

## PROJECT DESCRIPTION

The City of Stevenson Wastewater Treatment Plant (WWTP) and collection system is in need of upgrades to provide additional capacity and replace deficient components. These upgrades have been identified in the City's 2017 General Sewer Plan and Wastewater Facilities Plan Update (GSP/FP), which was recently amended. The GSP/FP described two phases of improvements to the WWTP to meet capacity needs for the next 20 years. The GSP/FP also identified a number of collection system improvements to reduce I&I, correct capacity issues, and extend sewer service to unsewered areas. These areas include the following: Rock Creek Pump Station, Fairgrounds Pump Station, Cascade Pump Station, Cascade Avenue Sewer, Kanaka Pump Station, and Cascade Interceptor, and Main D Extension.

In a previous agreement (1477A), Wallis Engineering completed preliminary design of the WWTP improvements identified in the GSP/FP, further refining the project design and phasing plan. This preliminary design effort culminated in a predesign report, which was required to be submitted and approved by the Washington State Department of Ecology (DOE) prior to completing final design. The predesign report was submitted to DOE on November 1, 2019; DOE is expected to either approve or provide comments on the report by December 31, 2019. Once approval is obtained, final design of WWTP improvements can begin.

## GENERAL SCOPE OF WORK

The primary goals of this scope are for the project team to complete final design for the WWTP Improvements Phases 1 and 2, and a select list of the collection system improvements. These goals are described below:

- ***Final Design of WWTP Phases 1 and 2 Improvements.*** We will advance design of the Phase I and Phase 2 WWTP Improvements to final design, refining the previously-completed preliminary design. These improvements include a new headworks facility, new aeration basin and blower building, new SCADA system, new backup generator, new UV disinfection facility, and other associated improvements. This design effort will culminate in a set of contract documents for each Phase, and multiple equipment procurement contracts to be used to publicly-bid the proposed improvements. We will also obtain Washington State Department of Ecology (DOE) approval prior to bidding.
- ***Kanaka Pump Station/Cascade Avenue Alternatives Analysis.*** We will perform an alternatives analysis to determine the best of two options, between upgrading the Kanaka Pump Station and Cascade Avenue Sewer versus constructing the Main F Diversion. This scope of work does not include design of either option.
- ***Final Design of Rock Creek Pump Station.*** We will advance design of the Rock Creek Pump Station (as described in the GSP/FP) to final design. This design effort will culminate in a set of contract documents to be used to publicly-bid the proposed improvements.
- ***Final Design of Cascade Interceptor Phase I.*** We will advance the design of the Cascade Interceptor Phase I project (as described in the GSP/FP) to final design. This design effort will culminate in a set of contract documents to be used to publicly-bid the proposed improvements.
- ***Final Design of Main D Extension.*** We will advance design of the Main D Extension project (as described in the GSP/FP) to final design. Design will be limited to the portion of Main D that is within the limits of the proposed paving project on Loop Road and approximately 100-feet up Frank Johns Road. This design effort will culminate in a set of contract documents to be used to publicly-bid the proposed improvements.

Other goals include providing comprehensive project management, assistance with permitting and funding procurement, and completing survey to inform design. This scope of work does not include bid or construction phase services.

It is not the intent of this scope of work to revisit major decisions established in the predesign report or in previous planning efforts. The recommendations of the predesign report and GSP/FP will be the starting point for this work.

## CONTRACT DURATION

Contract term shall be from the date contract is fully executed until June 30, 2021.

## PROJECT TEAM

Wallis Engineering will serve as the prime consultant for this project, leading a team of subconsultants to complete all the services identified in the specific scope of work. The project team is listed below, with the responsibilities which they will complete.

