



Gregory L. Geist  
Director

Board of County Commissioners  
Clackamas County

Members of the Board:

Approval of Contract between Water Environment Services and Stantec Consulting Services, Inc., for the  
Kellogg Creek Water Resource Recovery Facility Influent Pump 2 and 4 Replacement

<b>Purpose/Outcome</b>	Execution of Contract #3690 for engineering design services for the Kellogg Creek Water Resource Recovery Facility Influent Pump 2 and 4 Replacement Project.
<b>Dollar Amount and Fiscal Impact</b>	Total Contract Value of \$289,975.00 until August 31, 2022.
<b>Funding Source</b>	639-01-20100-481010-P632305
<b>Duration</b>	Contract until August 31, 2022
<b>Previous Board Action/Review</b>	Prior discussions related to budget and Capital Improvements Plan. Issue Discussion 2/2/21, approved to move forward to Business Meeting
<b>Strategic Plan Alignment</b>	<ol style="list-style-type: none"> <li>1. This project supports the County's Strategic Plan of building a strong infrastructure that delivers services to customers and honors, utilizes, promotes and invests in our natural resources.</li> <li>2. This project supports the WES Strategic Plan goal to provide properly functioning infrastructure that supports healthy streams and reduces flooding.</li> </ol>
<b>Counsel Review</b>	AK 2/8/2021
<b>Procurement Review</b>	Was this project processed through Procurement? Yes.
<b>Contact Person</b>	Steven Rice, Civil Engineering, 971-284-3710
<b>Contract No.</b>	3690

**BACKGROUND:**

WES is seeking engineering services for design of the Kellogg Creek Water Resource Recovery Facility (KC WRRF) Influent Pump 2 and 4 Replacement project. The KC WRRF was constructed as a conventional secondary treatment facility in 1976. The facility recently underwent an improvements project that included, in part, replacement of Influent Pumps 1 and 3, which serve as low flow pumps. Influent Pump 2 (originally constructed in 1976) and Influent Pump 4 (added to the pump station in 1996) serve as high flow pumps during periods of wet weather flow. The pumps have exceeded their expected operating life and are due for scheduled replacement.

The engineering services include hydraulic modeling to confirm pump selection and to identify any necessary wetwell or piping modifications to enable pump performance. Recommended structural or mechanical modifications will be included in the development of bid documents along with the

replacement of the influent pumps. Anticipated services also include support during the bidding phase. Additional services, such as construction administration, inspection, or start-up support may be added by future amendment.

**PROCUREMENT PROCESS:** This project was advertised in accordance with ORS and LCRB Rules on October 1, 2020. Proposals were opened on October 28, 2020. The District received two (2) proposals: Stantec Consulting Services, Inc. and Evergreen Engineering. The Evaluation Committee selected Stantec Consulting Services, Inc. as the highest ranking proposer recommended a contract be awarded. Following award, the Project Manager entered into negotiations with Stantec Consulting Services, Inc. and developed a final statement of work, along with final billing rates and contract value.

**RECOMMENDATION:**

Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and execute the Contract between Water Environment Services and Stantec Consulting Services, Inc. for the KC WRRF Influent Pump 2 and 4 Replacement Project.

Respectfully submitted,



[Greg Geist \(Feb 23, 2021 09:15 PST\)](#)

Greg Geist  
Director, WES

Placed on the \_\_\_\_\_ Agenda by the Procurement Division.



**WATER ENVIRONMENT SERVICES  
PERSONAL SERVICES CONTRACT  
Contract #3690**

This Personal Services Contract (this “Contract”) is entered into between **Stantec Consulting Services Inc.**, (“Contractor”), and Water Environment Services, a political subdivision of the State of Oregon (“District”).

**ARTICLE I.**

- 1. Effective Date and Duration.** This Contract shall become effective upon signature of both parties. Unless earlier terminated or extended, this Contract shall expire on **August 31, 2022**.
- 2. Scope of Work.** Contractor shall provide the following personal services: **Kellogg Creek Water Resource Recovery Facility Influent Pump 2 and 4 Replacement Design** (“Work”), further described in **Exhibit A**.
- 3. Consideration.** The District agrees to pay Contractor, from available and authorized funds, a sum not to exceed **Two Hundred Eighty-Nine Thousand and Nine Hundred Seventy-Five Dollars (\$289,975.00)**, for accomplishing the Work required by this Contract. Consideration rates are on a time and materials basis in accordance with the rates and costs specified in Exhibit B. If any interim payments to Contractor are made, such payments shall be made only in accordance with the schedule and requirements in Exhibit B.
- 4. Invoices and Payments.** Unless otherwise specified, Contractor shall submit monthly invoices for Work performed. Invoices shall describe all Work performed with particularity, by whom it was performed, and shall itemize and explain all expenses for which reimbursement is claimed. The invoices shall include the total amount billed to date by Contractor prior to the current invoice. If Contractor fails to present invoices in proper form within sixty (60) calendar days after the end of the month in which the services were rendered, Contractor waives any rights to present such invoice thereafter and to receive payment therefor. Payments shall be made in accordance with ORS 293.462 to Contractor following the District’s review and approval of invoices submitted by Contractor. Contractor shall not submit invoices for, and the District will not be obligated to pay, any amount in excess of the maximum compensation amount set forth above. If this maximum compensation amount is increased by amendment of this Contract, the amendment must be fully effective before Contractor performs Work subject to the amendment.

Invoices shall reference the above Contract Number and be submitted to: Steve Rice at [SRice@clackamas.us](mailto:SRice@clackamas.us)

- 5. Travel and Other Expense.** Authorized:  Yes  No  
If travel expense reimbursement is authorized in this Contract, such expense shall only be reimbursed at the rates in the Clackamas County Contractor Travel Reimbursement Policy, hereby incorporated by reference and found at: <https://www.clackamas.us/finance/terms.html>. Travel expense reimbursement is not in excess of the not to exceed consideration.
- 6. Contract Documents.** This Contract consists of the following documents, which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, Exhibit A, and Exhibit B.

