

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

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| AGENDA TITLE: | Authorize the City Manager to Execute an Amendment to the Contract with Jacobs Engineering Group for Bid-Ready Design on Phase 1 of the SR-523 (N/NE 145 th Street) Aurora Avenue to Interstate-5 Project in an Amount Not to Exceed \$629,778 for a Contract Maximum Amount of \$5,761,755 |
| DEPARTMENT: | Public Works |
| PRESENTED BY: | Elizabeth Kelly, Interim City Engineer |
| ACTION: | <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input checked="" type="checkbox"/> Motion <input type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing |

PROBLEM/ISSUE STATEMENT:

The City of Shoreline has passed the 100% design submittal milestone for the 145th Corridor – Phase 1 (Interstate 5 to Corliss Avenue N). During the effort from Jacobs Engineering Group to progress the design to 100%, a multitude of changes and a major scope addition were included in the final design. The major scope addition was the work to include voluntary betterments by Seattle Public Utilities (SPU) to their existing water system and drainage/wastewater system established in the interlocal agreement 145th Corridor Project – Water, Drainage, and Wastewater Design and Construction.

Tonight, Council is being asked to authorize the City Manager to execute an amendment (Supplement #7; Attachment A) with Jacobs Engineering Group to continue design and right-of-way services for Ad-Ready design on the 145th Corridor - Phase 1 Project.

RESOURCE/FINANCIAL IMPACT:

Jacobs will address minor design changes, add SPU scope, and prepare an Ad Ready design package for the project as defined in Attachment B to this staff report. The fee estimate for services is \$629,778 as per Attachment C. The additional funds for this amendment include \$66,138 in management reserve released from Supplement #6 (Property Management), \$272,868 from Seattle Public Utilities, and the remaining \$290,770 from the Connection Washington Grant. Future phases of the project will utilize Connecting Washington grant funding. The project cost and budget summary for the design phase for Phase 1 is as follows:

EXPENDITURES

| | |
|--|---------------------|
| City Staff + Expenses | \$ 691,595 |
| <u>Consultant Contract (Jacobs)</u> | |
| 30-Percent Design and Environmental | \$ 1,710,639 |
| 60-Percent Design and Right-of-way Acquisition | \$ 1,873,112 |
| 100-Percent Design and Right-of-Way Acquisition Phase 1 | \$ 1,548,228 |
| <i>Design Scope Additions and Ad-Ready Design (this contract amendment)</i> | \$ 629,778 |
| WSDOT | \$ 50,000 |
| Total Expenditures | \$ 6,503,352 |

REVENUE

| | |
|--|---------------------|
| Surface Transportation Program | \$ 4,235,000 |
| Roads Capital Fund (Design Phase) | \$ 660,954 |
| Seattle Public Utilities Reimbursement | \$ 272,867 |
| Connecting Washington (Design Phase) | \$ 926,525 |
| Connecting Washington (ROW Phase) | \$ 408,006 |
| Total Revenue | \$ 6,503,352 |

RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute an amendment with Jacobs Engineering Group for Ad Ready design related to Phase 1 of the SR 523 (NE 145th Street) Corridor Aurora Avenue to Interstate 5 Project in an amount not to exceed \$629,778 for a contract maximum amount of \$5,761,755.

Approved By: City Manager **BE** City Attorney **MK**

BACKGROUND

In 2016, the City completed the [145th Street Multimodal Corridor Study](#) which identified needed improvements along SR-523 (145th Street) from Aurora Avenue N to Interstate-5, in addition to improvements on three other segments of the corridor. The improvements are needed to benefit traffic operations, safety, pedestrian, and bicycle mobility and to improve access to the Shoreline South/148th Light Rail Station. The Multimodal Corridor Study separated the project into five phases that align with segments of the roadway. This contract covers the segment from Interstate 5 to Aurora Avenue N. The interchange is being designed through a separate project; the segment from SR-522 to I-5 is included in the Sound Transit 3 BRT scope; and the final segment from Aurora Avenue to 3rd Avenue NW is not currently funded for design.

On June 5, 2017, the City Council authorized the City Manager to enter into a contract with CH2M Hill for the design and environmental services for the 145th Corridor project (since this initial contract authorization, CH2M Hill was acquired by Jacobs Engineering Group and thus the name has been revised from the original contract.) The scope of the initial contract covered through 30% design and environmental review for a contract amount of \$1,710,639. The staff report for Council authorization of this contract can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2017/staffreport060517-7b.pdf>.

On November 18, 2019, the City Council authorized the City Manager to execute an amendment for the contract with Jacobs Engineering Group for the design and right of way services for the 145th Corridor Project. The scope of the amendment covered through 60% design and right of way services for a contract amount of \$1,873,112. The staff report for Council authorization of this amendment can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2019/staffreport111819-7f.pdf>.

On September 13, 2021, the City Council authorized the City Manager to execute an amendment for the contract with Jacobs Engineering Group for the design and right of way services for the 145th Corridor Project. The scope of the amendment covered through 100% design and right of way services with a contract amount of \$1,614,366. The staff report for Council authorization of this amendment can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2021/staffreport091321-7h.pdf>. \$1,548,228 has been expended by Jacobs on this supplement with a remainder of \$66,138 in management reserve.

DISCUSSION

Work performed under this amendment will fund minor design changes, add Seattle Public Utilities (SPU) betterment scope, and advance the design of Phase 1 (Interstate 5 to Corliss Avenue) to the Ad Ready design milestone. The design phase of the project has four funding sources: local funding from the Roads Capital Fund, federal State Transportation Project (STP) grant funding for engineering and design, reimbursement

from an Interlocal Agreement with SPU, and State Connecting Washington (CWA) grant funding. Phase 1 of the project is fully funded through the right-of-way and construction phases with these and other funding sources.

