

# Council Business Meeting

May 4, 2021

<b>Agenda Item</b>	Approval of a Personal Services Contract for Wastewater Treatment Plant Outfall Relocation Final Engineering and Bidding Services	
<b>From</b>	Kaylea Kathol, PMP Scott Fleury, PE	Sr. Project Manager Director of Public Works
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## **SUMMARY**

Before Council is a personal services proposal from Jacobs Engineering Group, Inc. (Jacobs) for an amount not to exceed \$362,409, for final engineering and bidding services for the development of the Wastewater Treatment Plant Outfall Relocation Project # 2013-21-D (Project). This is one of several projects the City will complete to comply with Oregon water quality regulations established in the forthcoming National Pollutant Discharge Elimination System (NPDES) permit that authorizes the City to operate the Wastewater Treatment Plant (WWTP). Preliminary engineering and permitting for this project were completed by Jacobs (formerly CH2M Hill Engineers, Inc.) during the 2017-2019 BN. This project is identified in the current adopted Capital Improvement Program.

## **POLICIES, PLANS & GOALS SUPPORTED**

City Council Goals:

- Essential Service-Wastewater Treatment

CEAP Goals:

- Natural Systems NS 1-3: Undertake restoration efforts to retain and restore native fish and riparian species.

Department Goals:

- Maintain existing infrastructure to meet regulatory requirements and minimize life-cycle costs
- Deliver timely life cycle capital improvement projects
- Maintain and improve infrastructure that enhances the economic vitality of the community
- Evaluate all city infrastructure regarding planning management and financial resources

## **PREVIOUS COUNCIL ACTION**

Staff provided the City Council with an informational update on the NPDES permit process and associated background at the February 1, 2021 Study Session meeting ([Minutes](#), [Staff Report](#)). At the [December 5, 2017](#) Business Meeting Council awarded the contract for preliminary engineering and permitting to CH2M Hill Engineers, Inc. (now a wholly owned subsidiary of Jacobs Engineering) for the WWTP Outfall Relocation Design.

## **BACKGROUND AND ADDITIONAL INFORMATION**

The Outfall Relocation Project is one of several capital projects in the 2012 Comprehensive Sanitary Sewer Master Plan (Keller Associates) that were identified to meet anticipated regulatory water temperature limits in the forthcoming NPDES permit, administered by Oregon Department of Environmental Quality (DEQ). The outfall of the WWTP currently discharges warm effluent to Ashland Creek. In-stream flows in Ashland Creek are often too low to buffer the temperature impact from the effluent, which results in exceedances of water quality standards DEQ has established to protect migratory fish in the Bear Creek basin. Relocating the outfall to Bear Creek, a much larger stream than Ashland Creek, has been approved by DEQ as an effective temperature mitigation strategy and a path to regulatory compliance. The City outlined the components of the WWTP Outfall Relocation Design in a

public Request for Qualifications Based Proposals that closed on October 12, 2017. The Project components described in that document were broken into the following project phases:

- Phase 1A, Preliminary Engineering (COMPLETED)
- Phase 1B, Easements, Permitting, and Public Outreach (COMPLETED)
- Phase 2, Final Engineering and Bidding Services (THIS SCOPE)
- Phase 3, Construction Services (FUTURE SCOPE)

Following evaluation of three qualifications-based proposals, the City selected CH2M Hill Engineers, Inc. in October 2017 for Outfall Relocation Design. Phases 1A and 1B of the Project were completed with the issuance of a Basis of Design report in December 2018 and the issuance of permits to construct the project. The project has been on hold since that time waiting for DEQ to initiate a renewal of the NPDES permit for the WWTP. Now the NPDES permit renewal is on track for issuance in June 2021, the City wishes to move forward with Phase 2 of this project to support construction during the 2022 in-water work window. It is critically important to move forward at this time with final design as the NPDES permit has a compliance schedule with mitigation project milestones the City must achieve to comply with all NPDES permit regulations. In addition, the City has already obtained all necessary environmental permits for the outfall relocation work. Most of the permits have already been extend for another year or two beyond their initial expiration date. While permit extension rules vary by issuing agency, the City does not expect further extensions requests to be granted. The permits expire at the end of 2022 and if the project is not completed within the approved environmental permit window, the City would be required to obtain new permits through the US Army Corps of Engineers and the Oregon Department of State Lands, a costly and time significant process. For reference, the initial permitting effort for these two permits cost over \$100,000 and required more than a year to complete. Lastly, failure to adhere to the established compliance schedule could put the City of Ashland in a situation where civil and/or criminal penalties could be levied for non-compliance related to NPDES permit requirements.

The attached scope of work outlines the activities required to progress the Project through final engineering including preparation of construction documents and bidding services, concluding with City selection of a contractor to construct the Project. Phase 3, Construction Services, will be discussed and negotiated at a later date.

### **FISCAL IMPACTS**

The current 2019-2021 Biennial Budget includes \$500,000 itemized as a Capital Improvement Project for outfall relocation. However, substantially all remaining work and expenses associated with this Project are anticipated to occur during the 2021-2023 biennium. Staff has therefor requested funds in the 2021-2023 Biennial Budget to support final engineering and construction. This project is funded through a DEQ Clean Water State Revolving Fund (CWSRF) Loan for \$2,500,000. The Clean Water State Revolving Fund provides below-market rate loans to eligible public agencies for the planning, design, and construction of water pollution control activities. The City's loan has an interest rate of 1.00 percent per annum, a 30-year repayment period, and an annual fee of 0.5 percent of the outstanding loan amount.

### **STAFF RECOMMENDATION**

Staff recommends Council move approval of the personal services contract with Jacobs for final engineering and bidding services for the development of the WWTP Relocation Project.