<i>Consultant</i>	<i>Responsibilities</i>
Wallis Engineering(Wallis)	Project Management and Civil Engineering
Esvelt Environmental Engineering(EEE)	Process Engineering
B2 Architecture	Architectural Design
LSB Engineering (LSB)	Structural Engineering
Kartchner Engineering	Mechanical Engineering
Klein & Associates (Klein)	Surveying
Geotechnical Resources Inc. (GRI)	Geotechnical Engineering
Industrial Systems (IS)	Electrical and Control Systems Engineering
Barney and Worth (B&W)	Public Engagement (as authorized)
Ecological Land Services (ELS)	Environmental Permitting
E2 Land Use Planning Services (E2)	Land Use Permitting
Wastewater Solutions (WWS)	Wastewater Operations

## TASK 1 PROJECT MANAGEMENT AND ADMINISTRATION (AMENDED)

**Objective:** Wallis Engineering (Wallis) will provide full project management, administration, and coordination between all team members, City staff, regulatory authorities, and key stakeholders. This task includes technical and financial management of the project, lead meetings and design workshops, and help the City with ongoing public involvement. Key tasks will be to organize and conduct all meetings, develop and track project schedule proactively to address critical path elements and ensure on-time delivery, and communicate to City staff of project progress.

### Task 1.1 Project Management and Coordination

Wallis will refine the Project Management Plan (PMP) completed in the preliminary design effort in order to define and provide project management, schedule, coordination, and direction to the City staff and design team to track project progress and adjust as necessary.

Implementation of the PMP will include the following:

- Comprehensive project management to ensure the scope, schedule and budget are met. Provide a point contact person for the City while coordinating with the project team.
- Schedule and participate in monthly or as-needed coordination conference calls with the City Project Manager and other staff at their request.
- Provide maintenance of a comprehensive Microsoft Project schedule with individual task milestones, task duration, individual responsibilities of subconsultants and City staff, agencies, and utilities.
- Monthly status reports will be submitted with invoices for the City's use in funding reimbursement. Monthly status reports will include task level budget status, schedule status, estimated percentage of completion for each task, and brief summary of work completed along with any upcoming scope, schedule or budget concerns. Billings will include staff, title, hourly rate, and hours charged to the project.

Wallis will also assist on an as-needed basis with funding procurement.

### **Task 1.2      *Coordination with Department of Ecology***

Wallis will coordinate with the Department of Ecology (DOE) to ensure that DOE's requirements are being met. We anticipate up to one (1) physical meeting at DOE's Olympia office, and emails and conference calls.

### **Task 1.3      *Public Engagement***

Wallis along with Barney and Worth (B&W) will work with stakeholders, property owners, and the public to ensure concerns are adequately addressed and adverse impacts are minimized. The following summarizes the anticipated public involvement efforts through the final design effort:

#### *Council Updates*

Wallis will attend up to two (2) council meetings to update council and the public on the project.

#### *Stakeholder Meetings*

Wallis will attend up to two (2) stakeholder meetings, listening to concerns and communicating the City's value engineering efforts. Stakeholder meetings are assumed to be held with the Port of Skamania County and affected industries, and the Waste Water Clarifiers group.

#### *Public Involvement Contingency*

On a contingency, as-needed basis, Wallis and B&W will assist the City with additional meetings and production of public involvement materials. This work could include assistance with website updates, inserts for sewer bills including updates on the project, press releases, and other public engagement needs.

### **Task 1.4      *Workshops and Meetings***

Wallis will organize and conduct project workshops and meetings at key points in the project schedule. To begin the project, we will conduct a kick-off meeting at the City of Stevenson with key City staff and key team members. The objective of the kickoff meeting will be to introduce this phase of the project, identify and confirm contacts and roles, discuss broad goals and schedule objectives, and resolve decision points. In addition to the kickoff meeting, we anticipate a total of seven (7) design workshops and review meetings at key review points, including:

- One (1) workshop to discuss pump station design
- Two (2) workshops to discuss Phase 1 and 2 wastewater treatment plant design
- Four (4) review meetings to discuss the 50% and 90% submittals for wastewater treatment plant and collection system contract documents

For all meetings, we will provide a meeting agenda and summary.

### **Task 1.6 Funding Assistance (New Subtask)**

Wallis will assist with funding procurement as requested by the City. This task includes assisting with funding applications, coordinating with funding agencies, and other work as requested by the City.

