EXHIBIT A - SCOPE OF SERVICES
CITY OF CAMAS
LOWER PRUNE HILL BOOSTER PUMP STATION AND 0.5 MG RESERVOIR IMPROVEMENTS
PHASE 2 DESIGN: PRELIMINARY DESIGN, FINAL DESIGN, PERMITTING AND BIDDING SUPPORT

Background

Murraysmith, Inc. (Murraysmith) has developed the following scope of services and accompanying engineering fee estimate for Phase 2 Design: Preliminary Design, Final Design, and Bidding Support services for the City of Camas (City) Lower Prune Hill Booster Pump Station and 0.5 MG Reservoir Improvements project. The scope and fee have been developed based on the previously completed site evaluation technical memorandum developed in Phase 1, discussions with City staff, and our understanding of the project.

Proposed Improvements

This project involves the replacement of the existing Lower Prune Hill Pump Station that pumps from two (2) existing 455 pressure zone reservoirs on the shared site with a new pump station delivering water to the Upper Prune Hill reservoirs in the 852 pressure zone. The project will also include replacement of the existing Lower Prune Hill No. 1 reservoir with a new 0.5 MG welded steel reservoir in the southwest corner of the site. The existing pump station and reservoir are located on City owned property near the intersection of NW 18th Loop and NW Ostensen Canyon Road.

The Phase 1 Design technical memorandum "Lower Prune Hill Booster Pump Station Improvements Siting Alternatives Evaluation," (Siting Evaluation) dated August 21, 2020 outlined preliminary pump sizing, pump selection and site layout alternatives including reservoir replacement. Preliminary work was completed to assess the feasibility of the alternatives evaluated. The Siting Evaluation included a topographical survey, natural resource assessment, archaeological resources assessment, and geotechnical investigation. This scope of work is based on the preferred alternative identified in this evaluation including reservoir replacement for completion of preliminary design, final design, permitting and bidding support services.

Project Approach

The engineering services to be provided by Murraysmith will be phased into separate activities as follows.

- Phase 1 Design: Data Collection and Siting Evaluation – Preferred siting alternative determined under this effort. This phase will continue to run concurrent with Phase 2 to complete additional survey, geotechnical report completion, and data collection.

- Phase 2 Design: Preliminary Design, Final Design, Permitting, and Bidding Support – Includes the scope of services contained herein.

- Phase 3 Construction: Construction Support Services – Separate scope of services to be developed in the future.

Overview

The services defined herein for Phase 2 Design consists of the following major tasks.

- Task 1 – Project Management and Coordination
- Task 2 – Field Investigations and Utility Coordination
- Task 3 – Preliminary Design
- Task 4 – Preliminary Design Report
- Task 5 – Final Design
- Task 6 – Permitting
- Task 7 – Bidding Support
- Task 8 – Subconsultant Services

Scope of Services

Task 1 - Project Management and Coordination

Subtasks

1.1 Monthly Progress Reports and Invoices.

Prepare and submit electronic monthly invoice for review and approval by the City. Each invoice shall include the following information.

- Billing period (start and end date)
- Description of work accomplished for the billing period
- Name, billing rate, and hours for each resource that worked on each task
- Potential out-of-scope work items

1.2 Project Coordination

Coordinate with City PM and manage project staff and subconsultants to ensure all services are in conformance with the scope of services, fee estimate, and schedule.

1.3 Project Schedule and Updates

Prepare the project schedule and update at each submittal of plans to the City. The schedule will include key tasks, milestones, deliverables, and City review periods, including the estimated construction schedule.

1.4 Quality Assurance/Quality Control (QA/QC)

Perform in-house quality assurance reviews of all deliverables. PS&E developed by subconsultants will be reviewed for design consistency prior to incorporating into the design submittal.

1.5 Project Management Plan

Prepare a Project Management Plan (PMP) that includes a description of the problem statement, scope of work, project team member roles and responsibilities, communications protocols, quality management plan and activities, schedule from Subtask 1.3, and this scope of consultant services.

1.6 Kick-off Meeting

Prepare for and attend virtual kick-off meeting with City staff.

Assumptions

- The duration for design and bidding is estimated to be 16 months.
- Anticipated notice to proceed will be in June 2021.
- Project schedule will be developed and maintained using MS Project.

Consultant Deliverables

- Up to sixteen (16) months of progress reports and invoices
- Project Management Plan, draft and final
- Up to three (3) project schedule updates (PDF format) at 30%, 60%, and 90% deliverables.

Task 2 - Field Investigations and Utility Coordination

Subtasks

2.1 Utility Coordination

Coordinate with utility companies regarding utility service for the project. Coordinate regarding removal the existing antennae and associated facilities off the project site, as well as regarding mounting of new cellular equipment as needed.

2.2 Site Reconnaissance

Conduct a field reconnaissance of the project site with the City and team members to review layout of the proposed improvements and gather additional field information.