### **ACTIONS, OPTIONS & POTENTIAL MOTIONS**

1. I move approval of a personal services contract with Jacobs Engineering Group, Inc. for final engineering and bidding services in the amount of \$362,409.
2. I move to amend the scope and fee of the personal services contract with Jacobs Engineering Group, Inc. for final engineering and bidding services (insert amendment).

### **REFERENCES & ATTACHMENTS**

Attachment 1: Negotiated scope, schedule, and fee proposal from Jacobs

# Exhibit A

## City of Ashland - Wastewater Treatment Plant Outfall Relocation Design and Construction Services Phases 2 Final Engineering and Bidding Services Scope of Work and Estimated Fee

### Introduction

The City of Ashland, Oregon (City) outlined the components of the Wastewater Treatment Plant (WWTP) Outfall Relocation Design (Project # 2013-21-D) in a public Request for Qualifications Based Proposals that closed on October 12, 2017. The project components described in that document were broken into the following project phases:

- Phase 1A, Preliminary Engineering (COMPLETED)
- Phase 1B, Easements, Permitting, and Public Outreach (COMPLETED)
- Phase 2, Final Engineering and Bidding Services (THIS SCOPE)
- Phase 3, Construction Services (FUTURE SCOPE)

Following evaluation of three qualifications-based proposals, the City selected CH2M HILL Engineers, Inc. (CH2M) (now a wholly owned subsidiary of Jacobs Engineering Group, Inc.) on October 26, 2017 to perform the Wastewater Treatment Plant Outfall Relocation Design (Project # 2013-21-D). Phases 1A and 1B of the project were completed with the issuance of a Basis of Design report in December 2018 and the issuance of permits to construct the project. The project has been on hold since that time waiting for the Oregon Department of Environmental Quality (DEQ) to initiate a renewal of the National Pollution Discharge Elimination (NPDES) permit for the WWTP. Now that the NPDES permit renewal appears to be on track for issuance in June 2021, the City wishes to move forward with Phase 2 of this project to support construction during the 2022 in-water work window.

This scope of work outlines the activities required to progress the Outfall Relocation project through final engineering including preparation of construction documents and bidding services, concluding with City selection of a contractor to construct the project. Phase 3, Construction Services, will be discussed and negotiated at a later date.

### Phase 2 Activities

The outline of the Phase 2 activities, at a minimum, requested by the City are as follows:

- Incorporate preliminary design comments and respond, as necessary, to requests for additional information.
- Review and refine construction cost estimates.
- Attend City Council meetings for discussion and approval of final engineering design.
- Provide updates to the public regarding any changes to the site layout and community impacts.

- Take meeting notes and summarize follow-up documentation. Consolidate information and post to project SharePoint site.
- Prepare final drawings of the site layout, utilities, and grading plans.
- Prepare civil documents for construction along with complete bid documents (final design drawings, specifications, bid quantities, etc.) and assist City in the bidding of the project. Final specifications shall include information necessary to meet the DEQ CWSRF loan program requirements.
- Develop final comprehensive construction scope and timeline.
- Prepare a construction schedule and engineers cost estimate (AACE Class 2).
- Prepare a final engineering report.
- Facilitate Pre-Bid conference and provide meeting minutes as necessary.
- Issue necessary addenda to the bid package.
- Provide technical assistance to the City during bidding.
- Review bids, bonds, insurance certificates, construction schedules, alternative bids and other documentation included with the contractors bid.
- Prepare bid abstract and unit price comparison and in consultation with City staff, make recommendations for contract award.
- Assist City in contract approval presentation to the City Council.
- Assist City in ensuring compliance with the DEQ CWSRF loan requirements.

## Scope of Work

Our approach to completing Phase 2 of the project is organized into five main tasks, which are further subdivided into several subtasks. The tasks and subtasks include:

### **Task 1            Phase 2 Project Management and QA/QC**

- Task 1.1            Phase 2 Project Management
- Task 1.2            Phase 2 QA/QC

### **Task 2            Phase 2 Public Involvement**

- Task 2.1            Public Involvement Support

### **Task 3            Phase 2 Permitting Support**

- Task 3.1            Phase 2 Permitting Support
- Task 3.2            NPDES 1200-C Permit
- Task 3.3            Floodplain No-Rise Certification
- Task 3.4            Tree Protection Plan

### **Task 4            Phase 2 Final Engineering**

- Task 4.1            Prepare 60% Dwgs and Specs
- Task 4.2            Prepare 90% Dwgs and Specs
- Task 4.3            Prepare 100% Dwgs and Specs

### **Task 5            Phase 2 Bidding Services**

- Task 5.1            Bidding Period Services
- Task 5.2            Conformed Documents

### **Task 6            Final Engineering Survey**

- Task 6.1            Surveying

The work included under each subtask is detailed further in the following sections.

## General Assumptions

The level of effort and cost are based on the following general assumptions.