**7. Contractor and District Contacts.**

Contractor	District
Administrator: Heather Stephens, PE Phone: 503-220-5437 Email: <a href="mailto:heather.stephens@stantec.com">heather.stephens@stantec.com</a>	Administrator: Steve Rice Phone: 503-742-4605 Email: <a href="mailto:SRice@clackamas.us">SRice@clackamas.us</a>

Payment information will be reported to the Internal Revenue Service (“IRS”) under the name and taxpayer ID number submitted. (See I.R.S. 1099 for additional instructions regarding taxpayer ID numbers.) Information not matching IRS records will subject Contractor payments to backup withholding.

**ARTICLE II.**

- 1. ACCESS TO RECORDS.** Contractor shall maintain books, records, documents, and other evidence, in accordance with generally accepted accounting procedures and practices, sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. District and their duly authorized representatives shall have access to the books, documents, papers, and records of Contractor, which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Contractor shall maintain such books and records for a minimum of six (6) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later. Notwithstanding the foregoing, the County’s right to inspect, copy and audit shall not extend to the composition of the Contractor’s rates and fees, percentage mark-ups or multipliers but shall apply only to their application to the applicable units.
- 2. AVAILABILITY OF FUTURE FUNDS.** Any continuation or extension of this Contract after the end of the fiscal period in which it is written is contingent on a new appropriation for each succeeding fiscal period sufficient to continue to make payments under this Contract, as determined by the District in its sole administrative discretion.
- 3. CAPTIONS.** The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.
- 4. COMPLIANCE WITH APPLICABLE LAW.** Contractor shall comply with all applicable federal, state and local laws, regulations, executive orders, and ordinances, as such may be amended from time to time.
- 5. COUNTERPARTS.** This Contract may be executed in several counterparts (electronic or otherwise), each of which shall be an original, all of which shall constitute the same instrument.
- 6. GOVERNING LAW.** This Contract, and all rights, obligations, and disputes arising out of it, shall be governed and construed in accordance with the laws of the State of Oregon and the ordinances of Clackamas County without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the District of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise,

from any claim or from the jurisdiction of any court. Contractor, by execution of this Contract, hereby consents to the personal jurisdiction of the courts referenced in this section.

7. **RESPONSIBILITY FOR DAMAGES; INDEMNITY.** Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from, the conduct of Work, or from any act, omission, or neglect of Contractor, its subcontractors, agents, or employees. The Contractor agrees to indemnify, hold harmless and defend Clackamas County and the District, and their officers, elected officials, agents and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the errors, omissions, fault or negligence of the Contractor or the Contractor's employees, subcontractors, or agents. However, neither Contractor nor any attorney engaged by Contractor shall defend the claim in the name of District or any department of District, nor purport to act as legal representative of District or any of its departments, without first receiving from the Clackamas County Counsel's Office authority to act as legal counsel for District, nor shall Contractor settle any claim on behalf of District without the approval of the Clackamas County Counsel's Office. District may, at its election and expense, assume its own defense and settlement.
  
8. **INDEPENDENT CONTRACTOR STATUS.** The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; and (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement benefits.
  
9. **INSURANCE.** Contractor shall secure at its own expense and keep in effect during the term of the performance under this Contract the insurance required and minimum coverage indicated below. The insurance requirements outlined below do not in any anyway limit the amount of scope of liability of Contractor under this Contract. Contractor shall provide proof of said insurance and name the District and Clackamas County as an additional insureds on all required liability policies. Proof of insurance and notice of any material change should be submitted to the following address: Clackamas County Procurement Division, 2051 Kaen Road, Oregon City, OR 97045 or [procurement@clackamas.us](mailto:procurement@clackamas.us).

Required - Workers Compensation: Contractor shall comply with the statutory workers' compensation requirements in ORS 656.017, unless exempt under ORS 656.027 or 656.126.
<input checked="" type="checkbox"/> Required – Commercial General Liability: combined single limit, or the equivalent, of not less than \$1,000,000 per claim, with an annual aggregate limit of \$2,000,000 for Bodily Injury and Property Damage.
<input checked="" type="checkbox"/> Required – Professional Liability: combined single limit, or the equivalent, of not less than \$1,000,000 per occurrence, with an annual aggregate limit of \$2,000,000 for damages caused by error, omission or negligent acts.
<input checked="" type="checkbox"/> Required – Automobile Liability: combined single limit, or the equivalent, of not less than \$1,000,000 per accident for Bodily Injury and Property Damage.

The policy(s) shall be primary insurance as respects to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it. Any obligation that District agree to a waiver of subrogation is hereby stricken.

- 10. LIMITATION OF LIABILITIES.** This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent. Except for liability arising under or related to Article II, Section 13 or Section 20 neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contract in accordance with its terms.
- 11. NOTICES.** Except as otherwise provided in this Contract, any required notices between the parties shall be given in writing by personal delivery, email, or mailing the same, to the Contract Administrators identified in Article 1, Section 6. If notice is sent to District, a copy shall also be sent to: Clackamas County Procurement, 2051 Kaen Road, Oregon City, OR 97045, or [procurement@clackamas.us](mailto:procurement@clackamas.us). Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing, and immediately upon personal delivery, or within 2 hours after the email is sent during District's normal business hours (Monday – Thursday, 7:00 a.m. to 6:00 p.m.) (as recorded on the device from which the sender sent the email), unless the sender receives an automated message or other indication that the email has not been delivered.
- 12. OWNERSHIP OF WORK PRODUCT.** All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for any reason the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications. Notwithstanding the above, District shall have no rights in any pre-existing Contractor intellectual property provided to District by Contractor in the performance of this Contract except to copy, use and re-use any such Contractor intellectual property for District use only.
- 13. REPRESENTATIONS AND WARRANTIES.** Contractor represents and warrants to District that (A) Contractor has the power and authority to enter into and perform this Contract; (B) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; (C) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work; (D) Contractor is an independent contractor as defined in ORS 670.600; and (E) the Work under this Contract shall be performed in the same professional skill, care, diligence and standards as other professionals performing similar services under similar conditions. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided. The Contractor shall be responsible for the technical accuracy of its services and documents resulting therefrom, and District shall not be responsible for discovering deficiencies therein. The Contractor shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in information furnished by the District.
- 14. SURVIVAL.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Article II, Sections 1, 6, 7, 11, 13, 14, 16, 21 and 27, and all other rights and obligations which by their context are intended to survive. However, such expiration shall not extinguish or prejudice the District's right to enforce this Contract with respect to:



(a) any breach of a Contractor warranty; or (b) any default or defect in Contractor performance that has not been cured.

**15. SEVERABILITY.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

**16. SUBCONTRACTS AND ASSIGNMENTS.** Contractor shall not enter into any subcontracts for any of the Work required by this Contract, or assign or transfer any of its interest in this Contract by operation of law or otherwise, without obtaining prior written approval from the District, which shall be granted or denied in the District's sole discretion. In addition to any provisions the District may require, Contractor shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this Article II, Sections 1, 7, 8, 13, 16, and 27 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract.

**17. SUCCESSORS IN INTEREST.** The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

**18. TAX COMPLIANCE CERTIFICATION.** The Contractor shall comply with all federal, state and local laws, regulation, executive orders and ordinances applicable to this Contract. Contractor represents and warrants that it has complied, and will continue to comply throughout the duration of this Contract and any extensions, with all tax laws of this state or any political subdivision of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318. Any violation of this section shall constitute a material breach of this Contract and shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract or applicable law.

**19. TERMINATIONS.** This Contract may be terminated for the following reasons: (A) by mutual agreement of the parties or by the District (i) for convenience upon thirty (30) days written notice to Contractor, or (ii) at any time the District fails to receive funding, appropriations, or other expenditure authority as solely determined by the District; or (B) if contractor breaches any Contract provision or is declared insolvent, District may terminate after thirty (30) days written notice with an opportunity to cure.

Upon receipt of written notice of termination from the District, Contractor shall immediately stop performance of the Work. Upon termination of this Contract, Contractor shall deliver to District all documents, Work Product, information, works-in-progress and other property that are or would be deliverables had the Contract Work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research, objects or other tangible things needed to complete the Work

**20. REMEDIES.** If terminated by the District due to a breach by the Contractor, then the District shall have any remedy available to it in law or equity. If this Contract is terminated for any other reason, Contractor's sole remedy is payment for the goods and services delivered and accepted by the District, less any setoff to which the District is entitled.

**21. NO THIRD PARTY BENEFICIARIES.** District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or

otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

- 22. TIME IS OF THE ESSENCE.** Contractor agrees that time is of the essence in the performance this Contract.
- 23. FOREIGN CONTRACTOR.** If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.
- 24. FORCE MAJEURE.** Neither District nor Contractor shall be held responsible for delay or default caused by events outside the District or Contractor's reasonable control including, but not limited to, fire, terrorism, riot, acts of God, or war. However, Contractor shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.
- 25. WAIVER.** The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.
- 26. PUBLIC CONTRACTING REQUIREMENTS.** Pursuant to the public contracting requirements contained in Oregon Revised Statutes ("ORS") Chapter 279B.220 through 279B.235, Contractor shall:
- a. Make payments promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the work provided for in the Contract.
  - b. Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the Contract.
  - c. Not permit any lien or claim to be filed or prosecuted against District on account of any labor or material furnished.
  - d. Pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
  - e. As applicable, the Contractor shall pay employees for work in accordance with ORS 279B.235, which is incorporated herein by this reference. The Contractor shall comply with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract, and failure to comply is a breach entitling District to terminate this Contract for cause.
  - f. If the Work involves lawn and landscape maintenance, Contractor shall salvage, recycle, compost, or mulch yard waste material at an approved site, if feasible and cost effective.
- 27. NO ATTORNEY FEES.** In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.
- 28. KEY PERSONS.** Contractor acknowledges and agrees that a significant reason the District is entering into this Contract is because of the special qualifications of certain Key Persons set forth in the contract. Under this Contract, the District is engaging the expertise, experience, judgment, and personal attention of such Key Persons. Neither Contractor nor any of the Key Persons shall delegate performance of the management powers and responsibilities each such Key Person is required to provide under this Contract to any other employee or agent of the Contractor unless the District provides prior written consent to such delegation. Contractor shall not reassign or transfer a Key Person to other duties or positions such that the Key Person is no longer available to provide the





**EXHIBIT A**  
**STATEMENT OF WORK**

**EXHIBIT 1**  
**PROFESSIONAL SERVICES CONTRACT**  
**SCOPE OF WORK**

The following is a scope of services for professional engineering services for the design, bid, and award for the Kellogg Creek Water Resource Recovery Facility (KC WRRF) Influent Pump 2 and 4 Replacement Project.

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## **Background**

Clackamas Water Environment Services (herein referred to as District), an intergovernmental partnership formed pursuant to ORS 190, owns and operates over 340 miles of conveyance infrastructure and five water resource recovery facilities. The KC WRRF was constructed as a conventional secondary treatment facility in 1976 to serve the North Clackamas Urban area, and the cities of Happy Valley, Johnson City and Milwaukie. The facility recently completed an upgrade that included, in part, replacement of Influent Pumps 1 and 3. This project will replace Influent Pumps 2 and 4 and their associated Variable Frequency Drives. These pumps serve as high flow pumps to meet peak wet weather demand.

