are more efficient.
- The recirculation pumps need to be repaired every 2-3 years. Repairs normally consist of new impellers, wear rings, and mechanical seals. Recirculation pumps need to have gas bled off from them daily or they lose their prime.
- Muffin Monsters are being repaired or replaced every other year.
    - Recommendation: Consider replacing recirculation pumps and muffin monsters with a chopper style or grinder style pump.

4.6 Belt Thickening Building:

- Progressive cavity pumps, thickening belts, and polymer equipment are more than 20 years old (upgrade). More repairs are anticipated.
    - Recommendation: New Moyno pumps. Replace polymer system with PolyBlend or Vessco is also building skids. Conduct polymer testing by Sioux Valley Environmental or Polydyne.
- Copper plumbing is rusting and flaking. Several repairs have been completed.
- Roll up garage door rusting and requires repair/replacement.

4.7 Trickling Filters (x4):

- Perform trickling filter distributor and media inspection and provide recommendations.
- Trickling filter arms are rotten. Trickling filters can be detrimental w/o intermediate clarifier. Ammonia is 19.8 out of clarifier and 9.9 out of TF. Recommend flushing TF on a weekly or biweekly basis to prevent sloughing.
- During cold nights can denitrify; have forced air.
- TSS concerns – bring high BOD.

4.8 Intermediate Screw Pump Building:

- All 3 gear boxes have minor oil leaks. Sand blast and coat screws. $78k per each was quoted to the City.

4.9 Aeration Basins (x2):

- Need to be taken down and cleaned.
- Upgrade air diffusers. Existing are ceramic diffusers – acid cleaned – fouled.
- Add additional 30% tankage @ $2.50 per gallon. Future total N and total P removal requires additional basins 30% of size for anoxic stage and a recycle pump station capable of 5-7 feet of head to send nitrate to front of plant pumping at 4Q.
- Controls upgrade for better dissolved oxygen control. Existing blowers are only adjustable by changing sheaves.
    - Recommendation: Incorporate VFD blower control by Installing VFDs and compatible motors on aeration basin and post aeration blowers to maintain 5.8 – 6.1 DO. Potentially add two sizes of blowers based on function instead of VFD upgrade. $75k each to upgrade blowers and controls.
- Capacity – ammonia is limiting factor and most restrictive; sump pump discharges push hydraulic capacity.
- Daily Max. – anticipated permit will cut ammonia in 1/2, cut max. day and 30 day in 1/2.

4.10 Final Clarifiers (x3):

- Replace sludge interface meters. Three (3) Royce display screens are failing (located in dome) and parts are no longer available. No repairs available to existing equipment.
- Sand blast, repair, and recoat drive and scraper mechanisms. $75k per unit to coat, plus some additional for welding. Could also replace with stainless steel; 70-foot diameter.
- Final clarifier drain valve stems are rusted off and inoperable on 2 of the 3 clarifiers (replace all 3). These are buried valves.
- Add a new (fourth) final clarifier.

4.11 UV Building:

- UV recently upgraded – Trojan 3000 – self-cleaning – 5 or 6 years old.
- Two channels with two banks each per channel.
- Eight (8) MGD per channel, 17.61 MGD peak hour.

4.12 Effluent Pump Building:

- Upgrade VFD’s to serviceable models (x2).
- Upgrade electronics and starters for vertical turbine pumps. Goulds pumps are used to bypass to pond.

City of Watertown WWTP and Collection System Upgrades
Design and Construction
6/10/2022