- The outfall location and pipeline alignment that is described in the *Basis of Design Report Ashland WWTP Outfall Relocation Bear Creek* (December 2018) will be progressed through final design, bidding services, and construction
- Except where noted, deliverables will be electronic and up to five (5) hard copies of final submittals will be provided
- Drawings will be prepared in MicroStation (to be converted to AutoCAD at the conclusion of the final engineering phase) and will be presented as half-size (11"x17") sheets. CH2M will implement their company CAD standards which are based on National CAD Standards.
- Services covered under this project begins with Notice to Proceed and end with delivery of all deliverables noted under this scope of work.
- City will provide CH2M with all data in City's possession relating to CH2M's services on the project in response to data requests from CH2M to the City. CH2M will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
- City will make its facilities accessible to CH2M as required for CH2M's performance of its services and will provide labor and safety equipment as required by CH2M for such access.
- The previously completed survey is adequate to complete the final design
- The City will obtain a permanent utility easement for the completed pipeline design if necessary.
- The City will obtain access agreements and temporary construction easement(s) for pipeline construction activities if necessary.
- The geotechnical field exploration work previously completed is satisfactory for final design.
- The project will be a single construction contract, delivered using a modified 4-phase delivery process with major remaining milestone deliverables at 60%, 90% and 100% (Construction Documents).
- CH2M master specifications will be used as the basis for all specifications, including CH2M standard Division 0 and Division 1 documents.
- A consolidated set of formal comments from the City will be solicited at the 60% and 90% deliverables, adjudicated and incorporated into the subsequent deliverable.
- The City will engage in informal review and will provide input as the design progresses between milestone deliverables.
- Bidding will occur in the First Quarter of 2022.
- NTP for the construction contractor will be issued a minimum of 4 weeks ahead of the 2022 In-Water-Work Period.
- Any temporary irrigation required for establishment of vegetation will be delegated to the construction contractor / landscaping subcontractor.
- Conformed documents for construction will be prepared at the conclusion of the bidding period, and will be translated to AutoCAD.

Additional assumptions are noted under individual subtasks.

## City Provided Information and Services

The level of effort and cost are based on the following general assumptions for City-provided information and services.

- City will provide as-built record drawings in AutoCAD and PDF format for affected facilities

- City will provide locations and descriptions of known utilities and utility easements in project area
- City will provide LIDAR contour data for the project area
- City staff will lead public involvement and permitting/regulatory agency consultation activities with CH2M support
- City staff will lead the coordination of the project with other City of Ashland departments with CH2M support
- City staff will lead the communications with DEQ to satisfy requirements for the Clean Water State Revolving Fund (CWSRF) project funding with CH2M support
- City will provide timely responses to requests for information and review comments

## Task 1 Phase 2 Project Management and QA/QC

### Task 1.1 Phase 2 Project Management

This task includes activities needed to initiate, plan, manage, and close the project. Throughout the project, the CH2M project manager will maintain frequent and open communication with the City's project manager and will work closely with the City's project manager to anticipate changes in project needs. This task includes preparing the project execution plan/project instructions to assist in performing the work and preparing monthly progress reports and progress billings in a format approved by the City's project manager.

#### **Assumptions:**

- Assume 14 hours/month for Project Management.
- Phase 2 will have a 13-month duration.

#### **Deliverables:**

- Monthly progress reports submitted with invoice documentation.

### Task 1.2 Phase 2 QA/QC

As part of each design phase, CH2M will carry out a quality assurance program (QAP). The purpose of this QAP is to monitor the quality of the Project through the use of internal quality assurance/quality control (QA/QC) reviews as described herein. CH2M will manage multidiscipline internal QA/QC review activities with a senior review team. A QC review will be performed on technical and cost calculations leading up to each milestone prior to the City's review of design deliverables.

A Quality Management Plan (QMP) will be prepared for the project to serve as a guide for all phases of the project. Key features of the QMP will include:

- A single point of contact responsible for all quality management, identified as the project Quality Control Manager (QCM).
- Independent quality review performed by discipline-specific quality reviewers to provide critical analysis without bias.
- Procedures for engineers; detailed checks of reports, calculations, drawings and specifications.

QA personnel will verify conformance with the QMP and confirm that required checking and review functions are completed.

Design quality review documentation will demonstrate that quality review process is complete and review comments are acceptably addressed as a component of the overall records management system. The following documentation will be prepared, collected and properly stored in the project records system:

- Technical verification forms for each discipline used to document internal quality reviews.
- Design review forms used by the City to document review comments, and design team response to each comment.
- Project discipline checklists or milestone checklists signed by the reviewer and the appropriate project staff.
- Review-related correspondence with City staff and other external agencies or entities.

The level of effort for this task includes preparation of the QMP, QC reviews and documentation for each of the design phases.

***Deliverables:***

- Quality Management Plan
- Discipline Technical Verification Forms as documentation of QC reviews

## Task 2      Phase 2 Public Involvement

### Task 2.1      Public Involvement Support

CH2M will support City in making presentations to elected and appointed officials and community groups. This includes attending one City Council meeting for discussion and approval of the final engineering design, one City Council meeting for construction contract approval, providing materials that the City can utilize for a project web site to inform and solicit input from community members, and supporting the City in planning and execution of a community open house event to discuss impacts during construction.

***Assumptions:***

- CH2M will develop one slide deck of up to ten (10) PowerPoint slides that can be adapted for use with different groups.
- City will set up, manage, and maintain the project web site.
- CH2M will work with City to identify a meeting date for the open house and the City will secure ADA accessible meeting location.
- City will be responsible for public notices, contacting interested parties, and maintaining the list of interested parties, and tracking responses to public inquiries in a response log maintained through project.
- Up to two (2) CH2M staff will attend open house which will be up to two (2) hours long.
- Open house materials will be provided only in English. Translated versions can be provided as a supplemental service.
- CH2M will provide graphics for up to four (4) poster boards and City will print, laminate on foam board and bring poster boards to the open house.
- CH2M's Project Manager will attend the two (2) identified City Council meetings.

***Deliverables:***

- Draft and final PowerPoint slide deck.
- Participation in up to two (2) meetings (by phone) with City to support planning for the open house.



- Meeting plan for open houses due one (1) month before open house.
- Draft and final open house materials.