## **General Assumptions**

The following key assumptions were used when determining the scope, schedule, and level of effort for compensation to the Consultant. These assumptions are in addition to those included in the Scope of Services.

1. The design shall be based on standards and codes in effect on the effective date of the authorization to proceed.
2. Consultant shall submit minutes from each workshop no later than 5 working days following each respective workshop. The District's review comments will be received by the Consultant within 10 working days from any corresponding design review workshop. Written responses to the comments will be provided by the Consultant. District shall furnish required information, examine deliverables submitted by Consultant, and render decisions and approvals in a timely manner.
3. The Consultant shall use the 49-Division Construction Specifications Institute (CSI) MasterFormat® specifications. District will provide Division 0 specifications and Consultant will provide Division 1 and technical specifications for project use with District review and comment. District will compile Division 0, Division 1, the Technical Specifications, and the Construction Drawings for delivery to the Clackamas County Purchasing Department.
4. Deliverable documents shall be provided electronically using .PDF and original .DOC format, unless otherwise specified herein. Drawings (11-inch by 17-inch) in .PDF format will be provided for each District internal review.
5. The Consultant's standard CAD software shall be used to produce the drawings, in conformance with Consultant's CAD drafting standards.
6. Meetings and workshops will be held remotely via video conferencing.
7. No permit applications will be prepared by Consultant. Consultant shall provide supporting documentation through an allowance as defined in this scope. The District shall develop the actual permit application and required reports and pay all permit application fees.
8. At a minimum (unless otherwise approved by County), two vendors shall be named for each manufactured component or piece of equipment with provisions for an "equal" to be proposed by the contractor and subject to approval by the Engineer. An exception to this assumption applies to the pumps, with which the District has standardized around Flygt N-Pumps, by Xylem.
9. No equipment pre-purchase or pre-negotiation shall be required.

10. No additive or deductive alternates shall be included on the bid form and contract documents.
11. At the Districts direction, physical modeling shall be performed by our subconsultant, Northwest Hydraulic Consultants (NHC) as a lump sum service.
12. Attachment A provided the anticipated project schedules.

**District-Provided Services:**

1. District shall provide to Consultant available data in District's possession relating to Consultant's services on the Project. Consultant will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by District.
2. District shall make its facilities accessible to Consultant as required for Consultant's performance of its services.
3. District shall give prompt notice to Consultant when District observes, or becomes aware of, developments that affect the scope or timing of Consultant's services, or of defects in the work of Consultant.
4. District shall provide the final Protective Device and Arc Flash Study for the existing plant upgrade project. The Study will need to be updated for Pump 2 & Pump 4 by the Contractor during construction. This will also need to be made available to the Contractor selected for this Contract.
5. District shall provide available documentation regarding wet well modifications studied/considered during previous Influent Pump Station improvements and shall provide available as-built information for modifications made to the wet well, junction box, or pump suction/discharge piping.

**Scope of Services**

The Consultant shall provide the District with the engineering design, bid, and award services described herein.

**Task 1 - Project Management**

Task Specific Objectives:

The purpose of this task is to provide the administrative, project team management, and financial/schedule management activities associated with performing and completing this task of the project. This task also includes maintaining clear communication with the District to deliver the project through conclusion of Construction.

**Task 1.1 - Develop Brief Project Management Plan**

Consultant will set up the project and prepare a brief project management plan (PMP). The PMP will provide for a staffing plan identified in the scope of work to communicate staff roles and responsibilities. The PMP will describe how Consultant will manage cost, scope, schedule and quality; establish lines of communication and team member roles; and help to define how the project will be managed so that the budget and schedule goals are met. Components of the PIP consist of the following:

### Project Schedule

A project schedule will be developed and maintained to monitor overall progress of the project.

### QA/QC Plan

Prepare a project QA/QC plan, which defines reviews to be conducted for all Consultant's deliverables and the roles and responsibilities of QA/QC team members. This subtask will also include project close out activities.

### Decision and Risk Register

Develop and maintain Decision and Risk registers for review during Project Management meetings.

### Bi-Weekly Project Manager Meeting

Participate and attend bi-weekly project management meetings between District's PM and two Consultant team members. Meetings will review schedule and progress, and updates to the Decision and Risk register will be made at this time.

## **Task 1.2 - Invoicing and Scope Management**

Invoices will be submitted on a monthly basis. A project report will accompany each monthly invoice and will detail task and subtask breakdown of cost and hours worked per staff person and percent spent/complete for each task and subtask. This monthly project status report will be included with each submitted invoice.

### **Task 1 Deliverables:**

- One invoice will be submitted for monthly payment in PDF format.
- Project Status Report submitted monthly with invoice in PDF format.

### **Task 1 Meetings**

- Biweekly project updates

## **Task 2 - Internal Quality Management**

Task Specific Objectives:

Discipline reviews at the 30%, 90%, and 100% milestones will be documented under this Task. Each design discipline will be reviewed by an approved quality control reviewer. The discipline reviewer will generate a log of comments, and each design lead will adjudicate each comment.

### **Task 2 Deliverables:**

- Documentation of QC reviews available upon request

## **Task 3 - CFD Modeling**

Task Specific Objectives:

Consultant will develop a computational fluid dynamics (CFD) model for the influent pump station to evaluate whether the existing wet well can be modified during replacement of pumps 2 and 4, and develop design modifications to the suction piping if necessary. The CFD model will be developed using the ANSYS FLUENT software which has been successful for predicting complex three-dimensional



patterns. The CFD results will be used to assess if the approaching hydraulics to the pumps is appropriate to meet with the requirements of Hydraulic Institute Standards – Rotodynamic Pumps for Pump Intake Design (ANSI/HI 9.8-2018), and Rotodynamic Pumps for Pump Piping (ANSI/HI 9.6.6-2016). At the end of the study, a recommended design will be prepared.