#### **Task 1 Assumptions:**

- Project management is anticipated to span a 12-month period (January 2020 – December 2020), for the duration of final design, with an additional 6 months (January 2021 – June 2021) for assistance with funding procurement
- All meetings with City staff will be held at City of Stevenson or other venue of staff choice
- Wallis will hold monthly project coordination conference calls with the City
- City will lead implementation of the Public Engagement Plan
- City will manage funding procurement efforts

#### **Task 1 Deliverables:**

- Project scope and fee
- Updated Final Project Management Plan (including Public Engagement Plan)
- Meeting agendas and minutes for kickoff meeting
- Meeting agendas and minutes for up to seven (7) design meetings/workshops
- Up to one (1) physical meetings with DOE
- Up to two (2) meetings with stakeholders
- Up to two (2) meetings with City Council
- MS Project Schedule and updates as needed
- Monthly progress billings on a time and materials basis per task with status reports

## **TASK 3 SURVEY AND MAPPING (AMENDED)**

*Objective:* Survey existing sites and facilities to provide a comprehensive base map for design.

### **Task 3.2 Cascade Interceptor Survey and Base Mapping (New Subtask)**

Klein will order utility locates, provide detailed mapping of features, and prepare a topographic and boundary survey base map for the Cascade Interceptor project. The Cascade Interceptor survey will include an area of 10-feet on each side of the existing sewer main, plus the full road width of Rock Creek Drive adjacent to the existing sewer.

Klein will prepare a complete base map for use in preparing the improvement plans. Wallis will review the base map and coordinate with Klein for additional survey needs as required.

### **Task 3.3 Main D Extension Survey and Base Mapping (New Subtask)**

Klein will order utility locates, provide detailed mapping of features, and prepare a topographic and boundary survey base map for the Main D Extension project. The Main D Extension survey will include the full right-of-way along the extent of the proposed sewer.

Klein will prepare a complete base map for use in preparing the improvement plans. Wallis will review the base map and coordinate with Klein for additional survey needs as required.

### **Task 3.4 WWTP Potholing Survey (New Subtask/Contingency Task)**

During final design, potholing may be necessary to accurately locate existing yard piping at the WWTP. This contingency task includes two (2) site visits to survey the location of up to ten (10) yard piping potholes.

### ***Task 3 Assumptions:***

- City will provide all available as-built drawings of utilities within the project extents.
- Utility locates will be accomplished via One-Call. Utility as-builts will be compiled, compared and resolved with locates
- The City will complete potholing at the WWTP, with Klein surveying horizontal and vertical locations of located piping
- Survey of potholed piping will occur over one work day
- Base maps will include the following features:
  - Existing improvements
  - Contours at 1-foot elevations with active surface in Civil 3D 2018
  - Utilities with inverts for sanitary sewer and storm structures
  - All lot and right-of-way corners, including research of existing monuments
  - Right-of-way and centerline locations
  - Boundary lines of private property adjacent to sites
  - Location of environmental areas (OHWM, wetland and buffer, etc)

### ***Task 3 Deliverables:***

- Base map in AutoCAD Civil 3D and PDF format for Cascade Interceptor and Main D Extension
- Legal exhibit for Rock Creek Pump Station easement
- Updated WWTP base map with pothole survey points

## **TASK 7 PERMITTING (AMENDED)**

***Objective:*** To complete all permitting required for the project improvements.

### ***7.2 Environmental Permitting***

ELS will lead the environmental permitting work on this project, which will begin with completing a delineation report for the Ordinary High-Water Mark (OHWM) of Rock Creek at Rock Creek Bridge, and the Columbia River where they are adjacent to the project areas in order to support permitting efforts.

ELS will prepare documents for Washington Department of Fish and Wildlife's (WDFW) Hydraulic Project Approval (HPA) for replacement of the Rock Creek Pump Station Forcemain across Rock Creek. This work will consist of completing the JARPA and coordination with Wallis and WDFW.