## Task 3 Phase 2 Permitting Support

### Task 3.1 Phase 2 Permitting Support

This task provides support to the City for responses to permitting agency requests for information throughout the course of the Phase 2 work. This task will include consultation and coordination with DEQ for the engineering plan review. The 60% deliverables will be provided to DEQ for consultation and preliminary feedback on the plans. The 90% deliverable will be submitted to DEQ for Engineering Plan Review to obtain concurrence and approval on the bid package components before advertising the project for bidding.

#### **Assumptions:**

- Up to 24 hours of CH2M support will be provided in response to requests for information from the City related to project permits and approvals
- Any major comments from the DEQ Engineering Plan Review on the 90% deliverable will be addressed by addendum.

### Task 3.2 NPDES 1200-C Permit

An NPDES permit for storm water discharges must be obtained for construction activities that disturb one or more acres of land. This task covers completing the application to obtain an NPDES Storm Water discharge Permit #1200-C for the project. The application will be completed in accordance with Oregon Department of Environmental Quality (DEQ) requirements. The application will include completion of:

- NPDES 1200-C Application Form
- Land Use Compatibility Statement Form

In addition, this scope includes preparation of an Erosion and Sediment Control Plan, required by the 1200-C NPDES permit. The Plan must be submitted to DEQ at least 30 days before commencement of construction activities. The plan must be submitted with the permit application if the construction schedule will not allow for the 30-day review period. The required information for this plan includes:

- Narrative Site Description
- Site Maps and Construction Plans
- Erosion and Sediment Control Details

#### **Assumptions:**

- The City will submit the completed application to DEQ and will provide the necessary application and permit fees.

#### **Deliverables:**

- 1200-C Construction Stormwater General Permit Application for City to submit.

### Task 3.3 Floodway No-Rise Certification

This task covers the preparation of a “No-Rise” Certification for the proposed outfall in Bear Creek. The no-rise certification will be prepared in accordance with the written guidance provided by FEMA on Procedures for “No-Rise” Certification for Proposed Developments in the Regulatory Floodway.



The effective Flood Insurance Study (FIS) for The City of Ashland that includes Bear Creek was revised in 2018 but the hydrology and hydraulic analysis used to develop the floodplain and floodway mapping was performed in January of 1981. The HEC-2 hydraulic model from 1981 likely is available to use as a basis for development. The procedure requires field survey of the nearest original cross section location to the project and two additional cross sections defining the local project impact areas. FEMA's guidance for determining the longitudinal extent of the model states:

*"The engineering "no-rise" certification and -supporting technical data must stipulate NO impact on the 100-year flood or floodway elevations at the new cross-sections and at all existing cross section anywhere in the model. Therefore, the revised computer model should be run for a sufficient distance (usually one mile, depending on hydraulic slope of the stream) upstream and downstream of the development site to insure proper "no-rise" certification."*

The proposed longitudinal extent for the duplicate effective model is approximately 1.5 miles long, one mile downstream to Section CZ, and a half-mile upstream to Section DI located immediately downstream of a diversion dam that breaks the hydraulic slope. One of the original cross sections on Bear Creek, DJ, will be surveyed by the Jacobs subcontractor, plus two new cross sections to define the project impact area. The extent and cross sections are shown on Exhibit 6.1.

After development of the Duplicate Effective Model, CH2M will develop a Corrected Effective Model that corrects any errors that occur in the Duplicate Effective Model and add two new cross sections. CH2M will then develop the Existing Condition Model by revising the Duplicate Effective Model to reflect any modifications that have occurred in the floodplain since the date of the Effective Model. The Proposed Condition Model will then be developed to reflect the impact of the proposed new outfall and any conveyance mitigation needs (up to four will be considered).

The analysis and supporting data required by FEMA will be documented in a No-Rise Hydraulic Report.

**Assumptions:**

- Two CH2M staff will attend up to 2 floodplain inquiry meetings via phone or web-conference (no travel required).
- The current regulatory effective model is available.
- Three new cross sections will need to be surveyed and added to the effective model.
- Only the 100-year base flood will be evaluated for floodplain and floodway impacts.
- Up to 4 conveyance mitigation alternatives will be considered in the effort to meet the No-Rise criteria.
- Preparation and submittal of a Letter of Map Revision (LOMR) is excluded.
- City shall distribute base flood notification to property owners, if required.
- No planimetric files are included in deliverable.
- Project permit appeals are excluded.

**Deliverables:**

- Completed engineering "no-rise" certification form
- Technical memorandum (6-10 pages) documenting analysis, findings and supporting material
- Electronic delivery of model files: Duplicate Effective Model, Corrected Effective Model, Existing Conditions Model, and Proposed Condition Model.

### Task 3.4 Tree Protection Plan

In the April 2019 Notice of Final Decision from the City of Ashland on the local Limited Activities and Uses Permit and Physical Environmental Constraints Permit, the application was approved with the condition that prior to commencing site work including any demolition, staging, storing of project materials, or tree removal:

- The applicant shall submit a Tree Removal Permit application including a tree inventory, tree preservation and protection plan, and written findings addressing the approval criteria in AMC 18.5.7.040. The Tree Removal Permit, associated plans and Tree Verification inspection shall be approved prior to any site work including tree removal.
- A Mitigation Plan consistent with the requirements of AMC 18.3.11.110 and a Long-Term Conservation, Management and Maintenance Plan consistent with the requirements of AMC 18.3.11.110.C for the disturbed water resources protection zones shall be provided for the review and approval of the Staff Advisory in conjunction with the Tree Removal Permit request once final design drawings have been developed.

This task covers the preparation of the Tree Remove Permit application and Mitigation Plan.