Manhour & Fee Summary

Labor Category	Project Principal	Project Manager	Process/Civil						ASME Architectural				ASME Structural				ASME Mechanical				ASME Electrical				ASME I&C				ASME Fire & Life Safety				Model Manager	Construction Observation	Project Controller	STENO/ Clerical/ Tech	TOTAL
			QC	SR	SR	SR	JR	DRAFTING	QC	SR	JR	DRAFTING	QC	SR	JR	DRAFTING	QC	SR	JR	DRAFTING	QC	SR	JR	DRAFTING	QC	SR	JR	DRAFTING	QC	SR	JR	DRAFTING					
TASK SERIES 100: WWTP IMPROVEMENTS																																					
TASK SERIES 110: WWTP IMPROVEMENTS - PLANNING AND PRELIMINARY DESIGN																																					
a. Kick-off Meeting	6	10	8			8	10	10																									20		4	2	78
b. Utility Coordination		40				30	40	40																													150
c. Preliminary Equipment and Tankage Layout Drawings		80				30	80	80		10	50	16		20	40	16		20	40			20	40			8	20			8	8		4				590
d. Basis of Design TM		80	16			30	80	80		10	50	16		20	40	16		20	40			20	40			8	20			8	8					8	610
e. Review Meeting and TM Finalization		40				30	40	40																													150
TASK SERIES 120: WWTP IMPROVEMENTS - DESIGN																																					
a. Site Visits During Design (2 Site Visits)	4	32				24	32	32			16				16				16				16				16				16			12	2	234
b. Site Geotechnical		40				30	40	40																													150
c. Opinion of Probable Construction Cost (OPCC)		80	32			60	80	80	8	15	20	20	16	15	20	20	16	15	20	20	16	15	20	20	16	15	20	20	8	8	10	10				8	723
d. SWPPP		24				18	24	24		5	6	6		5	6	6		5	6	6		5	6	6		5	6	6		2	4	2					181
e. Design Team Meetings		120	32			80	120	120	8	20	30	30	16	20	30	30	16	20	30	30	16	20	30	30	16	20	30	30	8	10	16	16					994
f. 50% Plans Development		120		8	40	80	360	360		40	360	80		80	360	80		80	360	80		80	360	80		80	160	80		16	20	40	40				3444
g. 50% Plans Review		160				160	240	160		60	120	80		120	240	40		80	160	80		120	240	80		80	160	80		24	40	20					2544
h. 95% Plans Development		240	32	8	20	80	240	360	8	40	360	80	8	80	360	80	16	80	280	80	16	80	320	80	16	80	80	80	8	16	20	20	20				3288
i. 95% Specification Development		160	16			120	220	160	8	30	40	40	8	40	80	40	8	30	40	40	8	40	80	40	8	30	40	40	2	16	20	20				180	1604
j. 95% Plans and Specification Review		120				80	120	120		20	30	30		20	30	30		20	30	30		20	30	30		20	30	30		10	16	10					876
k. Final Design Plans and Specifications		120	8		10	80	120	120	8	20	30	30	8	20	30	30	8	20	30	30	8	20	30	30	8	20	30	30		10	16	10				16	950
TASK SERIES 130: WWTP IMPROVEMENTS - BIDDING																																					
a. Interpretations and Distribution of Documents	8	24	8			24	18	24																											2	2	110
b. PreBid Conference		32				32	24	32		8	20			8	20			8	20			8	20			8	20			8	8						276
c. Assist with Bid Opening		16				16	12	16																													60
TASK SERIES 200: COLLECTION SYSTEM IMPROVEMENTS																																					
TASK SERIES 210: COLLECTION SYSTEM IMPROVEMENTS - PLANNING AND PRELIMINARY DESIGN																																					
a. Kick-off Meeting	6	16	8			12	16	16																									20		4	2	100
b. Utility Coordination		16				12	16	16																													60
c. Preliminary Layout Drawings		16				12	16	16																													60
d. Basis of Design TM		20	16			16	20	20																													92
e. Review Meeting and TM Finalization		40				32	40	40																													152
TASK SERIES 220: COLLECTION SYSTEM IMPROVEMENTS - DESIGN																																					
a. Site Visits During Design (2 Site Visits)	4	16				12	16	16																											12	2	78
b. Site Geotechnical		8				8	8	8																													32
c. Opinion of Probable Construction Cost (OPCC)		40	16			32	40	40																												8	176
d. SWPPP		4				4	4	4																													16
e. Design Team Meetings		40				32	40	40																													152
f. 50% Plans Development		72	16			16	180	280	8	16	100	40	16	16	80	40	16	16	200	40	16	16	60	40	40	16	48							50				1436
g. 50% Plans Review		24				16	24	24																													88
h. 95% Plans Development		72	16			80	160	160																										50				538
i. 95% Specification Development		60	8			48	60	60	8	8	50	40	16	8	40	40	16	8	120	40	16	8	40	40											180	914
j. 95% Plans and Specification Review		24				16	24	24																													88
k. Final Design Plans and Specifications		80	8			80	240	160	8	8	50		8	8	40		8	8	40		16	8	40												16	806
TASK SERIES 230: COLLECTION SYSTEM IMPROVEMENTS - BIDDING																																					
a. Interpretations and Distribution of Documents	4	16				12	16																												2	2	52
b. PreBid Conference		16				12	16																														44
c. Assist with Bid Opening		16				12	16																														44

PROJECT TOTALS	
HOURS TOTAL	21942
FEE TOTAL	$3,774,342.50