ELS will prepare documents for the National Marine Fisheries Service (NMFS), consisting of a no-effect letter for federally-listed Fall Chinook which have been mapped in Rock Creek, describing why the Rock Creek Forcemain project will have no effect on ESA listed species or critical habitats.

ELS will complete wetland delineation for the wetland located adjacent to the Cascade Pump Station, and complete a Buffer Mitigation Plan if the proposed improvements are anticipated to impact the wetland buffer.

### ***7.3 Land Use Permitting***

E2 will prepare a permitting requirements memorandum that summarizes the potential laws or rules triggered by each project, the regulatory agency responsible for administration of these requirements, specific permitting pathways for each land use, and permit issuance timeline for each triggered permit requirements. After City review and comments on this memorandum, E2 will prepare one land use application to include all improvements for the project, and participate in the public review process.

### ***Task 7 Deliverables:***

- Delineation Report for OHWM of Rock Creek and Columbia River
- JARPA and figure set to WDFW
- No-effect letter and figure set for NMFS
- Buffer mitigation plan for City (if needed)

- Land Use Permitting Technical Memorandum
- Land Use Application for all Phase I and 2 WWTP and collection system improvements

**Task 7 Assumptions:**

- The City will pay all permitting application fees
- The NEPA checklist will be completed by the City; the project will likely be classified as a documented categorical exclusion
- The project will not have any disproportionate effects on low-income, minority, limited English speakers or other special populations
- No permitting with the USACE will be necessary
- Land use permitting will require participation in up to one public meeting, including preparation of meeting materials
- The City completed an update of its Shoreline Master Program (SMP) and is awaiting final approval of the SMP by the WA Department of Ecology (ECY). The E2 scope and fee proposal assumes that Shoreline permits will be governed by the locally-approved 2018 Stevenson SMP.
- E2 will use the previously-prepared SEPA Checklist for WWTP, Rock Creek PS, and other facilities.
- E2 will prepare one land use application, to include narrative and findings, for all the above projects. Applications may include shorelines, critical areas and land use site plan review.
- The City will ensure all property owners (City and Port) sign required land use applications and will timely prepare and circulate all required public notices
- Design of buffer mitigation measures is not included.

**TASK 8 KANAKA PUMP STATION/CASCADE AVENUE ALTERNATIVES ANALYSIS (NEW TASK)**

**Objective:** Perform an alternatives analysis and evaluate the Kanaka Pump Station/Cascade Avenue deficiencies, with the end objective of recommending a preferred alternative.

**Task 8.1 Kanaka Pump Station/Cascade Avenue Alternatives Analysis**

Wallis will complete modeling and evaluation of two alternatives:

- Replacement of Kanaka Pump Station and Cascade Avenue Sewer to increase capacity, or
- Main F Diversion project, extending a sewer main up Loop Road to divert flow from a portion of the basin contributing flow to the Kanaka Pump Station and Cascade Avenue Sewer

The hydraulic model previously developed by Tetra Tech for the General Sewer Plan will be modified to determine how much flow can be diverted from the Kanaka Pump Station and Cascade Avenue Sewer, and whether this flow diversion is sufficient to alleviate capacity constraints. Cost estimates will be prepared for each alternative, in order to aid selection. Each alternative will be evaluated based on evaluation criteria reviewed by the City and revised as needed. A technical memorandum will be prepared, summarizing the analysis effort and recommending a preferred alternative for design and construction based on the results of the evaluation.

**Task 8 Deliverables:**

- Draft and Final Alternatives Analysis Technical Memorandum

**Task 8 Assumptions:**

- This task does not include final design for the preferred alternative; final design work will be scoped in a separate agreement after alternative selection
- The existing sanitary sewer hydraulic model will be provided by the City
- Wallis will conduct one site visit

## **TASK 9      WWTP FINAL DESIGN (NEW TASK)**

**Objective:** To complete final design of the Phase 1 and Phase 2 WWTP improvements defined in the Predesign Report for this project. Design will include civil, structural, architectural, process, mechanical, and electrical disciplines. EEE will lead design of the WWTP, with assistance from Wallis, IS, B2 Architecture, LSB, and Kartchner Engineering. This work will result in two contract document packages: one for Phase 1, and one for Phase 2 improvements.