#### ***Assumptions:***

- City surveyors will provide any necessary field survey including:
  - Staking of the proposed pipeline alignment and work limits prior to the tree preservation site walk.
  - Return to survey confirmed and flagged trees requiring removal and trees requiring protection following the tree preservation site walk.
  - Any updates to the tree inventory required due to site fire damage since the previous tree inventory conducted during the pre-design.
- City will arrange for an arborist to supplement tree inventory with identification to species of all trees on and within 15 feet of the site, provide an inventory of the health and hazard of each tree, and provide recommendations for treatment for each tree (AMC 18.4.5.030).
- City will conduct the Tree Verification Inspection and provide Tree Verification Inspection Permit per AMC 18.4.5.050
- City will identify suitable mitigation sites for any required tree mitigation.
- One CH2M design team member will attend the half-day pipeline route walk with City and Parks Commission staff to identify trees requiring removal and trees requiring protection and preservation during the construction activities. The site walk will cover all proposed project work areas including equipment storage and laydown areas.

#### ***Deliverables:***

- Completed Tree Removal Permit application addressing criteria in AMC 18.5.7.040
- Completed Mitigation Plan addressing criteria in AMC 18.3.11.110.C

## Task 4 Phase 2 Final Engineering

The proposed alignment for the relocated WWTP outfall pipeline is as shown below in Exhibit 4-1.

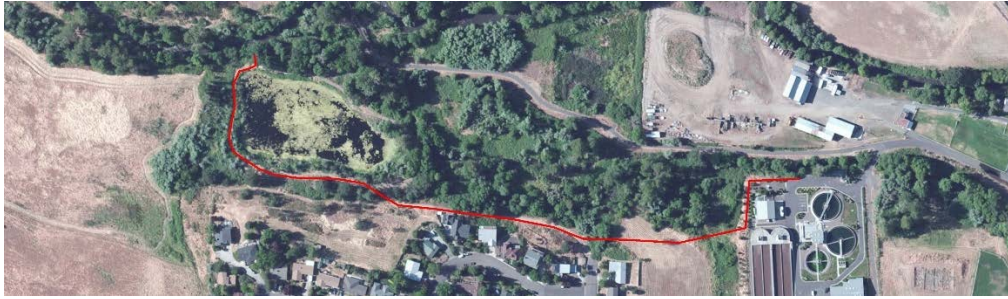


Exhibit 4-1. Proposed horizontal alignment for Ashland WWTP Outfall Relocation

### Task 4.1 Prepare 60% Design

The purpose of this task is to utilize the conceptual decisions of the project that were made in the Preliminary Design to complete and finalize the preliminary calculations, develop draft plans and specifications, and develop the project design to achieve a true “design freeze” at the conclusion of this phase. Structures, major piping, and the site plan are all finalized during this phase to allow detailing in the next phase of design. Specific activities and work products from this phase are described in the following subtasks. Any City provided comments on the Preliminary Design will be responded to by the design leads, adjudicated and incorporated in this Task as appropriate.

#### Task 4.1.1 Prepare 60% Drawings, Specifications and Basis of Design Report

This subtask will document the basis of design through updating the Preliminary Design Report with the 60% Design information including the recommended type and features of construction materials (pipe, manholes, valves, appurtenances, scour analysis summary, easement summary, and operational requirements for use of new and existing outfalls) for the new outfall pipeline. Drawings will be created based on the Preliminary Design and advanced to a 60% level of content. See anticipated drawing list in this scope. Technical specifications will be selected, and a first draft will be written in this task. Coordination with the City for initial development of the front-end specifications (Division 0 and Division 1) will occur with an owner questionnaire to document City preferences and requirements.

This subtask will also include updating the hydraulic model developed in Preliminary Design. The model will incorporate the 60% design elements and confirm hydraulic performance. An estimated construction schedule will be created based on the 60% design.

#### **Assumptions:**

- The project will use EJCDC General Conditions
- The project will use CH2M Supplementary Provisions (with input and confirmation from the City)
- The project will use CH2M Division 0 specifications
- Use of CH2M CSI Formatted 49 Division technical specifications.

#### **Deliverables:**

- Preliminary Design City comment responses
- 60% Drawings
- 60% Specifications
- 60% Estimated Construction Schedule
- Division 0 Client questionnaire
- Basis of Design Report

#### **Task 4.1.2 60% Cost Estimate**

A Class 2 cost opinion (in accordance with AACE International, the Association for the Advancement of Cost Engineering) will be developed based on the 60% design drawings and specifications.

##### ***Assumptions:***

- In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CH2M has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, CH2M makes no warranty that City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from CH2M's opinions, analyses, projections, or estimates.

##### ***Deliverables:***

- AACE Class 2 Construction Cost Opinion based on the 60% Deliverables.

#### **Task 4.1.3 60% Design Workshop Meeting**

CH2M will prepare for and participate in one design review workshop meeting. The meeting will be held with the CH2M team and City staff. This assumes that City staff will participate in each workshop. The workshops will be 3 hours in duration with City staff at City offices.

The workshop will be conducted following development the 60% deliverable.

##### ***Assumptions:***

- Review meetings will occur in City offices and will include two CH2M team staff members in City offices and other required CH2M staff members connecting via teleconference.

##### ***Deliverables:***

- Meeting notes will be distributed electronically to staff present at the meeting

#### **Task 4.2 Prepare 90% Design**

The purpose of this task is to develop the final contract drawings, specifications, and schedules for competitive bidding. Key activities during this phase will include:

- Finalize specification front-end documents, including General Conditions, General Requirements, bidding documents, bonds, and Instruction to Bidders. City input is required at this point to determine construction contract requirements and insurance requirements.
- Coordinate with City on advertising and bidding process.
- Prepare 90% construction drawings.
- Prepare 90% technical specifications.
- Prepare final calculations.