Development of the CFD model of the Existing Wet Well. A CFD model will be developed for the existing wet well based on as-built drawings provided by the District supplemented with site photos or other available documents. This model will include influent pipe, wet well, suction piping to the four pumps, and reaches of discharge pipes.

Existing Wet Well Modeling. Up to three simulations of the existing wet well will be performed with different pumps in operation. The results of these simulations will identify poor hydraulics and provide information to develop design modifications.

Design Modification Modeling. Up to three design modifications will be modeled at the most conservative condition selected during review of the existing wet well. This will develop a design that has acceptable hydraulics in terms of pre-swirl angles and velocity distribution at pump throats. Once an accepted design is developed, two additional CFD simulations will be performed for other operating conditions to confirm that design will also work for these conditions.

Following development of the existing pump station model and a development of an initial approach for alleviating hydraulic concerns, a CFD modeling workshop will be held to discuss and review results. The goal of the workshop will be to reach consensus on what type of modifications can or should be made, and to discuss potential scheduling for construction of the recommended improvements.

Report and Meeting. At the end of this study, a draft technical report will be submitted for review. After a consolidated set of the comments are received, the final report will be prepared and submitted.

### **Task 3 Assumptions:**

- District will provide available drawings reflecting current configuration of influent pump station.
- If physical modeling is done as part of this project, findings from the CFD model will be coordinated with Northwest Hydraulics Consultants (NHC) to test desired CFD outputs.

### **Task 3 Deliverables:**

- Technical memorandum describing the model results and recommendations in PDF format.

### **Task 3 Meetings**

- CFD modeling workshop: This workshop will be a key decision workshop which will determine the design path for upgrading the hydraulic characteristics within the wet well. This meeting will also be used to discuss and determine if physical modeling is warranted and should proceed. The meeting is expected to last at least 2 hours and will include Consultant’s CFD modeling lead, PM, and Design Management Staff.

## **Task 4 - Physical Modeling**

### **Task Specific Objectives:**

The goal of the physical model study is to optimize and confirm the design of the wet well by determining if the proposed pump station design can provide acceptable flow to the pumps. The District and Consultant team will determine whether to proceed with physical modeling based on the outcome

of the CFD modeling workshop in Task 2. The physical modeling study will be provided by subconsultant NHC, working closely with Stantec and District staff. Specific objectives include:

- Determine the existence and magnitude of adverse flow phenomena in terms of free and subsurface vortex activity, swirl of flow entering the pump and velocity distribution at the pump impeller location;
- Investigate geometric modifications to the pump station to improve flow approaching the pumps;
- Document the performance of the selected pump station design for the anticipated range of operating conditions.

### Model Design and Construction

Based on the provided information on the proposed geometry, the flow rate, and the study objectives, construct and test the physical model at a scale of approximately 1:3 (The model scale will be confirmed upon receipt of dimensional drawings that include the pump suction bell and throat diameters. The model scale may require slight adjustments to accommodate commercially available cast acrylic tubing). The physical model will be operated in adherence to the Froude criterion for dynamic similarity.

The proposed model scale has been estimated based on existing drawings which show that the pump suction inlet is 30 inches in diameter and the reduced throat at the pump impeller is 16 inches in diameter.

The physical model will include an approximately 40-foot length (prototype) of the two 48-inch influent pipes, the Influent Junction Box, and the 8-foot length of the influent pipe connecting to the wet well. The wet well, all four pumps, and suction plumbing to the impeller location will all be included in the model. NHC will prepare physical model design drawings and submit them for review and approval prior to the onset of model construction.

Prior to the start of model design and construction, the team will hold a meeting with the District PM, NHC PM, Stantec PM and Design Manager, and CFD Modeling lead to discuss the findings of CFD modeling and considerations related to physical modeling.

### Model Testing

The testing approach will include assessing the performance of the existing design under proposed flow capacities, evaluating design modifications to the initial configuration if unsatisfactory pump performance is identified, and fully documenting the final design. All decisions regarding the test program, test results, design modifications, or test procedures will be made with concurrence from Stantec. Each model test will be operated in steady state, where the inflow equals the outflow, and the water level remains constant. Model measurements and instrumentation will be in accordance with ANSI/HI 9.8-2018.

Testing will be conducted in the following phases:

1. Existing Design Testing: The performance of the existing wet well and pump suction piping will be assessed with 4 pump operating combinations. With each test, general flow patterns will be documented, debris mats on the horizontal trash rack will be assessed, solids deposition evaluated, surface and subsurface vortex formation, flow velocity distribution at the pump impeller location, and flow pre-swirl at the pump impeller location.

2. At the end of Existing Design Testing a conference call will held to summarize the results and discuss potential modifications to the wet well and pump suction piping. We have assumed a Microsoft Teams call will conducted so any photos and tabulated results can be presented.
3. Design Modification Testing: In consultation with the design team, modifications will be performed to resolve any deficiencies. We have assumed that Design Modification testing will be limited to 3 weeks (15 working days) to resolve any deficiencies in the design.
4. Final Documentation Testing: After the Witness Test (discussed below) the selected modified design will be tested to confirm the design. We have assumed 8 pump operating and inflow distribution scenarios will be conducted.

#### Witness Test

Model testing will include a witness test for Stantec and District personnel and will be conducted at the end of the design modification testing. Given the current global pandemic, it has been assumed that the witness test will need to be held by video conference and will include a presentation of study results including pre-recorded video footage and/or a live feed of the physical model for various operating conditions. The laboratory can be made available for a limited (1-2) number of personnel from Stantec/WES if an in-person witness test would be valuable. If this occurs, they will need to follow all State and NHC guidelines for in-person meetings. This includes, masks, social distancing requirements, etc.