ALTERNATIVES ANALYSIS

CH2M Hill was selected for this work in 2017 based on a competitive selection process including review of written qualifications, an interview, and a review of references. The scope of the selection process included design, right-of-way services and services during construction. Their work on the preliminary design, environmental documentation, and right-of-way acquisition has been satisfactory and staff recommends that the consultant, which is now Jacobs Engineering, be retained for the additional services presented.

The alternative is to not authorize this amendment which would stop progress on the design of the project and result in a delay in construction and potentially risk grant funds. Staff does not recommend this alternative.

COUNCIL GOAL(S) ADDRESSED

Progress on the 145th Corridor Project helps to implement City Council Goals:

- Goal 2: Continue to deliver highly valued public services through management of the City’s infrastructure and stewardship of the natural environment; and
- Goal 3: Continue preparation for regional mass transit in Shoreline.

RESOURCE/FINANCIAL IMPACT

Jacobs Engineering will address minor design changes, add SPU scope, and prepare an Ad Ready design package for the project as defined in Attachment B to this staff report. The fee estimate for services is \$629,778 as per Attachment C. The additional funds for this amendment include \$66,138 in management reserve released from Supplement #6 (Property Management), \$272,868 from Seattle Public Utilities, and the remaining \$290,770 from the Connection Washington Grant. Future phases of the project will utilize Connecting Washington grant funding. The project cost and budget summary for the design phase for Phase 1 is as follows:

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RECOMMENDATION

Staff recommends that the City Council authorize the City Manager to execute an amendment with Jacobs Engineering Group for Ad Ready design related to Phase 1 of the SR 523 (NE 145th Street) Corridor Aurora Avenue to Interstate 5 Project in an amount not to exceed \$629,778 for a contract maximum amount of \$5,761,755.

ATTACHMENTS

- Attachment A: Draft Supplement #7
- Attachment B: Jacobs Engineering 145th Street Multimodal Corridor Project – Aurora Avenue to Interstate-5 Project, Phase 1 – Scope Additions and Bid Ready Design Scope of Work
- Attachment C: Fee Estimate/Level of Effort (LOE)



**Washington State
Department of Transportation**

| | | | |
|---|--|--|--------------------------------------|
| Supplemental Agreement Number <u>07</u> | | Organization and Address | |
| Original Agreement Number 8794 | | CH2M Hill, Inc. 1100 112th Ave NE, Suite 500 Bellevue, WA 98004-4505 | |
| Project Number ST266643 / STPUL-0523(010) | | Execution Date | Completion Date December 31, 2024 |
| Project Title 145th Street Corridor Project | | New Maximum Amount Payable \$5,761,754.58 | |
| Description of Work This supplement provides services for Phase 1 (Interstate 5 to Corliss Avenue) Ad Ready design and SPU Scope change as outlined in Exhibit B (attached). The supplement will release the remaining \$66,138.83 from the Management Reserve budget, \$290,770 Connecting Washington funds, and \$272,868 authorized by the Seattle Public Utilities Interlocal Agreement. Maximum Amount Payable increased to \$5,761,754.58 as per the Supplement Summary Sheet (Exhibit "A"). | | | |

The Local Agency of Shoreline
desires to supplement the agreement entered in to with CH2M Hill, Inc.
and executed on 07/21/2017 and identified as Agreement No. 8794

All provisions in the basic agreement remain in effect except as expressly modified by this supplement.
The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:
The original agreement will be supplemented for the addition of scope for SPU scope addition and Ad Ready design for Phase 1 of the 145th Corridor (I-5 to Corliss Avenue). Services to additional engineering and design for SPU infrastructure and various change items as outlined in Exhibit A6.

II

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: No change in completion date. December 31, 2024

III

Section V, PAYMENT, shall be amended as follows:
Maximum Amount Payable increased to \$5,761,754.58. Amended as shown in the attached Fee Estimate/LOE (Exhibit D5).

as set forth in the attached Exhibit A, and by this reference made a part of this supplement.
If you concur with this supplement and agree to the changes as stated above, please sign in the Appropriate spaces below and return to this office for final action.

By: _____ By: Bristol Ellington, City Manager

Consultant Signature Approving Authority Signature

Date

Exhibit "A"
Summary of Payments

| | Basic Agreement | Supplement #1 | Total |
|---|-----------------|---------------|-------------------------|
| Direct Salary Cost | 1,409,884.08 | 229,158.16 | 1,639,042.24 |
| Overhead (Including Payroll Additives) | 1,456,833.21 | 236,789.13 | 1,693,622.34 |
| Direct Non-Salary Costs | 1,883,045.88 | 24,361.17 | 1,907,407.05 (incl. MR) |
| Fixed Fee | 448,352.34 | 73,330.61 | 521,682.95 |
| Total | 5,198,115.51 | 563,639.07 | 5,761,754.58 |

City of Shoreline
145th Street Multimodal Corridor Project
Aurora Avenue to I-5
PH.1 Scope Additions and Ad Ready Design

02/01/2023

Exhibit A6 – Scope of Work

Supplement #7

In developing Phase 1 90% Design and Final Design for the CITY of Shoreline 145th Street Multimodal Corridor Project, additional design, coordination, and support are required of the CONSULTANT to deliver the project. This additional design, coordination, and support requested of the CONSULTANT was not anticipated during project scoping. Supplemental design, coordination, and support items of work have been identified through the process of coordinating project requirements with the CITY, the Interchange Project, and outside stakeholders and have been recorded in the Project Change Log.

This exhibit serves as a Scope Modification document to identify the supplemental and additional scope items and to allocate project budget for these tasks.

Seattle Public Utilities (SPU) is requesting additional work elements to be included in the project to add water, drainage and wastewater (DWW) improvements. The addition of these project improvements will require potholing, environmental documentation, and utility design. Redesign of roadway improvements as depicted in the 60% Design will not be required to accommodate the SPU additions.