### ***Civil Design***

Wallis will lead design of civil improvements for both Phases 1 and 2, including yard piping and other site improvements. They will also manage compilation of the contract documents and coordination between all team member firms.

### ***Process Design***

EEE will lead design of biological process improvements, including improvements to secondary treatment for the Phase 1 improvements, and to UV disinfection for the Phase 2 improvements. They will also lead completion of the equipment procurement contracts.

### ***Structural Design***

LSB will lead structural design of the anoxic selector basins, headworks structure, and blower building foundation.

### ***Architectural Design***

B2 Architecture will lead architectural design of the remodeled laboratory building and the new blower building.

### ***Electrical Design***

Industrial Systems will lead electrical and instrumentation and control design for Phases 1 and 2, including SCADA and standby power needs.

## **9.1      50% WWTP Final Design**

A set of plans for each phase of the WWTP improvements will be completed to the 50% level, and submitted to the City for review. An engineer's opinion of cost reflecting the 50% design will also be submitted for each phase.

## **9.2      90% WWTP Final Design**

Based on the City's 50% design review comments, the design team will complete 90% plans, specifications, equipment procurement documents, and an opinion of cost for each phase of improvements. These will be submitted to the City for their review.

## **9.3      Operability Review WWTP Final Design**

WSI will complete an operability review of the design, consisting of an initial operability review at the 50% submittal, and a 90% final design review point. The operability review will examine:

- Ability to meet operability and permit goals
- Ease of operation
- Process control limitations
- Instrumentation
- Energy considerations
- Overall design
- Safety considerations

The results of these reviews will be compiled in a brief technical memorandum. WSI will also be available to participate in a review meeting following submittal of the draft and final memorandum.

#### 9.4 100% WWTP Final Design

Based on the City’s 90% review comments and the conclusions of the operability review, the design team will complete 100% plans, specifications, and opinion of cost for each phase.

##### Task 9 Deliverables:

- 50% plans and opinion of cost for Phase 1 WWTP Improvements
- 50% plans and opinion of cost for Phase 2 WWTP Improvements
- 90% and 100% plans, specifications, equipment procurement documents, and opinion of cost for Phase 1 WWTP Improvements
- 90% and 100% plans, specifications, equipment procurement documents, and opinion of cost for Phase 2 WWTP Improvements
- Operability Review Memorandum (Draft and Final)

##### Task 9 Assumptions:

- This task does not include bidding and construction phase services
- EJCDC Contract Documents will be used as the template for the contract document packages.
- The operability review will examine proposed Phases 1 and 2
- EEE and B2 will attend up to one (1) workshop at the City, with the rest attended remotely via conference call or web meeting
- LSB and Kartchner will not attend any on-site meetings at the City, but will be available for conference calls
- Programming of the WWTP PLC and SCADA system will not be required at this time.
- The approximate total quantity of plan sheets prepared will be as follows:

Section	Sheets per Discipline					
	<i>Esvelt (Process)</i>	<i>B2 (Architect)</i>	<i>LSB (Structural)</i>	<i>Wallis (Civil)</i>	<i>KE (Mechanical)</i>	<i>IS (Electrical)</i>
Overall	12	3				
Site Work				10		5
Headworks	6	3	6			2
Anoxic & Aeration Basins	9	3	10			2
Blower Building	4	4	4		2	13
UV Disinfection	5	2	4			5
Lab & Ops Building	6				6	3
General	5	9	6	3	3	4
<b>Total</b>	<b>47</b>	<b>24</b>	<b>30</b>	<b>13</b>	<b>11</b>	<b>34</b>

## TASK 10 MAIN D EXTENSION FINAL DESIGN (NEW TASK)

**Objective:** To produce contract documents for construction of a segment of the Main D Extension project.

### 10.1 50% Main D Extension Final Design

Wallis will submit a 50% set of plans and opinion of cost to the City for review. Design will include the following work:

- Establish vertical and horizontal sewer alignment
- Establish locations of sewer laterals to each property
- Develop typical trench sections

### 10.2 90% Main D Extension Final Design

Based on the 50% design review comments, Wallis will refine the design and submit a 90% set of plans, specifications, and opinion of cost to the City for review. Following their review, a 90% design review meeting will be held at the City.