#### Reporting

NHC will prepare a draft technical report summarizing the results of the physical model study for review by the design team and the District. The report will contain an introduction, descriptions of the model, scaling criteria, instrumentation, test procedures, relevant color photographs, complete descriptions of the test results including observations, tabular and graphical data, and conclusions and recommendations. The report will also provide details (description and drawings) of all modifications and/or additions that were required to correct any hydraulic anomalies or other unsatisfactory flow conditions.

#### **Task 4 Deliverables:**

- A draft report will be submitted in electronic (PDF) format within two weeks of completing the model testing. An electronic copy (PDF format) of the final report will be submitted within approximately one week of receiving a consolidated set of review comments.

#### **Task 4 Meetings**

- CFD/Physical Modeling coordination meeting
- Witness testing

#### **Task 5 - Preliminary (30%) Design**

The purpose of this task is to develop the design in sufficient detail to convey the design intent to District staff. Design development will include incorporation of hydraulic modeling and recommendations for wet well and pump suction improvements.

### Task 5.1 - Pump Station Model Update

A baseline 3D CAD model of the junction boxes, wet well, and pump suction/discharge piping will be developed which incorporates all modifications made the infrastructure to date. The 3D model will be provided to the CFD and Physical Modeling teams so that they can proceed with the most accurate information.

### Task 5.2 - Preliminary Design Documents

The anticipated drawing list is provided in the **Figure 1**. The 30% Preliminary Design submittal will include preliminary drawings as noted in Figure 1, a Table of Contents for the complete specifications, and 90% specifications for the pumps and variable frequency drives.

Sheet List				
Number	Sheet	Description	30% Deliverable	90%/100% Deliverable
<b>GENERAL</b>				
1	G-001	COVER SHEET & LIST OF DRAWINGS	X	X
2	G-002	STANDARD SYMBOLS	X	X
3	G-003	ABBREVIATIONS	X	X
4	G-004	PIPE SCHEDULE & DESIGN CRITERIA	X	X
5	G-005	3D MODEL	X	X
<b>DEMOLITION</b>				
6	CX-101	MECHANICAL DEMOLITION - PLAN		X
7	CX-102	MECHANICAL DEMOLITION - SECTION I		X
8	CX-103	ELECTRICAL DEMOLITION - PLAN		X
9	CX-104	ELECTRICAL DEMOLITION - SECTION I		X
<b>INSTRUMENTATION</b>				
10	GI-001	SYMBOLS AND NOMENCLATURE - I		X
11	GI-002	INSTALLATION DETAILS - I		X
12	GI-003	INSTALLATION DETAILS - II		X
13	I-001	PROCESS AND INSTRUMENTATION DIAGRAM	X	X
14	I-002	CONTROL WIRING SCHEMATICS - I		X
15	I-003	CONTROL WIRING SCHEMATICS - I		X
16	I-004	BLOCK DIAGRAMS		X
<b>STRUCTURAL</b>				
17	S-001	GENERAL NOTES - I		X
18	S-002	SPECIAL INSPECTION REQUIREMENTS - I		X
19	S-003	STANDARD DETAILS - I		X
20	S-101	PUMP BASE PLAN AND SECTION		X
21	S-102	WET WELL PLAN	X	X
22	S-103	WET WELL SECTION	X	X
<b>PROCESS MECHANICAL</b>				
23	D-001	GENERAL NOTES AND SYMBOLS		X
24	D-002	STANDARD DETAILS - I		X
25	D-101	PUMP STATION - PLAN	X	X
26	D-102	SECTION - I	X	X
<b>ELECTRICAL</b>				
27	GE-001	SYMBOLS - I		X
28	GE-002	SYMBOLS - II		X
29	GE-003	ABBREVIATIONS AND GENERAL NOTES		X
30	GE-004	STANDARD DETAILS - I		X
31	GE-005	STANDARD DETAILS - II		X
32	GE-006	PHOTOGRAPHS - I*		X
33	GE-007	PHOTOGRAPHS - II*		X
34	GE-008	SCHEMATIC DIAGRAMS - I*		X
35	GE-009	SCHEMATIC DIAGRAMS - II*		X
36	GE-010	SINGLE LINE DIAGRAM		X
37	E-001	INFLUENT PUMP STATION PUMP FLOOR PLAN		X
38	E-002	INFLUENT PUMP STATION TOP PLAN*		X

Figure 1 – Anticipated Design Drawing List

## **Task 5 Assumptions**

- Pumps will be dry pit submersible by Flygt and will be provided with the MAS 801 pump protection system with a new HMI. Pumps #1 & #3 have been provided with the Mini-CAS monitoring system from the previous design/construction project and will remain as-is and will not be modified, programmed, or otherwise integrated into the new pumps monitoring system or SCADA.
- Design includes relocating the Ventilation Alarm Panel which conflicts with the new/larger Pump 4 VFD.
- Design includes demolition of the RTD Relay panel related to abandoned Pump 1 RTD's and Pump 2 RTD's. This will provide space for the Pump 2 VFD.
- Seal Water & its Low Flow instrument will be removed from Pump 2 & 4, as well as seal water I/O point/s to SCADA. Existing wiring will remain in place as spare where it is combined in conduit with other wiring.
- Hardwired I/O to SCADA will remain the same except for removal of seal water.
- Existing flow meters do not need to be replaced
- Updates required to the Protective Device and Arc Flash Study for Pump 2 & Pump 4 VFD's will be included as a performance specification
- Consultant will provide pump anchorage calculations during design
- Consultant will provide calculations for the VFD cabinets once the VFD submittal has been approved.
- Seismic or a structural evaluation of the existing wet well and influent junction box will not be required
- Structural modifications to the floor, hatches, openings or the monorail system are not required.
- Replacement of pumps #2 and #4 will not require any changes to the pump station electrical distribution system and standby power system.
- New influent screening options will not be evaluated
- HVAC, plumbing, or fire protection design will not be required
- Consultant will not provide full size (22x34) mylar or paper drawings. It is assumed that drawings required for permitting can be stamped and delivered electronically.