This Scope of Work adds water and DWW improvements in Phase 1 extents. This scope of work includes environmental permitting, final design engineering, plans, specifications, cost estimating, agency approvals and agency coordination.

Scope of work is based on the proposed SPU improvements coordinated with and provided to the CITY in July, 2021, specific to improvements within the Project Phase 1 limits.

The CITY and SPU have entered into an agreement (the Agreement) for the execution of this work. Per the Agreement, this scope of work is a Contract Amendment to the CITY'S 145th Street Corridor Project with Jacobs Engineering, Inc. Invoicing for this amendment will be sent to the CITY. SPU will reimburse the CITY according to the terms and conditions in the Agreement.

Task 1 Supplemental Project Management

1.3 Project Schedule Management. Additional schedule management services are required to merge the project with the Interchange project and to evaluate schedule changes. The CONSULTANT shall evaluate project schedule changes and will communicate project risks to the CITY.

1.8 Supplemental Change Management. The Project Change Log will be updated to identify changes and communicate response strategies.

Task 1 Deliverables:

- Project Schedule updates.
- Change Log.
- Meeting notes.

Task 4 Right of Way

4.4 Support for Surplus Parcels. The CONSUTLANT shall prepare exhibit maps, calculations, and legal descriptions for the Phase 1 Surplus parcels for up to 6 parcels.

4.5 Supplemental Building Demolition Permitting. The CONSULTANT will support the CITY to address additional services requested by the CITY. This task includes preparation of TESC plans and grading permit applications.

4.6 Supplemental Property Management Services. Additional property management services are required to deliver the project. Services include responding to multiple property incidents, re-boarding buildings, additional fence rental, and additional coordination with the CITY.

4.7 Supplemental Rights of Entry. The CONSULTANT will support the CITY and the project by obtaining rights of entry needed for the additional scope modifications. These activities that need rights of entry include supplemental field surveys, arborist activities, and supplemental geotechnical field work.

Task 4 ROW Deliverables:

- Additional parcel maps and legal descriptions.
- TESC Plans for grading permit.
- Property management.
- Additional TCE.
- Surplus.

Task 5 Contract Drawings

5.7 Supplemental Design. The CONSULTANT will support the CITY to address design changes requested by the CITY. This task includes roadway design, stormwater design, utilities, illumination, traffic signals, and other disciplines as needed to support design changes. Design changes include, but are not limited to:

- Redesign of 1st Ave profile and cross slope, including Washington State Department of Transportation (WSDOT) design analysis and documentation, revision to grading, revision to plans and estimate. This task also includes the redesign of structural retaining wall on the north side of 145th Street.

- Redesign of Corliss Ave due to changed site conditions.
- Redesign of Sunnyside Ave due to changes in property acquisition. This includes the design modifications of structural wall.
- Redesign of the joint detention vault. This task includes relocating the detention vault from the Lin Parcel to the Portal North parcel. This task includes several updates and reconfiguration to the layout to address project changes and opportunities including Third Ave Access road, Third Ave sewer, access from 147th, dog park option.
- Advancement of Early Works package. Development of design and documentation to break out an early works construction package. Develop early works package including the design for access from 147th to implement the installation of a new sewer line (design by CITY), and installation of detention vault outfall pipe.
- Redesign of utility undergrounding to accommodate power distribution crossings from south of 145th to north of 145th Street.
- Redesign of utility undergrounding to accommodate power distribution trench running east-west along the north side of 145th Street.
- Redesign of stormwater management facility at Meridian Ave based on changes to landscaping and increased impervious surface.
- Redesign of curb ramp configuration to directional ramps
- Project combining with Interchange Project. This task includes supporting the CITY with merging the Corridor Project Phase 1 construction documents with the Interchange Project. The task includes revisions to plans, specifications, bid documents, bid list, and engineers estimate in coordination with the Interchange Project to create a seamless bid package. Formatting changes to plans are included for consistency. The task includes additional weekly meetings with the Interchange project management team, peer-to-peer coordination meetings with the CONSULTANT and the Interchange design team, additional meetings with the CITY to coordinate the changes, and additional meetings with utility companies as necessary to address project changes.
- Program Cost Estimate Review, Phase 2 and Phase 3. Review bid items and unit prices for adjustments based on market conditions. Develop an approach for project escalation.
- Redesign of 1st Ave Bike Facility. Redesign curb ramps and grading of 1st Ave NE to accommodate revised bike facility design on 1st Ave NE. This task includes traffic signal plans modifications.
- Redesign of Wall 15S from standard curb wall to custom CIP wall design.
- Redesign of Illumination including illumination calculations based on revised direction to use SCL wiring instead of WSDOT wiring. Redesign includes change to the CITY'S service cabinet instead of WSDOT service cabinet.
- Phase 1 Arborist Report. The CONSULTANT will prepare an Arborist Report for Phase 1. Due to the time lapse since the 60% Arborist Report, the Phase 1 Arborist Report will require field work to evaluate trees in the project area. The Arborist Report will be specific to Phase 1 improvements.

- Update to City of Seattle Standard Specifications 2023. The City of Seattle has requested that the project contract documents be updated to 2023 Standard Specifications. The CONSULTANT will update applicable plans and project specifications.

Task 5.7 Deliverables

- Supplemental design elements will be included as part of 90% design submittal PS&E package, 100% design PS&E, and Ad-Ready PS&E.
- Program cost estimates for Phase 2 and Phase 3.
- Illumination Calculations.
- Phase 1 Arborist Report.

Task 9 Additional Geotechnical Investigation Support

9.1 Supplemental Geotechnical Investigation. Due to the relocation of the storm detention facility, additional geotechnical analysis is needed to support the final design. This task includes field work, coordination with the drilling subcontractor, and development of traffic control plans. This task also includes activities of an arborist to remove limbs from a tree to facilitate the drilling of a geotechnical boring.