2.3 Utility Potholing Coordination and Review

Murraysmith will prepare a potholing plan in coordination with the City, coordinate, and provide field observation of potholing to be completed by subconsultant Vac X, as described in Task 8. Add information obtained during potholing to base map for the project.

2.4 Tree Assessment Coordination and Review

Murraysmith will coordinate completion of a tree assessment and survey to be completed by subconsultant Arborscape, Ltd, as described in Task 8. Murraysmith will review tree survey report prior to inclusion in permit submission packages.

Provided by the City

- Timely responses to data requests
- Attend site reconnaissance with Murraysmith
- Obtain all right of entry agreements necessary for completion of field work

Assumptions

- No permits will be required for completion of the field investigations
- The City will lead all coordination with cellular providers regarding removal and relocation of existing wireless facilities.
- Up to three (3) Murraysmith staff will attend site reconnaissance

Consultant Deliverables

- Data request list(s)
- Utility potholing data, in electronic format
- Draft and final tree survey reports submitted electronically to the City in PDF format

Task 3 - Preliminary Design

Subtasks

3.1 Design Criteria

Develop design criteria for the proposed improvements based on City standards, regulatory agency requirements, completed services by subconsultants, and coordination with the City on equipment preferences.

3.2 Pump Sizing and Selection Verification

Coordinate with the City on final capacity requirements and planned operation of the pump station, considering pump runtimes, storage replenishment rates, and supply redundancy. Conduct hydraulic modeling to verify that the recommended pump sizes and selection recommended in the Siting Evaluation remain valid.

3.3 Preliminary Pump Station and Site Layout

Develop preliminary floor plan and associated site plan alternatives for the pump station and reservoir site. It is assumed the pump station will be constructed of split face concrete masonry units and that up to two (2) alternatives will be developed for City review and input. Murraysmith will coordinate with the City to review and select a preferred pump station layout to continue detailing during final design.

3.4 Tank Improvements

Develop list of tank appurtenances and gather input from the City on preferred options to incorporate into the 30% preliminary plans.

Perform an evaluation to finalize the preferred tank geometry. Evaluate information from the geotechnical investigation, existing site conditions, and hydraulic modeling to determine preferred tank floor elevation. It is anticipated that raising the floor above the existing floor elevation will facilitate site drainage while reducing retaining wall heights.

3.5 Stormwater Analysis

Develop a conceptual drainage plan based on the Department of Ecology Stormwater Management Manual for Western Washington and the City's Stormwater Design Standards Manual.

3.6 30% Preliminary Plans and Cost Estimate

Prepare preliminary plans at the 30% completion level for the pump station and other proposed site improvements using the information developed in prior tasks. Prepare a preliminary opinion of construction cost for the proposed pump station, reservoir, and site improvements.

3.7 30% Design Review Workshop

Prepare for and attend a 30% design review workshop with City staff at the City's operations center.

Provided by the City

- Input on equipment preferences, pump station and reservoir capacity requirements, and proposed operation

- Input on preliminary pump station layouts and associated site layouts
- Input on reservoir appurtenances and improvements
- Attendance at meetings and workshops
- Review of the preliminary design plans and preliminary opinion of construction cost with one compiled written set of comments prior to the 30% review meeting
- Current hydraulic model of water system

Assumptions

- Up to two (2) preliminary pump station facility layout alternatives will be developed for City review and input.
- The current hydraulic model provided by the City does not require calibration and its accuracy is sufficient to perform the analysis outlined in this scope. Hydraulic modeling will require no more than 20 hours.
- No evaluation or improvement to the existing 1.5 MG Reservoir will be included in the project.
- The results of the Phase 1 Design will be incorporated into the preliminary design elements of this project.
- No hoisting systems will be included with the design. Roof hatches will be provided for extraction of pumps/motors.
- The new tank will be welded steel.
- The pump station and ancillary rooms will be located within a single building.
- The existing pump station building will remain in place and the existing equipment will be removed.
- The 30% preliminary plans will consist of up to 15 sheets.
- The City review period will be three (3) weeks.
- The 30% review workshop will be held at the City operations center and will be attended by up to three (3) Murraysmith staff.

Consultant Deliverables

- Preliminary pump station layout figure(s) in PDF format
- Workshop agendas and meeting summaries

- An electronic copy (PDF format) of 30% preliminary plans at half size (11x17) and 30% preliminary opinion of construction cost

Task 4 - Preliminary Design Report

Subtasks

4.1 Draft Preliminary Design Report

Prepare a Preliminary Design Report that documents the project background, proposed improvements, design criteria, analyses, discussion of operations and maintenance requirements, cost estimate, and project schedule. Include in the appendix the 30% preliminary plans, and the technical memoranda from the services performed by subconsultants. The Preliminary Design Report will be prepared to fulfill the Department of Health (DOH) Project Report requirements for facility projects.

4.2 Final Preliminary Design Report

Modify report based on City review comments and submit copies of final report to City and DOH.