#### **Task 4.2.1 Prepare 90% Drawings, Specifications and Basis of Design Report**

This subtask will document the basis of design through updating the 60% Basis of Design Report with the 90% Design information. Drawings will be detailed based on the 60% Design and advanced to a 90% level of content. Technical specifications will be finalized. Coordination with the City for final development of the front-end specifications (Division 0 and Division 1) will occur.

This subtask will also include finalizing the hydraulic model updated in the 60% Design. The model will incorporate the 90% design elements and confirm hydraulic performance. An estimated construction schedule will be updated based on the 90% design.

***Assumptions:***

- The design concepts at the end of 60% are frozen and will be detailed in the 90% Design phase. Any major deviation from the 60% concepts will be evaluated for impacts to design cost and delivery schedule

***Deliverables:***

- Adjudicated responses to City 60% comments
- 90% drawings
- 90% Specifications
- 90% Estimated Construction Schedule
- 90% Basis of Design Report

**Task 4.2.2 90% Cost Estimate**

The Class 2 cost opinion (in accordance with AACE International, the Association for the Advancement of Cost Engineering) developed in the previous phase will be updated based on the 90% design drawings and specifications.

***Assumptions:***

- In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CH2M has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, CH2M makes no warranty that City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from CH2M's opinions, analyses, projections, or estimates.

***Deliverables:***

- Updated AACE Class 2 Construction Cost Opinion based on the 90% Deliverables.

**Task 4.2.3 90% Design Workshop Meetings**

CH2M will prepare for and participate in one design review workshop meeting. The meeting will be held with the CH2M team and City staff. This assumes that City staff will participate in each workshop. The workshops will be 3 hours in duration with City staff at City offices.

The workshop will be conducted following development the 90% deliverable.

***Assumptions:***

- Review meetings will occur in City offices and will include two CH2M team staff members in City offices and other required CH2M staff members connecting via teleconference

***Deliverables:***

- Meeting notes will be distributed electronically to staff present at the meeting

### Task 4.3 Prepare 100% Deliverable

The purpose of this task is to incorporate City 90% comments into the final contract drawings, specifications, and schedules for competitive bidding. All final contract documents will be stamped with professional seals as required. Key activities during this phase will include:

- Update BODR with changes resulting from City comments on the 90% Deliverable.
- Finalize specification front-end documents, including General Conditions, General Requirements, bidding documents, bonds, and Instruction to Bidders.
- Coordinate with City on advertising and bidding process.
- Prepare final construction drawings.
- Prepare final technical specifications.
- Prepare final calculations.
- Complete final checking and coordination review.
- CH2M will modify the contract documents to reflect all agreed upon final review comments from the City, applicable regulatory agencies and CH2M's quality control review team. The final documents will then be stamped and submitted to the City.

#### Task 4.3.1 Prepare 100% Drawings, Specifications and Construction Schedule

This subtask will finalize the Bid Document package through response, adjudication and incorporation of City comments on the 90% Design Deliverable. Any outstanding items requiring input from the City for the front-end specifications will be resolved. An estimated construction schedule will be finalized based on the 100% design.

##### **Assumptions:**

- The City will take the lead in determining and communicating DEQ CWSRF lone program requirements. CH2M will incorporate information provided by the City.

##### **Deliverables:**

- Updated BODR
- Bid package consisting of Div 0 and Div 1, technical specifications and drawings
- Bid package Estimated Construction schedule

## Preliminary Drawing List

We anticipate including the following sheets in the outfall relocation design.

Sheet Number	Title	Scale (full size)
	<b>ASHLAND WWTP OUTFALL RELOCATION</b>	
1	COVER, SITE MAP, LOCATION MAP	N/A
2	CIVIL LEGEND AND ABBREVIATIONS AND GENERAL NOTES	N/A
3	STRUCTURAL LEGEND 1	N/A
4	STRUCTURAL LEGEND 2	N/A
5	MECHANICAL LEGEND	N/A
6	SITE PLAN OVERVIEW, KEY PLAN, SURVEY CONTROL & CONSTRUCTION ACCESS	1"=200'
7	HYDRAULIC PROFILE	N/A
8	CIVIL – GEOTECHNICAL EMBANKMENT CONSTRUCTION	Varies
9	OUTFALL PLAN AND PROFILE 1	1"=50'
10	OUTFALL PLAN AND PROFILE 2	1"=50'
11	OUTFALL PLAN AND PROFILE 3	1"=50'
12	OUTFALL PLAN AND PROFILE 4	1"=50'

Sheet Number	Title	Scale (full size)
13	OUTFALL PLAN AND PROFILE 5	1"=50'
14	OUTFALL PLAN AND PROFILE 6	1"=50'
15	SEWER REPLACEMENT PLAN AND PROFILE 1	1"=50'
16	DETAILS – OUTFALL AND TRENCH DETAILS	Varies
17	CONNECTION AT WWTP - CIVIL	Varies
18	CONNECTION AT WWTP – STRUCTURAL	Varies
19	CONNECTION AT WWTP –MECHANICAL	Varies
20	DETAILS – AIR VALVES AND ACCESS MANHOLES	Varies
21	BEAR CREEK OUTFALL PLAN - CIVIL	Varies
22	BEAR CREEK OUTFALL PLAN - STRUCTURAL	Varies
23	BEAR CREEK OUTFALL PLAN - MECHANICAL	Varies
24	ASHLAND POND INTAKE PLAN AND SECTIONS	Varies
25	ASHLAND POND INTAKE STRUCTURAL AND MECHANICAL DETAILS	Varies
26	EROSION CONTROL - CONSTRUCTION AREA AND ACCESS ROADS	Varies
27	EROSION CONTROL PLAN – WWTP	Varies
28	EROSION CONTROL PLAN – PIPELINE	Varies
29	EROSION CONTROL PLAN – BEAR CREEK OUTFALL	Varies
30	EROSION CONTROL PLAN – ASHLAND POND INTAKE	Varies
31	EROSION CONTROL SECTIONS	Varies
32	EROSION CONTROL DETAILS	Varies
33	EFFLUENT PIPELINE CORRIDOR RESTORATION PLAN	Varies
34	BEAR CREEK OUTFALL RESTORATION PLAN	Varies
35	TREE PROTECTION PLAN	1"=100'