Task 12 Additional Agency Coordination Support

12.4 Supplemental Utilities Coordination. The CONSULTANT will support the CITY in coordination with the Utility providers in the development of the project design. Coordination includes meetings with utility providers, review of materials provided by Utility agencies, and development of materials for coordinating the design. Four (4) additional meetings are assumed for up to three (3) CONSULTANT team members.

12.6 Additional Agency Coordination Meetings as Directed. The CONSULTANT will support the CITY as directed with participation in additional coordination meetings with Agency partners. Meeting support includes preparation of agendas, meeting notes, and meeting materials. The level of effort for this task is limited to the budget established in Exhibit D LOE.

Task 12 Deliverables:

- Meeting agendas and meeting notes

14.0 SPU Water and DWW Improvements

The CONSULTANT will prepare plans, profiles, and details for water and DWW Improvements.

14.1 PROJECT MANAGEMENT

The CONSULTANT will provide overall project administration and management for the duration of this contract.

- 1.1 Project Schedule. The project schedule will be revised to reflect the SPU Project Additions. A detailed critical path schedule for the CONSULTANT work elements shall be prepared by the CONSULTANT and will be jointly developed with the CITY with input from SPU.
- 1.2 Direction and Review. Implementation of the workplan, and direction of the staff and review of their work over the course of the project shall be provided. This is for the overall project rather than a specific work element and shall provide guidance to the entire team. The CONSULTANT shall direct and control the staff by supervising their work, holding regular internal coordination meetings, and by other methods.
- 1.3 Document Management. The CONSULTANT shall provide for the management of the drawings and documents received and generated over the course of the project. This information shall be filed to facilitate ready and selective retrieval. Drawings and documents will be accessible to SPU.
- 1.4 Monthly Progress Reports and Invoicing. This work element shall include the monthly invoice and progress reports. Invoices and backup shall be prepared in accordance with the format agreed to with the CITY and SPU project manager. Invoices shall clearly distinguish tasks and hours, and costs for Water and DWW funds. Invoices shall itemize cost per tasks, percent spent and percent complete. This section shall be consistent with the terms and conditions in the Agreement. The progress reports shall describe the work accomplished during the billing period in bullet form. The progress reports shall be submitted to the CITY with the monthly invoice.
- 1.5 Budget Monitoring and Projections. Monthly monitoring of the CONSULTANT'S budget shall occur over the course of the project and projections provided to the CITY and SPU upon request. This work element is intended to help monitor costs and budgets and to propose corrective actions.
- 1.6 Issue and Change Management. The Project Change Log will be updated to identify changes and communicate response strategies. three updates to the Change Log are assumed.

Task 1 Deliverables:

- Project schedule.
- Monthly invoices and progress reports.
- Monthly budget status reporting.
- Project change log and up to three (3) updates.

14.2 PROJECT DELIVERY AND PROJECT COORDINATION

This work element is continuous throughout the duration of the project. It includes the work necessary to coordinate the work with the CITY, SPU, related projects, and project team.

- 14.2.1 Project Management Team Meetings. The CONSULTANT will participate in project management team (PMT) meetings with the CITY to review project status and discuss project issues. These meetings are assumed to be two (2) hours in length. Up to one CONSULTANT team staff member leading the SPU design will attend ten (10) meetings over the course of the project.
- 14.2.2 Risk Management. The Risk Register is a tool that identifies potential risks to the project and management strategies for those risks. A Risk Register will be maintained and updated by the CONSULTANT up to three (3) times to monitor project progress over the course of the development of this Project Element.
- 14.2.3 Removed from scope.
- 14.2.4 Consultant Project Team Meetings. The CONSULTANT will plan and lead weekly team meetings to coordinate work between the team members. This effort is for the overall project rather than

a specific task and is intended to provide the coordination that the team will need to understand project priorities, deadlines, and resolve issues that arise. For budgeting purposes, 32 weekly meetings, one hour in length are assumed over the duration of the project. One (1) CONSULTANT staff is assumed.

- 14.2.5 SPU Coordination. The CONSULTANT will participate in over-the-shoulder review meetings with SPU to facilitate design feedback and progress check-ins. For budgeting purposes, four (4) meetings are assumed with a duration of two hours. Two (2) CONSULTANT staff are assumed.

14.3 ENVIRONMENTAL DOCUMENTATION

The purpose of this re-evaluation task is to document that additional SPU improvements work items (being coordinated with the City of Seattle) to be performed by the Project will not result in any new significant environmental impacts that were not previously evaluated in the 2020 National Environmental Policy Act (NEPA) Categorical Exclusion and 2020 State Environmental Policy Act (SEPA) Environmental Checklist.

14.3.1 NEPA Reevaluation

For this task, the CONSULTANT shall perform the following:

- Preparation of an Updated APE Map Memorandum that will contain an updated Section 106 Area of Potential Effect (APE) map and will describe additional work items; the Updated APE Map Memorandum will be transmitted to WSDOT, who in turn will transmit it to the Washington State Department of Archaeology and Historic Preservation (DAHP) for approval.
- Preparation of a NEPA-SEPA Re-Evaluation Memorandum which will describe how additional work items would not result in new significant adverse effects as compared to the previously approved 2020 NEPA Categorical Exclusion and SEPA Environmental Checklist; this memorandum (which will contain the DAHP-approved Updated APE Map Memorandum as an attachment) will be emailed to WSDOT to satisfy all Project requirements under NEPA and SEPA.

Assumptions:

- The Project will not entail any actions necessitating the acquisition of additional right-of-way (compared to that described in the 2020 NEPA Categorical Exclusion and 2020 SEPA Environmental Checklist).
- No additional new impacts, of any kind, to any environmental discipline areas are anticipated.
- Up to two (2) meetings with CONSULTANT and WSDOT.
- Coordination between the CONSULTANT and WSDOT shall be conducted via email.