4.3 DOH Report Submittal and Coordination

Submit the Preliminary Design Report and required DOH forms to DOH for review in accordance with the project report requirements for proposed facility projects. Coordinate with DOH staff as required and provide written responses to comments received from DOH review of the report.

Provided by the City

- Complete review of the preliminary design report and provide one (1) compiled written set of comments.

Assumptions

- The Preliminary Design Report will not require update following DOH review and approval.

Consultant Deliverables

- Draft and final Preliminary Design Report, submitted to the City in Word and PDF formats
- One (1) hard copy of the Final Preliminary Design Report, submitted to DOH

Task 5 - Final Design

Subtasks

5.1 60% Design Submittal

Develop plans, specifications, and opinion of construction cost to the 60% level based upon the 30% preliminary plans and design elements documented in the Preliminary Design Report.

5.2 90% Design Submittal

Further develop the PS&E to the 90% completion level based on the 60% design submittal and modifications from the City's review comments.

5.3 Final Bid-Ready Document Submittal

Further develop the PS&E to the 100% completion level based on the 90% design submittal and modifications from the City's review comments. Submit stamped and signed bid-ready contract documents and plans to the City. Update bid proposal quantities to reflect a bid-ready design package.

5.4 Design Review Workshops

Prepare for and attend 60% and 90% design review workshop with City staff.

Provided by the City

- Complete technical review of the design submittal documents and provide one (1) compiled written set of comments for each submittal prior to the review meetings.
- Standard front-end contract documents and specifications in MS Word format.

Assumptions

- The 60% plan set will consist of up to 60 sheets. The 90% and final plan sets will consist of up to 83 sheets.
- Plans will be developed at a 1"=20' or 1"=10' scale for site improvements and piping plan/profile and between ¼"=1' and ½"=1' scale for pump station and reservoir improvements and include details.
- Instrumentation and control design will be completed by S&B, Inc. and will be paid for by the City under a separate agreement.

- Arc flash studies are not included in this scope. This study will be addressed via specification and be a requirement of the construction contractor when equipment is known.

- Technical specifications prepared by Murraysmith and subconsultants will be in MasterFormat 48 Division CSI format. Specifications will include the City's front-end contract documents and general conditions.

- Traffic control plans for construction will be prepared during design.

- The opinion of construction cost will be formatted to reflect the items in the bid schedule and will be AACE Class 2 estimates.

- City review period is assumed to be three (3) weeks for the 60% and 90% submittals.

- The following workshops will be held at the City's operations center and will be attended by up to three (3) Murraysmith staff.

    - 60% review workshop
    - 90% review workshop

Consultant Deliverables

- Workshop agendas and meeting summaries

- Submission of 60% and 90% design packages includes:

    - An electronic copy (PDF format) of the half size (11x17) plan set, specifications, and engineer's opinion of probable construction cost, including MS Word documents of the specifications.

- Submission of Final Bid-Ready package includes:

    - An electronic copy (PDF format) of plan set (11x17 and 22x34), specifications, and engineer's opinion of probable construction cost, including MS Word documents of the specifications and design drawings in AutoCAD.

Task 6 – Permitting

Subtasks

6.1 Coordination with City and State Permitting Agencies

Coordinate with the City and permitting agencies during development of application packages. Develop and submit responses to agency review comments. Coordinate with agencies throughout the application review.

6.2 Permit Application, Reviews, and Approvals Preparation and Support

Prepare and submit application packages for the project with support from WSP Global for permitting and environmental services under Task 8. Anticipated permits/reviews/approvals:

- Conditional Use Permit
- Demolition Permit
- Lot Line Consolidation
- Site Plan Review
- Variance (Major)
- Design Review (Minor)
- Critical Areas Review
- Building Permit and Plan Review
- Fire Department Review
- Engineering Review
- DOH Construction Documents Review
- SW Clean Air Authority Permit
- SEPA Environmental Checklist

6.3 Permit Public Hearing

Prepare for and attend up to one (1) Public Hearing during permit review.

Provided by the City

- Review draft application packages and environmental documents and provide one (1) set of compiled review comments.
- Payment of all permit application and review fees
- Attendance at public hearings
- Preapplication conference submittal and attendance
- Complete SW Clean Air Authority Permit. It is assumed the City will review their general permit to include the project improvements.

Assumptions

- City will submit applications and required fees to the reviewing agency and be the main contact.
- Based on the Phase 1 Design archaeology investigation and agreement with City Planning, an archaeological predetermination will not be required.

- The project will disturb less than one (1) acre of soils and will not have a discharge to a water of the state, thus an NPDES Construction Stormwater General Permit will not be required from the Washington Department of Ecology.

- All Type III decisions will be made at a single hearing examiner decision. A consolidated approval will include all City permits except for the Building Permit and Engineering review.

- The following application packages are anticipated to be submitted as a consolidated application prior to the 60% design submittal.