## **Task 5 Deliverables:**

- A PDF of the 30% design drawings in 11x17 format. Deliverable will be electronic only.
- Draft specification table of contents, 90% specification sections for pumps and variable frequency drives.

## **Task 5 Workshops:**

Consultant will conduct one (1) four-hour workshop to conduct a review of the work products with the District staff, at the end of the 30% design phase. Consultant's project manager, technical advisor, design manager, and electrical and I&C design leads will attend the workshop.

## **Task 6 - Draft (90%) Contract Documents**

The purpose of this task is to develop the complete draft contract drawings specifications, and estimate. The following activities will be completed under this subtask:

- Finalize specification Division 1 documents
- Prepare construction drawings
- Prepare technical specifications
- Prepare final calculations
- Complete final QA/QC checking and coordination review
- Coordinate with District on advertising and bidding process
- Prepare construction cost estimate
- Incorporate District comments from the 30% deliverable

### **Task 6 Assumptions:**

- Coordination with outside agencies (DEQ) will not be required, assumes District will coordinate all permitting requirements.

### **Task 6 Deliverables:**

- 90% Construction Documents (PDF format)
- 90% Construction Cost Estimate and Schedule (PDF format)

### **Task 6 Workshops:**

Consultant will conduct one (1) four-hour workshop to conduct a review of the work products with the District staff upon delivery of the 90% deliverable. Consultant's project manager, technical advisor, design manager, and design leads (as necessary) will attend the workshop.

## **Task 7 - (100%) Bid Ready Contract Documents**

Consultant will modify the contract documents to reflect agreed-upon final review comments from the District after the 90% review workshop, applicable permitting agencies and Consultant's quality control review team. Reproducible final documents will then be submitted to the District.

### **Task 7 Deliverables:**

- Record of review and responses (PDF format)
- 100% contract documents (PDF format)

## **Task 8 - Bid Phase Services**

Consultant will provide the District various services during the bidding phase. Consultant will provide the drawings and plans and, at the District's request, will attend the pre-bid meeting with the contractors to help answer any questions that may arise. Stantec will put together addendums in the case that contractors ask formal questions.



Consultant will provide technical assistance as needed to interpret the contract documents during the construction contract bid phase. Correspondence with prospective bidders shall be documented in writing. Consultant team members will attend the pre-bid conference and will assist in preparing technical addenda to the contract documents (if needed).

**Task 8 Assumptions:**

- District shall plan and lead pre-bid conference
- Two addenda will be prepared

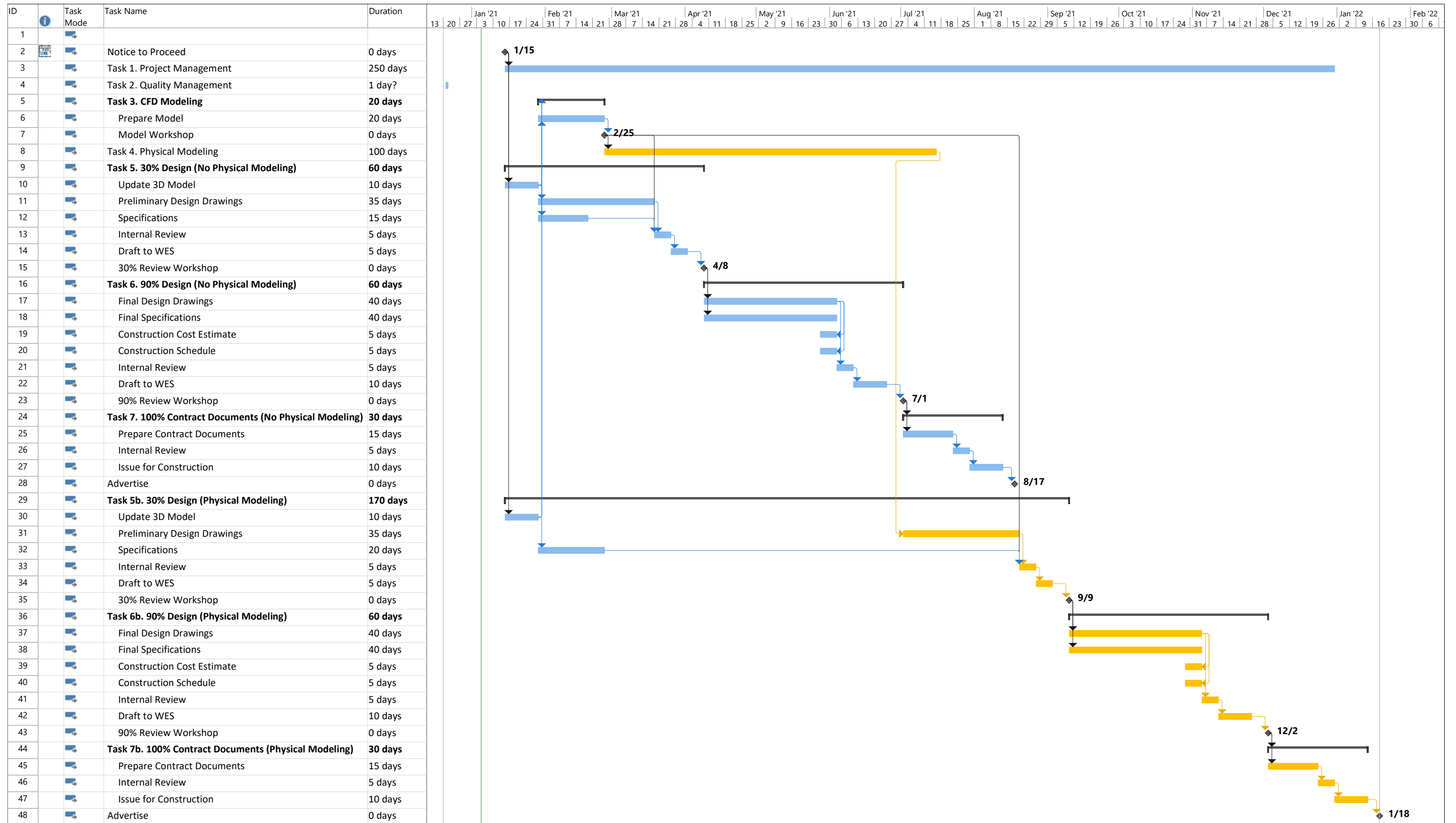
**Task 8 Deliverables:**

- Written documentation of correspondence with bidders (Word.doc format)
- Technical addenda to the contract documents (PDF and/or Word.doc format)