Deliverables:

- Draft and Final Updated APE Map Memorandum.
- Draft and Final NEPA-SEPA Re-Evaluation Memorandum.
- Attendance at up to two (2) meetings with WSDOT.

14.4 Supplemental Survey for Water and DWW improvements

Supplemental survey will be conducted in areas of proposed water and DWW improvements to locate potholing locations. Potholing will be conducted at each area of where proposed water and drainage crosses existing utilities per 14.5. For budgeting purposes this survey task item has been estimated not to exceed 40-field crew hours for field and office work.

14.5 Utility Potholing and Conflict Resolution

Pothole locations will be determined during the design phase and coordinated with the various utility owners. These critical locations will include locations where proposed utilities cross existing utilities that will remain, and connection locations. Documentation will consist of pothole location shown on plan drawings with additional information in tabular form. Tabular information will include utility type, size, location, depth and additional detail as determined. The CONSULTANT will obtain permits necessary for the potholing work. It is assumed that any permit fees for this task will be paid for by SPU and/or CITY. For budgeting purposes, fifteen (15) potholes are assumed as part of this scope of work.

- Conflict Resolution will be conducted through plan review initially and will be followed with meetings with each affected Utility. Up to three (3) CONSULTANT team members will attend up to three (3) Conflict Resolution meetings.
- A potholing plan will be developed as part of this scope of work. The potholing plan will be reviewed and approved by SPU prior to proceeding with potholing.

14.6 General Plans

The CONSULTANT will review the 60% General Plans as needed to incorporate the additional water and DWW work.

14.6.1 General Plans

The CONSULTANT will update the cover sheet in accordance with CITY standards and update the index of drawings. The list of plan sheet titles in the indices will exactly match the titles as they appear on the plan sheets. See Appendix A for preliminary list of the contract drawing sheets.

Water and DWW general notes, abbreviations, and symbols sheet will be created or updated as part of the discipline specific scope of work in Task 14.

A summary of quantities depicting bid items quantities will not be included in the plan set.

14.6.2 Survey Control, Alignment, and Right of Way Plans

No additional scope is included for these Plans.

14.6.3 Construction Sequence and Traffic Control Plans

The CONSULTANT will review and update the 60% construction staging plans as necessary to incorporate the additional water and DWW work.

14.6.4 Site Preparation and Temporary Erosion Control

The CONSULTANT will update the 60% Site Preparation and Temporary Erosion Control plans to incorporate demolition activities required for the additional water and DWW work.

Task 14.6 Deliverable(s):

- Plans described in Tasks 14.6.1 through 14.6.4 and as listed in Attachment A: Sheet List by Discipline

14.7 Roadway Plans

It is assumed that no revisions to roadway plans are needed to incorporate the additional water and DWW work.

14.8 Water Plans

14.8.1 Basis of Design

The CONSULTANT shall prepare a Basis of Design report to verify design criteria requirements of the watermain relocation. The design shall be according to 2020 Seattle Standard Plans and Specifications, as well as SPU's Design Standards and Guidelines. The design shall comply to Buy America(n) requirements as set forth by the CITY's federal funding source(s). This report would include the following:

- Verify water system design constraints such as normal operating pressures, fire flow demands, restrained joint pipe extents, and operational redundancy.
- Determine appurtenance and pipe material selection criteria for achieving manufacturing concurrence on products and materials between the AGENCIES and selected PROJECT stakeholders.
- Evaluate constructability and sequencing considerations to maintain water service as much as possible throughout construction and confirm watermain improvements does not conflict or impact with other improvements associated with the overall PROJECT. This work includes suggested construction sequencing to install and connect the water improvements.
- Determine extents of additional utility relocations as a result of the water and DWW improvements if utility relocations require pavement restoration beyond the 60% Design paving limits.

14.8.2 Water Plans and Details

The CONSULTANT will develop 1"=20' watermain plan & profile sheets for the corridor; and 1"=10' intersection plan view sheets in accordance with SPU standards. The sheets will be developed using the project's previously developed CAD standards but the content of the sheets will be in accordance with SPU standards. The design shall include lines to be decommissioned, relocations and new lines. Removals will be shown on the Site Prep Plans. The plans will also indicate service lines to be decommissioned, relocated, temporarily connected, disconnected and reconnected. A water service list will be developed and keyed to the plans containing individual water service data provided by SPU. The list shall also show work responsibilities performed by SPU and contractor. Details will be developed for connections of Contractor constructed water mains to existing water mains (system connections).

14.8.3 Water Profile Plans

Water line profiles will be included for service lines larger than 2-inches, fire hydrants and new water mains. These profiles will include pipe size, material, length, type of appurtenances, bedding, and utility crossings.

Assumptions

- Total watermain improvements include the removal, abandonment, retirement or decommissioning of miscellaneous water appurtenances associated with the work described below.
- Approximately 160 feet of 8-inch restrained joint ductile iron watermain and appurtenances along Corliss AVE N will be included as part of the PROJECT.
- Approximately 100 feet of 8-inch and 4-inch restrained joint ductile iron watermain and appurtenances along Sunnydale AVE N will be included as part of the PROJECT.
- Approximately 6 fire hydrants and hydrant leads will be installed and included as part of the PROJECT.
- Approximately 11 service connections will be retired from the 24-inch main line as part of the PROJECT.
- Approximately 3 services will be transferred to the new water mains as part of the PROJECT.
- Approximately 1 ~ 3-inch water service will be relocated to 1st AVE N. and reconnected to the customer service line prior to the PROJECT construction by Others (excluded from this project).
- Approximately six (6) water main system connections associated with the above work will be performed by SPU Water Ops with contractor assistance as part of the PROJECT.
- SPU to provide water and wastewater vault records.
- SPU to provide typical details (which may include ERDIP fire hydrants, water service connection, thrust collars, daily blocks, etc.) and the CONSULTANT will evaluate sufficiency and applicability of the typical details.