## Task 5 Phase 2 Bidding Services

### Task 5.1 Bidding Period Services

CH2M will provide services to assist the City in selection of a single Contractor assigned to construct the project. CH2M will provide services under this task up to the limits of the budget allocated. These services are expected to consist of the following.

#### Task 5.1.1 Administration of Project Advertisement

CH2M will support the City in advertising the Project. The City will prepare, arrange and pay for advertisement of the project in a local newspaper. The City will arrange for a Plan Center to host the documents for bidders to obtain documents and maintain interested bidders. The City will distribute the contract documents and maintain a list of plan holders and a list of registered parties. CH2M will provide support such as responses to City inquiries and requested adjustments to the bid package.

#### **Assumptions**

- Up to 8 hours of CH2M support will be provided for advertising the Project.

#### Task 5.1.2 Respond to Bidder Questions

It is assumed that the City will be the contact for receipt of bidder questions and requests for information (RFI). CH2M will receive bidder questions and RFIs from the City and develop responses.

CH2M will provide technical interpretation of the Bid Documents and will prepare, for City approval, proposed responses to all proposers' substantive questions and requests, which may be in the form of addenda. Responses to bidder questions will be provided by City to bidders. Substantive questions will



be questions that cannot be answered by referral of proposers to unambiguous Bid Documents and the associated specifications and drawings for resolution and require CH2M's interpretation or clarification by addenda.

***Deliverables***

- Log of bid questions with responses in Excel and PDF format.

**Task 5.1.3 Conduct Pre-Bid Conference**

CH2M will assist the City in arranging and conducting one pre-bid conference. In consultation with City, CH2M will develop the draft agenda and content of the pre-bid conference. CH2M will take minutes or make other provisions for documenting the results of the pre-bid conference. Also, CH2M will record all questions and requests for additional information and shall, after coordination with City, issue responses and additional information.

***Deliverables***

- Preparation of pre-bid conference minutes, and coordinate issuance of responses and additional information.

**Task 5.1.4 Prepare and Issue Addenda**

CH2M will prepare all Addenda to the Bid Documents and will distribute Addenda to the City. A maximum of three addenda are assumed. All Addenda will be approved by the City.

***Deliverables***

- Addenda during bid period.

**Task 5.1.5 Evaluate Bids**

CH2M will review submitted bids for responsiveness in accordance with the requirements Oregon Revised Statue 279C.375.(3), and including: bonds, insurance certificates, construction schedules, alternative bids and other documentation included with the contractors bid. Results will be organized and recorded in a spreadsheet. CH2M will prepare a bid abstract and unit price comparison and in consultation with City staff, make recommendations for contract award regarding the responsible bidder. CH2M will assist City staff in contract approval presentation to the City Council

***Deliverables***

- Bid responsiveness spreadsheet
- Bid abstract spreadsheet
- Recommendation for award

**Task 5.2 Conformed Documents**

CH2M will incorporate addenda during bidding phase into the contract documents.

***Assumptions:***

- Incorporate Addenda into CAD drawings.
- Stamp block will show Conformed Docs Language.

***Deliverables***

- PDF sets of full-size drawings, half-size conformed drawings and specifications.
- Translation of CAD files into AutoCAD format

## Task 6 Final Engineering Survey

### Task 6.1 Surveying

#### Task 6.1.1 Topographic Survey and Mapping for No-Rise Certification Model

This task covers the surveying required to support preparation of a “No-Rise” Certification for the proposed outfall in Bear Creek. The no-rise certification will be prepared in accordance with the written guidance provided by FEMA on Procedures for “No-Rise” Certification for Proposed Developments in the Regulatory Floodway.

Provide three existing conditions River Sections of Bear Creek at the locations shown in Exhibit 6-1.