    - Conditional Use Permit
    - Variance
    - Design Review
    - Critical Areas Review
    - Archaeological Review
    - Preliminary Site Plan Review
    - SEPA Environmental Checklist

- The following application packages are anticipated to be submitted following the 90% design submittal. Alternatively, they will be submitted sooner, as allowed by the agency.

    - Building Permit
    - Engineering Review
    - Final Site Plan Review
    - Fire Department Review
    - DOH Construction Documents Review

- No more than one (1) response to agency compiled review comments are anticipated per application package. It is anticipated that each response may contain multiple items, including but not limited to updated plan sheets, responses to questions/comments, and additional design calculations.

- It is anticipated that the SEPA determination issued by the City will be a Determination of Non-Significance or Mitigated Determination of Non-Significance. The City will accept this project as being "self-mitigating".

Consultant Deliverables

- Application packages (drafts for City review and finals for agency review) for the items listed under Task 6.2

- Responses to agency review comments

Task 7 – Property and Easement Support

Subtasks

7.1 Property and Easement Support

Assist City in acquiring additional property to construct improvements. Determine the limits of construction to assist in with permanent and temporary easement acquisition.

Provided by the City

- Lead all discussions and negotiations with property owners.
- Lead property owner coordination related to access easement and possible fence relocation to actual property line.
- Record final easement and lot line consolidation, pay all fees.
- Compiled review comments on easement materials
- Property appraisal coordination if needed

Consultant Deliverables

- Up to two (2) exhibits and legal descriptions to support easement acquisition.

Task 8 - Public Outreach Program Support

Subtasks

8.1 Review and Preparation Assistance of Outreach Materials

This task includes Murraysmith's services to assist the City and Murraysmith subconsultant, Barney & Worth, in public outreach activities associated with the project. This is anticipated to include assistance providing content for neighborhood mailers, fact sheets, and renderings.

Assumptions:

- No public meetings are anticipated.
- This task will be on an as needed basis, up to the amount shown on the fee estimate.
- Figures and graphics, aside from renderings, are assumed to be developed under other tasks and will require only modifications for public outreach materials.

Consultant Deliverables:

- Figures and graphics for public outreach materials
- Compiled review comments on public outreach materials
- Photorealistic rendering of proposed improvements

Task 9 - Bidding Support

Subtasks

9.1 Bidder Inquiries and Addenda

Respond to questions from bidders, subcontractors, equipment suppliers, and other vendors regarding the project, plans, and specifications. Prepare addenda for use by the City in issuing addenda.

9.2 Pre-Bid Conference

Attend the pre-bid conference and provide support to the City.

9.3 Bid Award Review

Provide supplemental support in reviewing bids, contacting references, verifying qualifications, and recommending bid award.

Assumptions

- The City will coordinate and pay all fees related to bid advertisement.
- The City will take the lead in tasks associated with bid advertisement, addenda distribution, plan holder administrations, bid evaluation, bid tabulation, etc.
- The City will be the lead in receiving questions from bidders, subcontractors, equipment suppliers, and other vendors. Upon referral from the City, Murraysmith will respond to up to 20 questions and prepare up to two (2) draft addenda.
- Only at the request of the City will Murraysmith provide support services during project bidding.
- The Pre-bid Conference will be attended by up to two (2) Murraysmith team members.

Consultant Deliverables

- Draft addenda for the City to distribute to plan holders
- Written responses to bidder's questions

Task 10 - Subconsultant Services

Subtasks

10.1 Electrical Engineering

Industrial Systems will provide electrical design for the instrumentation and controls system. It is understood that the City sole sources the SCADA and control system design to S&B. Industrial Systems will coordinate with S&B to determine preferences for the control system and incorporate them into the electrical design. A more detailed description of the services to be provided follows.

1. Contact the local electrical utility to coordinate new electrical service and determine metering requirements.

2. Finalize electrical calculations for utility service, generator sizing, and electrical distribution.

3. Coordinate instrumentation requirements with Murraysmith and S&B.

4. Prepare electrical system drawings.

5. Prepare electrical technical specifications.

6. Prepare engineering estimate of probable construction cost for electrical items.

7. Submit progress drawings at 60% and 90% completion for review by the project team. Submit 100% stamped and signed bid-ready drawings.

10.2 Permitting and Environmental Services

WSP Global will provide permitting and environmental services consisting of preparing a SEPA checklist and assisting with environmental and land use permitting to be completed under Task 6.

10.3 Geotechnical Engineering

Geotechnical Resources, Inc. (GRI) will provide geotechnical engineering services consisting of performing one additional field boring to support design of the reservoir and retaining wall and general consultation and review of proposed improvements as they relate to geotechnical recommendations to be finalized under Phase 1 Design.

10.4 Structural Engineering

Peterson Structural Engineers will provide structural engineering services for the design of the proposed reservoir, pump station, retaining walls, and bidding support services. A more detailed description of the services to be provided follows.

1. Perform design and generation of construction drawings for the 60%, 90%, and 100% design submittals for both structures.