Task 14.8 Deliverables:

- Basis of Design Report
- Plans described in Tasks 14.8 and as listed in Attachment A: Sheet List by Discipline
- Response to SPU review comments at 90% and 100% stages.

14.9 Utility Plans

The CONSULTANT will update the Utility Plans to incorporate the additional sewer work with callouts. The sheets will be developed using the project's previously developed CAD standards, but the content of the sheets will be in accordance with SPU standards.

The CONSULTANT's Phase 1 Plans will include:

- Rebuilt sewer structures at 3 locations per Seattle Standard Plan 220.
- 90%, 100%, and Bid-Ready Utility plans will include updated sewer design for the associated level of design.

Task 14.9 Deliverables:

- Plans described in Tasks 14.9 and as listed in Attachment A: Sheet List by Discipline.

14.10 Drainage Plans

14.10.1 Drainage Plans and Details

The CONSULTANT will prepare 90% drainage design for the additional SPU proposed drainage improvements and incorporate into the previously developed drainage design for the project. The CONSULTANT will prepare 90%, 100%, and Bid-Ready drainage plans incorporating the SPU proposed drainage improvements. Drainage plans will include plan views of drainage pipes and structures, connections to the existing stormwater systems, and nonstandard drainage details. These storm system layouts will include elevations on inverts, catch basin and manhole locations, and the details required to describe the stormwater facilities. Pothole locations will be identified on the plans.

The drainage plans will clearly delineate the work per jurisdictions which will be used as the basis of quantity takeoff for drainage bid items spanning cross bid schedules.

SPU proposed drainage improvements included in this scope of work will include replacing existing City of Seattle culverts at the following locations:

- Along the south curb line between 1st Ave and Sunnyside Ave N.
- Crossing on the south leg of the NE 145th St and 1st Ave NE intersection.

14.10.2 Drainage Profile Plans

The CONSULTANT will prepare 90%, 100%, and Bid-Ready Drainage Profile Plans that include the replaced SPU storm drains listed in task 14.10.1. Profiles for conventional CB connections will not be included (Note the CB outlet pipe minimum slope is 5%). These profile plans will include profiles for drainage lines required within the project limits. Pipe size, length, and type as well as drainage structures will be included on the plans. Existing and proposed utility crossings will be depicted.

14.10.3 Drainage and Hydraulic Modeling

The CONSULTANT will prepare a Final Hydraulic Report incorporating the additional SPU water and DWW improvements following WSDOT format to document that level of design. The report shall include discussion and supporting calculations for the conveyance elements (pipes). A single report will be prepared for review by the CITY, WSDOT and City of Seattle.

Assumptions

- Coordination meetings with utility providers are conducted under Task 14.2.
- Upgrades sanitary sewer lines are not included in this scope.
- Inlet/CB spacing design and additional drainage pickups required to meet gutter flow and allowable spread width are Project's responsibility and are excluded from this scope.
- PSD extension required to drain the street or to provide drainage pickups upstream of curb ramps is Project's responsibility and is excluded from this scope.
- SPU is responsible to enforce applicable codes and regulations within City of Seattle Right-of-Way.
- Cathodic protection is not included in the scope.
- Due to dense utilities, the existing culverts will be replaced with a Seattle PSD with modified (in-line) City of Seattle standard CBs in the same horizontal location along the curb line.
- A separate Seattle drainage report will not be prepared; supplemental calculations will be added to an update to the project's existing 60% report.
- Pavement and sidewalk work associated with replacing the Seattle storm drains will not trigger additional CITY or City of Seattle drainage code requirements (water quality, flow control, GSI, etc.).

It is assumed this will consist of replaced impervious surfaces and not subject to stormwater management.

- The drainage plan format shown in the project's existing 60% plan set will be used.
- A full updated 60% Draft Hydraulic Report is not included in this scope of work.

Task 14.10 Deliverables:

- 90%, 100%, and Bid-Ready Drainage plans and profiles will include updated culvert design for the associated level of design.
- Final Hydraulic Reports.

14.11 Submittals (90 Percent, and 100 Percent and Bid-Ready)

14.11.1 30 Percent Submittal

Task not used

14.11.2 60 Percent Submittal

Task not used

14.3.3 90 Percent Submittal

The 90% submittal will include electronic files in PDF format; 90% plans, special provisions, and supplemental technical specifications; and updated cost estimates at the 90% complete design level for project design review.

Calculations will be completed and checked in accordance with established QC procedures and submitted electronically in PDF format. Drawings will be at a 90% level of design and will have incorporated or resolved all comments made during the 60% design review and other informal reviews.

The cost estimate will be formatted to reflect the bid item breakdown.

SPU will provide formal comments in excel format to the design team. The CONSULTANT will provide responses to SPU comments. The CONSULTANT will attend a two (2) hour 90% design review meeting to discuss SPU's 90% comments and team responses to resolve any issues. Up to four (4) CONSULTANT staff will attend this meeting. Meeting minutes will be prepared and distributed to SPU for review and comments.

14.3.4 100 Percent Submittal

The 100% submittal will include electronic files in PDF format; 100% plans, special provisions and supplemental technical specifications; and updated cost estimates at the 100% complete design level for project design review.

Calculations will be completed and checked in accordance with established QC procedures and submitted electronically in PDF format. Drawings will be at a 100% level of design and will have incorporated or resolved all comments made during the 90% design review and other informal reviews.

The cost estimate will be formatted to reflect the bid item breakdown.

SPU will provide formal comments in excel format to the design team. The CONSULTANT will provide responses to SPU comments. The CONSULTANT will attend a two (2) hour 100% design review meeting to discuss SPU's 100% comments and team responses to resolve any issues. Up to four (4) CONSULTANT

staff will attend this meeting. Meeting minutes will be prepared and distributed to SPU for review and comments.