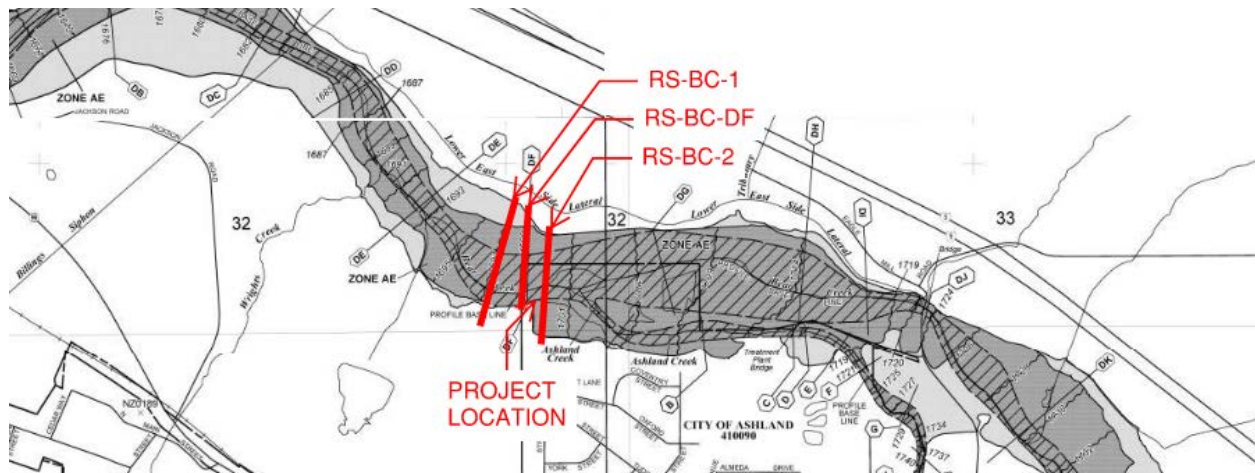


Exhibit 6-1. Bear Creek River Cross Sections for Ashland WWTP Outfall Relocation

The River Sections of Bear Creek shall be perpendicular to the flow and extend to encompass the active channel, the Floodway and Flood Plain as shown on the current the FEMA FIRM map. Each river section shall have data points taken approximately every 10-ft. Capture all significant breaks in slope across the section, water levels, changes in vegetation, intermediate points defining sections of material and changes in bank materials. Each data point shall record xyz coordinates and a description of ground material where point was taken. Also take digital photos of point locations in water where bottom is visible and all out of water locations. Correlate digital photos to point ID.

Prepare an AutoCAD file for the river sections. The basemap shall show the horizontal location of each river section, with the FEMA FIRM floodway and floodplain data overlaid. Also provide a cross section drawing for each River Section.

#### **Assumptions**

- Bathymetry in Ashland Pond for River Section RS-BC-2 is not required.
- Mapping shall be provided in accordance with CH2M CAD standards.
- Horizontal accuracy shall be plus or minus 0.1 feet and vertical accuracy shall be plus or minus 0.2 feet.
- The vertical and horizontal datums will be NGVD 29 and the City of Ashland’s standard horizontal datum.
- LIDAR data can be used for background topography in the basemap.

#### **Deliverables**

- One 1"=20' scale Base Map prepared in AutoCAD Version 2013 or later showing all required River Section locations and FEMA FIRM Floodway and Flood Plain limits. LIDAR contour interval shall be shown at 2 foot.
- River Section Drawings prepared in AutoCAD Version 2013 or later showing topographic data taken in the field and annotated with ground material.
- ASCII files of all surveyed points (PN,X,Y,Z,D)
- Copies of all field notes
- Digital photos of point locations
- Surveyor's Report describing methods and procedures used to acquire the surveyed data

### **6.1.2 Tree Protection Plan Survey**

In the April 2019 Notice of Final Decision from the City of Ashland on the local Limited Activities and Uses Permit and Physical Environmental Constraints Permit, the application was approved with the condition that prior to commencing site work including any demolition, staging, storing of project materials, or tree removal:

- The applicant shall submit a Tree Removal Permit application including a tree inventory, tree preservation and protection plan, and written findings addressing the approval criteria in AMC 18.5.7.040. The Tree Removal Permit, associated plans and Tree Verification inspection shall be approved prior to any site work including tree removal.
- A Mitigation Plan consistent with the requirements of AMC 18.3.11.110 and a Long-Term Conservation, Management and Maintenance Plan consistent with the requirements of AMC 18.3.11.110.C for the disturbed water resources protection zones shall be provided for the review and approval of the Staff Advisory in conjunction with the Tree Removal Permit request once final design drawings have been developed.

This task covers the surveying required to support preparation of the Tree Remove Permit application and Mitigation Plan.

Survey scope will include:

- Staking of the proposed pipeline alignment and work limits prior to the tree preservation site walk on a 25-ft interval. Work limits are approximately 25-ft either side of the pipeline alignment.
- Return to survey confirmed and flagged trees requiring removal and trees requiring protection following the tree preservation site walk. Tagging of trees for arborist coordination will be required.
- Any updates to the tree inventory required due to site fire damage since the previous tree inventory conducted during the pre-design.

### ***Deliverables***

- Updated basemap with trees to be protected and trees to be removed.
- Updated tree inventory

## Estimated Budget

CH2M will perform work on a time and materials basis. The budget for the Phase 2 work is \$362,409. The rates shown in Exhibit B are current and will be escalated due to annual review cycle in January 1, 2022.

A summary of total cost by top task is provided in the table below. A detailed breakdown of hours, labor costs, expenses, and total cost by subtask is provided in the attached Exhibit B.

<b>Task #</b>	<b>Task Name</b>	<b>Fee</b>
1.0	Phase 2 Project Management & QA/QC	\$54,381
2.0	Phase 2 Public Involvement	\$28,301
3.0	Phase 2 Permitting Support	\$50,795
4.0	Phase 2 Final Engineering	\$195,858
5.0	Phase 2 Bidding Services	\$28,971
6.0	Final Engineering Surveying	\$4,102
	<b>Phase 2 Total</b>	<b>\$362,409</b>

## Schedule

The following schedule is estimated for the Phase 2 work, assuming a notice to proceed is issued on or before May 20, 2021.

<b>Activity</b>	<b>Start</b>	<b>Finish</b>
Subconsultant Contracting and Project Initiation	3/10/2021	5/20/2021
Phase 2 Public Involvement Support	5/20/2021	4/21/2022
Phase 2 Permitting Support	5/20/2021	12/2/21
60% Design	5/20/2021	8/20/2021
90% Design	8/23/2021	11/24/2021
Final Design and Bid Package	11/29/2021	1/21/2022
Bidding and Award	2/7/2022	5/2/2022



# PROJECT SCHEDULE