### 10.3 100% Main D Extension Final Design

Based on the 90% review comments, Wallis will refine the design and submit a final (100%) set of plans, specifications, and opinion of cost to the City for their use in bidding.

#### Task 10 Deliverables:

- 50% plans and opinion of cost for Main D Extension
- 90% and 100% (final) plans, specifications and opinion of cost for Main D Extension

#### Task 10 Assumptions:

- Improvement limits will align with paving improvements completed in the same area: on East Loop Road between Columbia Street and Frank Johns Road.
- Design will be based on the general recommendations of the City's GSP/FP Update
- This project will be bid in the spring of 2020.
- Specifications will be based on Washington State Department of Transportation (WSDOT) format.
- Wallis will conduct one (1) site visit during design.
- This task does not include bidding and construction phase services
- Plan sheets prepared for each submittal will include the following:

<i>Title</i>	<i>Number of Sheets</i>			<i>Consultant</i>
	<i>50%</i>	<i>90%</i>	<i>100%</i>	
Cover	1	1	1	Wallis
General Notes & Legend	1	1	1	Wallis
Erosion Control Notes & Details	-	1	1	Wallis
Gravity Sewer Plan & Profile	3	3	3	Wallis
Civil Details	1	2	2	Wallis
<b>Total Sheets</b>	<b>6</b>	<b>8</b>	<b>8</b>	

## **TASK 11     ROCK CREEK PUMP STATION AND FORCE MAIN FINAL DESIGN (NEW TASK)**

**Objective:** To produce contract documents for construction of the Rock Creek Pump Station Improvements, including the force main replacement.

### **11.1     50% Rock Creek Pump Station Design and Workshop**

Wallis will conduct a design workshop with the City to discuss and select design options such as site layout, equipment selection (pumps, level control, SCADA), equipment shelter, and access. Following the design workshop, a 50% set of plans and opinion of cost will be completed and sent to the City for review.

#### ***Civil and Site Design***

Wallis will complete civil and site design, including following:

- Develop site layout options, to be discussed and finalized during the design workshop with the City
- Establish site surfacing and grading
- Sizing of wetwell, valve vault, and other structures

#### ***Pipelines Design***

Wallis will include pipeline design, including the following:

- Establish vertical and horizontal force main alignment
- Develop typical trench sections and pavement restoration plan
- Design method of securing force main to bridge

#### ***Mechanical Design***

Wallis will complete mechanical design, including the following:

- Develop options for equipment items and materials (pumps, valves, piping, coatings), to be discussed and selected during the design workshop with the City
- Prepare system head curve and hydraulic grade line calculations
- Establish wetwell liquid levels
- Size major equipment items, including pumps
- Coordinate equipment selection and design with electrical and controls discipline

#### ***Electrical and Controls Design***

Industrial Systems will complete electrical and control system design, including the following:

- Develop options for major electrical and control system components (level sensors, level controllers, pump starters, communications equipment), to be discussed and selected during the design workshop with the City
- Coordinate with Skamania County Public Utility District (PUD) for review of load calculations and one-line diagrams, including up to one site visit
- Sizing of electrical equipment and generators
- Design of control panels, motor control centers, disconnect panels, and other electrical and control equipment
- Site lighting, power, and instrumentation signal design
- Design of SCADA communications from pump stations to City's central monitoring site

### **11.2     90% Rock Creek Pump Station Design**

Based on the 50% design review comments, Wallis and IS will refine the design and submit a 90% set of plans, specifications, and opinion of cost to the City for review. Following their review, a 90% design review meeting will be held at the City.