2. Submit 60% and 90% construction documents for design review.

3. Review and respond to various design review comments and questions.

4. Assist in the development of structurally related specification sections.

5. Generate final design and construction documents for the project.

6. Submit 100% stamped bidding/construction drawings and structural calculations.

10.5 Potholing

VacX will provide potholing services for the proposed site improvements. The fee estimate is based on VacX providing potholing services for up to 10 potholes.

10.6 Tree Survey

Arborscape, Ltd will provide a tree survey and report as needed for any tree removal resulting from construction. This survey will be in compliance with Camas Municipal Code 18.13 requirements.

10.7 Corrosion Engineering

NW Corrosion Engineering will provide corrosion engineering services for the project that will include preparation of cathodic protection design details, specifications, and cost estimates. It is anticipated that the design will include a galvanic anode system for the reservoir. Review tank interior and exterior coating specifications provided by Murraysmith.

10.8 Public Outreach

Barney & Worth will provide public outreach support for the project. Services will include preparation of a public outreach plan and additional public outreach services on an as needed basis up to the amount shown on the fee estimate. Services that may be requested are anticipated to be preparation of neighborhood mailers and fact sheets. No public meetings are anticipated.

Fee Estimate

It is proposed that the above-described work be accomplished on a time and expense basis not to exceed $876,654, as summarized in the attached Fee Estimate.

Preliminary Drawing List

GENERAL		
1	G-1	TITLE SHEET, VICINITY MAP AND INDEX OF DRAWINGS
2	G-2	SYMBOLS AND LEGEND
3	G-3	ABBREVIATIONS
4	G-4	GENERAL AND EROSION CONTROL NOTES
CIVIL		
5	C-1	SITE LAYOUT PLAN AND SURVEY CONTROL
6	C-2	SITE PREPARATION AND EROSION CONTROL PLAN
7	C-3	EROSION CONTROL DETAILS
8	C-4	DEMOLITION
9	C-5	SITE GRADING AND DRAINAGE PLAN
10	C-6	DRAINAGE PROFILES
11	C-7	RESERVOIR SECTION AND DETAILS
12	C-8	SITE PIPING PLAN
13	C-9	SITE PIPING PROFILES
14	C-10	WATER VAULT PLANS, SECTIONS, AND DETAILS
15	C-11	CIVIL DETAILS - 1
16	C-12	CIVIL DETAILS - 2
17	C-13	CIVIL DETAILS - 3
STRUCTURAL - RESERVOIR		
18	S-1	RESERVOIR GENERAL STRUCTURAL NOTES
19	S-2	RESERVOIR QUALITY ASSURANCE PLAN AND NOTES
20	S-3	RESERVOIR ELEVATION AND FOUNDATION PLAN
21	S-4	RESERVOIR FOOTING AND ANCHORAGE DETAILS
22	S-5	RESERVOIR ROOF PLAN AND DETAILS
23	S-6	RESERVOIR PIPE BLOCKING, MANWAY, AND MISC. DETAILS
24	S-7	RESERVOIR ROOF LANDING AND STAIRWAY DETAILS
STRUCTURAL - PUMP STATION		
25	SP-1	PUMP STATION GENERAL STRUCTURAL NOTES
26	SP-2	PUMP STATION QUALITY ASSURANCE PLAN AND NOTES
27	SP-3	PUMP STATION FLOOR AND ROOF PLAN
28	SP-4	PUMP STATION TRANSVERSE & LONGITUDINAL SECTIONS
29	SP-5	PUMP STATION FOUNDATION DETAILS
30	SP-6	PUMP STATION PIPE CHASE DETAILS
31	SP-7	PUMP STATION CMU DETAILS
32	SP-8	PUMP STATION ROOF DETAILS
STRUCTURAL - RETAINING WALLS		
33	SW-1	RETAINING WALL GENERAL STRUCTURAL NOTES
34	SW-2	RETAINING WALL QUALITY ASSURANCE PLAN AND NOTES
35	SW-3	RETAINING WALL PLAN AND PROFILE
36	SW-4	RETAINING WALL DETAILS