14.3.5 Final Submittal

The Issue for Bid Submittal will include electronic files in AutoCAD and PDF formats; special provisions and supplemental technical specifications; and bid item list ready for bidding of the work. Drawings will be stamped and signed by the appropriate CONSULTANT team professional licensed in the State of Washington. Final drawing check prints (prepared in accordance with established QC procedures) will be submitted to the CITY. Final sealed original calculations (properly indexed) and cost-estimating back-up will be submitted.

The cost estimate will be formatted to reflect the bid item breakdown.

SPU will provide formal comments in excel format to the design team. The CONSULTANT will provide responses to SPU comments. The CONSULTANT will attend a two (2) hour meeting to discuss SPU's Final Design Package and team responses to resolve any issues. Up to four (4) CONSULTANT staff will attend this meeting.

14.12 Quality Control

14.12.3 90% QA/QC

The CONSULTANT will follow the previously developed project quality plan (PQP) to perform QA/QC on all documents, plans, and calculations included with the 90% submittal. The project quality manager will administer the PQP. Quality control includes technical discipline review while the work is in progress and senior review of work products prior to submittal to the CITY.

14.12.4 100% QA/QC

The CONSULTANT will follow the previously developed project quality plan (PQP) to perform QA/QC on all documents, plans, and calculations included with the 100% submittal. The project quality manager will administer the PQP. Quality control includes technical discipline review while the work is in progress and senior review of work products prior to submittal to the CITY.

14.12.5 Final QA/QC

The CONSULTANT will follow the previously developed project quality plan (PQP) to perform QA/QC on all documents, plans, and calculations included with the Final/bid-ready submittal. The project quality manager will administer the PQP. Quality control includes technical discipline review while the work is in progress and senior review of work products prior to submittal to the CITY.

14.13 Cost Estimating (90 Percent, and 100 Percent and Bid-Ready)

14.13.1 Quantities

The CONSULTANT will compile quantities from different disciplines for the project into a single summary of quantities sheet. The quantities included in this scope of work are only for those related to the additional SPU proposed improvements.

Quantity tabulation sheets will not be prepared.

Deliverable(s):

- 90% SPU quantities.
- 100% SPU quantities.
- Final SPU quantities.

14.13.2 Engineer's Estimate

The CONSULTANT will prepare an engineer's estimate for the additional SPU proposed improvements at the 90%, 100% and final levels of completion. The estimate will be prepared using the summary of quantity sheets with documented unit costs, lump-sum prices, and back up. The CONSULTANT will submit unit price documentation for nonstandard work items. The estimates will be submitted in PDF Format. The bid items and quantities for the SPU proposed improvements and all associated work with those improvements will be included in separate bid schedules (one for SPU Water and one for SPU DWW) within the project's engineer's estimate.

Deliverable(s):

- One (1) 90 percent design level estimate with all quantity and unit cost back-up and documentation.
- One (1) 100 percent design level estimate with all quantity and unit cost back-up and documentation.
- One (1) final bid-ready design level estimate with all quantity and unit cost back-up and documentation.

14.14 Specifications (90 Percent, and 100 Percent, and Bid-Ready)

The CONSULTANT will use the 2020 Seattle Standard Specifications in preparing the contract documents as applicable to the design of SPU proposed improvements and SPU owned assets. The CONSULTANT will modify the standard specifications by preparing contract specifications. The CONSULTANT will review any proposed changes to the standard specifications with CITY and SPU and *receive CITY's and SPU's concurrence* before preparing the contract specifications. In addition, the CONSULTANT will prepare new specification sections with contract specific requirements when the standard specifications do not cover a certain work element. This scope of work includes only those project specifications required due to the addition of the SPU proposed improvements for water and DWW.

Project specifications for the SPU proposed improvements will be incorporated into the project's contract documents. Only work to develop specifications for SPU proposed improvements is included in this scope of work.

Deliverable(s):

- 90%, 100%, and Final SPU contract specifications to be incorporated into the project contract specifications.

ATTACHMENT A

Sheet List by Discipline

| | | 90%-Final Submittal | |
|---|---------------------------------|--------------------------------|--|
| Drawing Title | Scale | No. of Sheets | Comments |
| General Plans (SHARED SHEETS) | | | |
| Cover sheet, Location and Vicinity Map | N/A | 1 | Shared (existing sheet modified to incorporate SPU work) |
| Drawing Index | N/A | 2 | Shared |
| General notes, legend, abbreviations | N/A | 2 | Shared |
| Construction Sequence and Traffic Control Plans | 1 inch = 40 feet | 2 | Shared |
| Site Preparation and TESC Plans | 1 inch = 20 feet | 3 | Shared |
| Drainage Plans | | | |
| Drainage notes | N/A | 1 | Shared |
| Drainage plans | 1 inch = 20 feet | 2 | Shared |
| Drainage profiles | 1 inch = 20 feet (height) | 2 | Shared |
| Drainage details | N/A | 1 | Shared |
| Utility Plans | | | |
| Utility notes | N/A | 1 | Shared |
| Utility Plans | 1 inch = 20 feet | 3 | Shared |
| Utility sections and details | N/A | | Shared |
| <i>Drainage and Utility plans: subtotal</i> | | 10 | |
| Water Plans | | | |
| Water General notes, legend, abbreviations | N/A | 1 | New (sheet created for SPU work) |
| Water plans | 1 inch = 20 feet | 3 | New |

| 90%-Final Submittal | | | |
|----------------------------|---------------------------------|---------------|----------|
| Drawing Title | Scale | No. of Sheets | Comments |
| Water profiles | 1 inch = 20 feet (height) | 2 | New |
| Water Intersection Details | 1 inch = 10 feet | 3 | New |
| Water details | N/A | 2 | New |
| Water Service List | N/A | 1 | New |
| <i>Plans: subtotal</i> | | 12 | |
| TOTAL | | 22 | |
| | | | |