### 11.3 100% Rock Creek Pump Station Design

Based on the 90% review comments, Wallis will refine the design and submit a 100% set of plans, specifications, and opinion of cost to the City for use in bidding.

#### Task 11 Deliverables:

- Design workshop agenda and meeting minutes
- 50% plans and opinion of cost for Rock Creek Pump Station
- 90% and 100% plans, specifications and opinion of cost for Rock Creek Pump Station

#### Task 11 Assumptions:

- Design of Rock Creek Pump Station will be based on the preliminary design established in the City's GSP/FP Update and the Preliminary Engineering Report for Collection System Improvements
- No landscaping design will be required
- Technical specifications will be in the Construction Specification Institute (CSI) format
- Programming of pump station PLC and SCADA system will not be required at this time
- Full-size, stamped, reproducible contract documents will be provided with the 100% submittal
- Any required standard drawings will be provided by the City
- Wallis will conduct one (1) site visit during design
- This task does not include bidding and construction phase services
- Plan sheets prepared for each submittal will include the following:

Title	Number of Sheets			Consultant
	50%	90%	100%	
Cover	1	1	1	Wallis
General Notes & Legend	1	1	1	Wallis
Erosion Control Notes & Details	-	1	1	Wallis
Demolition & Erosion Control Plan	-	1	1	Wallis
Pump Station Civil Site Plan	1	1	1	Wallis
Pump Station Utility & Piping Plan	1	1	1	Wallis
Pump Station Grading & Drainage Plan	-	1	1	Wallis
Pump Station Mechanical Plan & Sections	2	2	2	Wallis
Electrical One Line Diagram & Site Plan	1	1	1	IS
Electrical Area Plan & Circuit Schedule	-	1	1	IS
Wetwell & Valve Vault Electrical Plans	-	1	1	IS
Control Panel Enclosure	-	1	1	IS
Control Panel Interior Layout	-	1	1	IS
Control Panel Wiring Diagram	-	1	1	IS
Control Panel Wiring & I/O Diagrams	-	1	1	IS
Pump Disconnect Panel Wiring & Layout	-	1	1	IS
Force Main Plan & Profile	1	1	1	Wallis

Mechanical Details	1	2	2	Wallis
Civil Details	1	1	1	Wallis
<b>Total Sheets</b>	<b>10</b>	<b>21</b>	<b>21</b>	

## TASK 12 CASCADE INTERCEPTOR FINAL DESIGN (NEW TASK)

**Objective:** To produce contract documents for construction of the Cascade Interceptor Improvements.

### 12.1 50% Cascade Interceptor Design and Workshop

Wallis will conduct a design workshop with the City to discuss and select design options such as route, construction concerns, and sizing. Following this, a 50% set of plans and opinion of cost will be completed and sent to the City for review. Design work will include the following:

- Establish vertical and horizontal sewer alignment
- Develop typical trench sections

### 12.2 90% Cascade Interceptor Design

Based on the 50% design review comments, Wallis will refine the design and submit a 90% set of plans, specifications, and opinion of cost to the City for review. Following their review, a 90% design review meeting will be held at the City.

### 12.3 100% for Cascade Interceptor

Based on the 90% review comments, Wallis will refine the design and submit a 100% set of plans, specifications, and opinion of cost to the City for their use in bidding.

#### Task 12 Deliverables:

- Design Workshop
- 50% plans and opinion of cost for Cascade Interceptor
- 90% and 100% plans, specifications and opinion of cost for Cascade Interceptor

#### Task 12 Assumptions:

- Design will be based on the general recommendations of the City's GSP/FP Update
- This task does not include bidding and construction phase services
- Plan sheets prepared for each submittal will include the following:

Title	Number of Sheets			Consultant
	50%	90%	100%	
Cover	1	1	1	Wallis
General Notes & Legend	1	1	1	Wallis
Erosion Control Notes & Details	-	1	1	Wallis
Gravity Sewer Plan & Profile	2	2	2	Wallis
Civil Details	1	2	2	Wallis
<b>Total Sheets</b>	<b>5</b>	<b>7</b>	<b>7</b>	