ARCHITECTURAL - PUMP STATION		
37	A-1	CODE SUMMARY
38	A-2	PUMP STATION FLOOR PLAN
39	A-3	CONCEPTUAL ELEVATIONS SOUTH AND WEST
40	A-4	CONCEPTUAL ELEVATIONS NORTH AND EAST
41	A-5	ARCHITECTURAL SECTIONS
42	A-6	ARCHITECTURAL DETAILS - 1
43	A-7	FENESTRATION, WALL AND FINISH SCHEDULES
MECHANICAL - PUMP STATION		
44	M-1	EQUIPMENT LIST
45	M-2	PUMP AND PIPING FLOOR PLAN
46	M-3	PUMP AND PIPING SECTIONS - 1
47	M-4	PUMP AND PIPING SECTIONS - 2
48	M-5	PUMP AND PIPING DETAILS
49	M-6	PLUMBING PLAN
50	M-7	PLUMBING DETAILS
51	M-8	HVAC PLAN
52	M-9	MISCELLANEOUS MECHANICAL DETAILS - 1
53	M-10	MISCELLANEOUS MECHANICAL DETAILS - 2
MECHANICAL - RESERVOIR		
54	MR-1	RESERVOIR PIPING ENTRANCE/EXIT PLAN AND SECTIONS
55	MR-2	RESERVOIR OVERFLOW PIPING SECTIONS AND DETAILS
56	MR-3	RESERVOIR ROOF AND FLOOR PLAN
57	MR-4	RESERVOIR LADDER DETAILS
58	MR-5	RESERVOIR VENT DETAILS
59	MR-6	MISCELLANEOUS RESERVOIR DETAILS - 1
ELECTRICAL		
60	E-1	ELECTRICAL GENERAL NOTES AND ABBREVIATIONS
61	E-2	ELECTRICAL ONE LINE DIAGRAM & LOAD CALCULATION
62	E-3	ELECTRICAL SITE PLAN
63	E-4	ELECTRICAL BUILDING PLAN
64	E-5	ELECTRICAL BUILDING LIGHTING PLAN
65	E-6	ELECTRICAL RESERVOIR PLAN - DEMO
66	E-7	ELECTRICAL RESERVOIR PLAN
67	E-8	GROUNDING PLAN
68	E-9	PANEL SCHEDULES & CIRCUIT SCHEDULE
69	E-10	ELECTRICAL DETAILS
70	E-11	ELECTRICAL DETAILS
INSTRUMENTATION & CONTROL		
71	I-1	S&B STANDARDS
72	I-2	DISCRETE WIRING INTERFACE DETAILS
73	I-3	EQUIPMENT WIRING FOR DISCRETE AND VIRTUAL DATA
74	I-4	BLOCK DIAGRAM PUMPS AND RESERVOIR SYSTEMS
75	I-5	BLOCK DIAGRAM VAULTS AND STANDBY POWER SYSTEMS
76	I-6	BLOCK DIAGRAM NETWORK DIAGRAM
77	I-7	CONTROL PANEL ELEVATIONS
78	I-8	MOTOR CONTROL CENTER ELEVATIONS
CATHODIC PROTECTION		
79	CP-1	CATHODIC PROTECTION SYSTEM PLAN

80	CP-2	CATHODIC PROTECTION SYSTEM DETAILS
LANDSCAPING		
81	L-1	SOILS PLAN
82	L-2	PLANTING PLAN
83	L-3	PLANTING DETAILS
TRAFFIC CONTROL		
84	TC-1	TRAFFIC CONTROL PLAN 1
85	TC-2	TRAFFIC CONTROL PLAN 2

Estimated Schedule

Design and permitting for the pump station and reservoir are estimated to begin in July 2021 and conclude in the third quarter of 2022. Bidding is estimated to be in September 2022. A more detailed project schedule will be developed after Notice to Proceed is provided by the City.

CITY OF CAMAS
LOWER PRUNE HILL BOOSTER PUMP STATION AND 0.5 MG RESERVOIR IMPROVEMENTS
PHASE 2 DESIGN
EXHIBIT B - PROPOSED FEE ESTIMATE