**Task 9 - Construction Phase Services (FUTURE)**

Construction-phase services will be authorized through a separate amendment based on the District's needs. Construction-phase services could include Construction Management, Inspection, Engineering Services During Construction, Record Drawing preparation, and associated efforts.

**ATTACHMENT A – PROJECT SCHEDULE**



Project: Draft Schedule.mpp  
Date: Tue 1/5/21

Task	Summary	Inactive Milestone	Inactive Task	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks			

**EXHIBIT B  
FEE SCHEDULE**



FEE ESTIMATE - Kellogg WRRF\_IPS Pump 2 and 4

Name	Stephens, Heather	Odell, Adam	Randive, Prashant	Kulkarni, Prasad	Senon, Constantino	Johnson, Andrew	Lin, Fangbiao	Christie, Kieran	Thompson, Meghan	Perkins, Matthew	Papp, Joshua	Reed, Douglas	Tehaney, John	Black, Bryan	McGinn, Rachel	Morrison, Maxwell	ODCs - Travel	NHC	PEI
Project Billing Rate	\$230.00	\$185.00	\$135.00	\$135.00	\$400.00	\$165.00	\$230.00	\$185.00	\$155.00	\$217.00	\$185.00	\$230.00	\$230.00	\$230.00	\$115.00	\$75.00	\$1.00	\$1.05	\$1.05
Total Units (T&M)	77	148	140	80	8	233	33	16	16	82	84	16	16	16	22	20	1100	93300	12420
Fee (T&M)	\$18,630	\$30,340	\$18,900	\$10,800	\$3,200	\$39,765	\$7,590	\$2,960	\$2,480	\$17,794	\$15,540	\$3,680	\$3,680	\$3,680	\$2,530	\$1,500	\$1,100	\$97,965	\$13,041
Escalation (T&M)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Fee (T&M)	\$17,710	\$27,380	\$18,900	\$10,800	\$3,200	\$38,445	\$7,590	\$2,960	\$2,480	\$17,794	\$15,540	\$3,680	\$3,680	\$3,680	\$2,530	\$1,500	\$1,100	\$97,965	\$13,041

Project Summary	Labor	Expense	Subs	Total
Fixed Fee	\$0.00	\$0.00	\$0.00	\$0.00
Time & Material	\$177,869.00	\$1,100.00	\$111,006.00	\$289,975.00
<b>Total</b>	<b>\$177,869.00</b>	<b>\$1,100.00</b>	<b>\$111,006.00</b>	<b>\$289,975.00</b>

WBS Code	Task Code	Task Name	Units																	Task Type	Hours	Labour	Expense	Subs	Total		
1		<b>Project Management</b>																		Time & Material	101	\$16,068.00	\$0.00	\$0.00	\$16,068.00		
1.1		PMP and Bi-Weekly Meetings	12	16					2	1												Time & Material	41	\$8,118.00	\$0.00	\$0.00	\$8,118.00
1.2		Invoicing and Scope Management	10	10																		Time & Material	60	\$7,950.00	\$0.00	\$0.00	\$7,950.00
2		<b>Internal Quality Management</b>																		Time & Material	48	\$11,040.00	\$0.00	\$0.00	\$11,040.00		
3		<b>CFD Modeling</b>	6	12					132	20												Time & Material	170	\$29,980.00	\$0.00	\$0.00	\$29,980.00
4		<b>Physical Modeling (NHC)</b>	12	16						12												Time & Material	40	\$8,480.00	\$1,100.00	\$97,965.00	\$107,545.00
5		<b>Preliminary (30%) Design</b>																		Time & Material	183	\$33,054.00	\$0.00	\$1,701.00	\$34,755.00		
5.1		Pump Station Model Update	5	4	40				8													Time & Material	57	\$8,610.00	\$0.00	\$0.00	\$8,610.00
5.2		Preliminary Design Drawings	8	28				6	38				8	12	8					1080		Time & Material	108	\$21,014.00	\$0.00	\$1,134.00	\$22,148.00
5.3		30% Design Review Workshop	4	6					4						4					540		Time & Material	18	\$3,430.00	\$0.00	\$567.00	\$3,997.00
6		<b>Draft (90%) Contract Documents</b>																		Time & Material	312	\$52,434.00	\$0.00	\$11,340.00	\$63,774.00		
6.1		Drawings & Specifications	6	20	80	60	2	20				4	38	40						8100		Time & Material	270	\$44,346.00	\$0.00	\$8,505.00	\$52,851.00
6.2		Cost Estimate	2									16								2700		Time & Material	18	\$3,420.00	\$0.00	\$2,835.00	\$6,255.00
6.3		90% Design Review Workshop	4	8				4				4	4									Time & Material	24	\$4,668.00	\$0.00	\$0.00	\$4,668.00
7		<b>(100%) Bid Ready Contract Documents</b>	6	20	20	20		10				4	20	20								Time & Material	120	\$20,790.00	\$0.00	\$0.00	\$20,790.00
8		<b>Bid Phase Services</b>	2	8				15				4	4									Time & Material	33	\$6,023.00	\$0.00	\$0.00	\$6,023.00