	LABOR CLASSIFICATION (HOURS)													
	Principal Engineer V $269	Principal Engineer II $238	Professional Engineer VIII $209	Professional Engineer VII $197	Engineering Designer II $148	Technician IV $160	Administrative III $114	Hours	Labor	Subconsultants	Multiplier % Markup	Subconsultant Total with Markup	Expenses	Total
Task 1 - Project Management and Coordination														
Task 1.1 - Monthly Progress Reports and Invoices			18	27			36	81	$ 13,180		1.1	$ -	$ -	$ 13,180
Task 1.2 - Project Coordination		18	36	18				72	$ 15,347		1.1	$ -	$ -	$ 15,347
Task 1.3 - Project Schedule and Updates		4	14					18	$ 3,874		1.1	$ -	$ -	$ 3,874
Task 1.4 - Quality Assurance/Quality Control (QA/QC)	50	50	50					150	$ 35,759		1.1	$ -	$ -	$ 35,759
Task 1.5 - Project Management Plan		2	12					14	$ 2,981		1.1	$ -	$ -	$ 2,981
Task 1.6 - Kick-Off Meeting		2	5	7				14	$ 2,901		1.1	$ -	$ -	$ 2,901
Task 1 Subtotal	**50**	**76**	**135**	**52**	**0**	**0**	**36**	**349**	**$ 74,042**	**$ -**		**$ -**	**$ -**	**$ 74,042**
Task 2 - Field Investigations and Utility Coordination														
Task 2.1 - Utility Coordination		4	10	10	10			34	$ 6,490		1.1	$ -	$ -	$ 6,490
Task 2.2 - Site Reconnaisance		4	7	7				18	$ 3,794		1.1	$ -	$ 225	$ 4,019
Task 2.3 - Utility Potholing Coordination and Review			4	6	12			22	$ 3,793		1.1	$ -	$ 224	$ 4,017
Task 2.4 - Tree Assessment Coordination and Review			2	4				6	$ 1,207		1.1	$ -	$ -	$ 1,207
Task 2 Subtotal	**0**	**8**	**23**	**27**	**22**	**0**	**0**	**80**	**$ 15,284**	**$ -**		**$ -**	**$ 449**	**$ 15,733**
Task 3 - Preliminary Design														
Task 3.1 - Design Criteria		2	6	6	10			24	$ 4,390		1.1	$ -	$ 180	$ 4,570
Task 3.2 - Pump Sizing and Selection Verification			3	8	15			26	$ 4,422		1.1	$ -	$ 270	$ 4,692
Task 3.3 - Preliminary Pump Station and Site Layout		2	20	30	60	40		152	$ 25,848		1.1	$ -	$ 1,080	$ 26,928
Task 3.4 - Tank Improvements		2	10	30	30			72	$ 12,919		1.1	$ -	$ 540	$ 13,459
Task 3.5 - Stormwater Analysis		2	10	20	40			72	$ 12,423		1.1	$ -	$ 720	$ 13,143
Task 3.6 - 30% Preliminary Plans and Cost Estimate	2	12	40	70	90	90		304	$ 53,277		1.1	$ -	$ 1,620	$ 54,897
Task 3.7 - 30% Design Review Workshop		2	10	12				24	$ 4,932		1.1	$ -	$ 224	$ 5,156
Task 3 Subtotal	**2**	**22**	**99**	**176**	**245**	**130**	**0**	**674**	**$ 118,211**	**$ -**		**$ -**	**$ 4,634**	**$ 122,845**
Task 4 - Preliminary Design Report														
Task 4.1 - Draft Preliminary Design Report		5	15	25	40		4	89	$ 15,621		1.1	$ -	$ -	$ 15,621
Task 4.2 - Final Preliminary Design Report		2	10	20			2	34	$ 6,738		1.1	$ -	$ -	$ 6,738
Task 4.3 - DOH Report Submittal and Coordination			4	4			1	9	$ 1,738		1.1	$ -	$ -	$ 1,738
Task 4 Subtotal	**0**	**7**	**29**	**49**	**40**	**0**	**7**	**132**	**$ 24,098**	**$ -**		**$ -**	**$ -**	**$ 24,098**
Task 5 - Final Design														
Task 5.1 - 60% Design Submittal								0	$ -		1.1	$ -	$ -	$ -
Plans	5	15	60	140	180	120		520	$ 90,896		1.1	$ -	$ 3,240	$ 94,136
Specifications	2	12	24	40	76		8	162	$ 28,438		1.1	$ -	$ 1,368	$ 29,806
Estimates		2	4	16	20			42	$ 7,425		1.1	$ -	$ 360	$ 7,785
Task 5.2 - 90% Design Submittal								0	$ -		1.1	$ -	$ -	$ -
Plans	4	12	50	110	180	110		466	$ 80,303		1.1	$ -	$ 3,240	$ 83,543
Specifications	1	18	20	30	50		8	127	$ 22,944		1.1	$ -	$ 900	$ 23,844
Estimates		2	3	12	16			33	$ 5,835		1.1	$ -	$ 288	$ 6,123
Task 5.3 - Final Bid-Ready Document Submittal								0	$ -		1.1	$ -	$ -	$ -
Plans	3	10	40	90	130	80		353	$ 61,328		1.1	$ -	$ 2,340	$ 63,668
Specifications	1	10	16	20	40		8	95	$ 16,755		1.1	$ -	$ 720	$ 17,475
Estimates		2	2	10	12			26	$ 4,640		1.1	$ -	$ 216	$ 4,856
Task 5.4 - Design Review Workshops (2)		6	20	24				50	$ 10,339		1.1	$ -	$ 448	$ 10,787
Task 5 Subtotal	**16**	**89**	**239**	**492**	**704**	**310**	**24**	**1874**	**$ 328,903**	**$ -**		**$ -**	**$ 13,120**	**$ 342,023**
Task 6 - Permitting														
Task 6.1 - Coordination with City and State Permitting Agencies			20	25				45	$ 9,110		1.1	$ -	$ -	$ 9,110
Task 6.2 - Permit Application, Reviews, and Approvals Preparation and Support								0	$ -		1.1	$ -	$ -	$ -
Conditional Use Permit			3	6				9	$ 1,811		1.1	$ -	$ -	$ 1,811
Tree Permit			1	2				3	$ 604		1.1	$ -	$ -	$ 604
Demolition Permit			3	4				7	$ 1,416		1.1	$ -	$ -	$ 1,416
Lot Line Consolidation		2	4	6				12	$ 2,495		1.1	$ -	$ -	$ 2,495
Site Plan Review		2	8	6				16	$ 3,330		1.1	$ -	$ -	$ 3,330
Variance (Major)		1	2	6				9	$ 1,840		1.1	$ -	$ -	$ 1,840
Design Review (Minor)		2	6	8				16	$ 3,307		1.1	$ -	$ -	$ 3,307
Critical Areas Review		2		4				6	$ 1,265		1.1	$ -	$ -	$ 1,265

CITY OF CAMAS
LOWER PRUNE HILL BOOSTER PUMP STATION AND 0.5 MG RESERVOIR IMPROVEMENTS
PHASE 2 DESIGN
EXHIBIT B - PROPOSED FEE ESTIMATE

	LABOR CLASSIFICATION (HOURS)													
	Principal Engineer V	Principal Engineer II	Professional Engineer VIII	Professional Engineer VII	Engineering Designer II	Technician IV	Administrative III	Hours	Labor	Subconsultants	Multiplier % Markup	Subconsultant Total with Markup	Expenses	Total
Archaeological Review		2	4	4				6	$ 1,265		1.1	$ -	$ -	$ 1,265
Building Permit and Plan Review		2	4	6				12	$ 2,495		1.1	$ -	$ -	$ 2,495
Fire Department Review		2	2	2				6	$ 1,288		1.1	$ -	$ -	$ 1,288
Engineering Review		2	6	10				18	$ 3,702		1.1	$ -	$ -	$ 3,702
DOH Construction Documents Review			4	6				10	$ 2,019		1.1	$ -	$ -	$ 2,019
SW Clean Air Authority Permit			3					3	$ 626		1.1	$ -	$ -	$ 626
SEPA Environmental Checklist			4	4	10			18	$ 3,103		1.1	$ -	$ -	$ 3,103
Task 6.3 - Permit Public Hearing		2	4	6				12	$ 2,495		1.1	$ -	$ -	$ 2,495
Task 6 Subtotal	**0**	**19**	**74**	**105**	**10**	**0**	**0**	**208**	**$ 42,170**	**$ -**		**$ -**	**$ -**	**$ 42,170**
Task 7 - Property and Easement Support								0	$ -					$ -
Task 7.1 - Property and Easement Support		10	20			30		60	$ 11,358		1.1	$ -	$ -	$ 11,358
Task 7 Subtotal	**0**	**10**	**20**	**0**	**0**	**30**	**0**	**60**	**$ 11,358**	**$ -**		**$ -**	**$ -**	**$ 11,358**
Task 8 - Public Outreach Program Support								0	$ -		1.1	$ -	$ -	$ -
Task 8.1 - Review and Preparation Assistance of Outreach Materials		5	8			15		28	$ 5,262		1.1	$ -	$ -	$ 5,262
Task 8 Subtotal	**0**	**5**	**8**	**0**	**0**	**15**	**0**	**28**	**$ 5,262**	**$ -**		**$ -**	**$ -**	**$ 5,262**
Task 9 - Bidding Support														
Task 9.1 - Bidder Inquiries and Addenda		1	9	20				30	$ 6,065		1.1	$ -	$ -	$ 6,065
Task 9.2 - Pre-bid Conference		3	5					8	$ 1,757		1.1	$ -	$ -	$ 1,757
Task 9.3 - Bid Award Review		1	4	8				13	$ 2,652		1.1	$ -	$ -	$ 2,652
Task 9 Subtotal	**0**	**5**	**18**	**28**	**0**	**0**	**0**	**51**	**$ 10,473**	**$ -**		**$ -**	**$ -**	**$ 10,473**
Task 10 - Subconsultant Services														
Task 10.1 - Electrical Engineering (Industrial Systems)								0	$ -	$ 33,170	1.1	$ 36,487	$ -	$ 36,487
Task 10.2 - Permitting and Environmental Services (WSP)								0	$ -	$ 48,872	1.1	$ 53,759	$ -	$ 53,759
Task 10.3 - Geotechnical Engineering (GRI)								0	$ -	$ 10,000	1.1	$ 11,000	$ -	$ 11,000
Task 10.4 - Structural Engineering (PSE)								0	$ -	$ 70,672	1.1	$ 77,739	$ -	$ 77,739
Task 10.5 - Potholing (VacX)								0	$ -	$ 17,236	1.1	$ 18,960	$ -	$ 18,960
Task 10.6 - Tree Survey (Arborscape)								0	$ -	$ 2,100	1.1	$ 2,310	$ -	$ 2,310
Task 10.7 - Corrosion Engineering (NW Corrosion Engineering)								0	$ -	$ 16,723	1.1	$ 18,395	$ -	$ 18,395
Task 10.8 - Public Outreach (Barney and Worth)								0	$ -	$ 9,091	1.1	$ 10,000	$ -	$ 10,000
Task 10 Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$ -**	**$ 207,864**		**$ 228,650**	**$ -**	**$ 228,650**
TOTAL - ALL TASKS	***68***	***241***	***645***	***929***	***1021***	***485***	***67***	***3456***	***$ 629,801***	***$ 207,864***		***$ 228,650***	***$ 18,203***	***$ 876,654***