City of Shoreline
 145th Street Multimodal Corridor Project
 2/1/2023

| Task | CH2M HILL Hours | CH2M Labor | Subcontracts | Expense Total | Overall Total |
|--|--------------------|----------------------|---------------------|---------------|----------------------|
| Project Management | 80 | \$ 19,517.82 | \$0.00 | \$ - | \$ 19,517.82 |
| Right of Way | 92 | \$ 17,725.08 | \$33,000.00 | \$ - | \$ 50,725.08 |
| Supplemental Design | 1334 | \$ 241,096.94 | \$17,000.00 | \$ - | \$ 258,096.94 |
| Geotechnical Investigations | 28 | \$ 5,739.11 | \$ - | \$ - | \$ 5,739.11 |
| Agency Coordination, Documentation and Approvals | 116 | \$ 22,832.62 | \$0.00 | \$ - | \$ 22,832.62 |
| SPU Add on | 1445 | \$ 232,365.32 | \$40,500.00 | \$ - | \$ 272,865.32 |
| Total | 3095 | \$ 539,276.89 | \$90,500.00 | \$ - | \$ 629,776.89 |
| Management Reserve | | | | | \$ (66,138.83) |
| Total | | \$ 539,276.89 | \$ 90,500.00 | \$0.00 | \$ 563,638.06 |

Expense Breakdown

| | |
|------------------------------|--------------------|
| Parametrix | \$6,000.00 |
| HBB | \$0.00 |
| RES | \$30,000.00 |
| APS | \$37,500.00 |
| Urban Forestry Services, Inc | \$17,000.00 |
| CH2M expenses | \$0.00 |
| Total | \$90,500.00 |

Exhibit D

145th Street Multimodal Corridor Project

CH2M HILL, Inc.

| Employee or Category | Hrs. | x | Rate | = | Cost |
|--|-------------|--------------|-----------------|-------------|----------------------|
| Senior Consultant | 0 | | \$ 118.47 | | \$ - |
| QA/QC Lead | 0 | | \$ 103.00 | | \$ - |
| Project Manager | 253 | | \$ 104.14 | | \$ 26,347.42 |
| Senior Engineer | 583 | | \$ 89.75 | | \$ 52,321.34 |
| Environmental Lead | 0 | | \$ 71.99 | | \$ - |
| Design Engineer | 569 | | \$ 81.84 | | \$ 46,566.96 |
| Lead Engineer | 258 | | \$ 68.93 | | \$ 17,783.94 |
| Design Engineer | 74 | | \$ 55.08 | | \$ 4,075.92 |
| Design Engineer | 236 | | \$ 43.79 | | \$ 10,334.44 |
| Designer | 180 | | \$ 37.55 | | \$ 6,759.00 |
| Environmental Engineer | 12 | | \$ 52.95 | | \$ 635.40 |
| Lead CAD Technician | 276 | | \$ 50.88 | | \$ 14,042.88 |
| CAD Technician | 86 | | \$ 31.13 | | \$ 2,677.18 |
| Office/ Administration | 38 | | \$ 44.51 | | \$ 1,691.38 |
| Project Controls | 10 | | \$ 50.24 | | \$ 502.40 |
| Contracts Admin | 20 | | \$ 69.27 | | \$ 1,385.40 |
| Utilities Lead | 500 | | \$ 74.72 | | \$ 37,360.00 |
| Total Hrs. | 3095 | | | | \$ 222,483.66 |
| Direct Salary Cost | | | | | \$ 222,483.66 |
| Salary Escalation Cost (estimated) | | | | | |
| 2023 | | | 3% | | \$ 6,674.51 |
| Total Direct Salary Cost | | | | | \$ 229,158.16 |
| Overhead Cost @ | | 103.33% | of Direct Labor | | \$ 236,789.13 |
| Net Fee @ | | 32.0% | of Direct Labor | | \$ 73,330.61 |
| Total Overhead & Net Fee Cost | | | | | \$ 310,119.74 |
| Total Labor Cost (Additions) | | | | | \$ 539,277.91 |
| Direct Expenses | | | | | |
| | Quantity | Unit \$ | | Cost | |
| Reprographics | 0 | \$10 /each | | 0.00 | |
| Mileage | | \$0.58 /mile | | 0.00 | |
| Tolls | 0 | \$5 /each | | 0.00 | |
| | | | | | <u>\$0.00</u> |
| Subcontracts | | | | | |
| LMN | | | | | |
| EnviroIssues | | | | \$0.00 | |
| Parametrix | | | | \$6,000.00 | |
| Alta | | | | \$0.00 | |
| HBB | | | | \$0.00 | |
| RES | | | | \$30,000.00 | |
| Valbridge | | | | \$0.00 | |
| Appraisal Group of the Northwest | | | | \$0.00 | |
| First American Title Company | | | | \$0.00 | |
| APS | | | | \$37,500.00 | |
| Gregory Drilling | | | | \$0.00 | |
| TCS (Traffic Control) | | | | \$0.00 | |
| Hayre McElroy (lab) | | | | \$0.00 | |
| Urban Forestry Services, Inc | | | | \$17,000.00 | |
| Appraisal Group of the Northwest | | | | \$0.00 | |
| HWA | | | | \$0.00 | |
| Direct Expenses Subtotal | | | | | <u>\$90,500.00</u> |
| Total | | | | | \$629,777.91 |

Attachment C

| CH2M HILL, Inc. | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total | |
|-----------------|---|------------|-----------------|-----------------|--------------------|-----------------|---------------|-----------------|-----------------|------------|------------------------|---------------------|----------------|-----------------------|------------------|-----------------|----------------|-------------|-------------|
| Task | Task Description | QA/QC Lead | Project Manager | Senior Engineer | Environmental Lead | Design Engineer | Lead Engineer | Design Engineer | Design Engineer | Designer | Environmental Engineer | Lead CAD Technician | CAD Technician | Office/Administration | Project Controls | Contracts Admin | Utilities Lead | CH2M Total | |
| Raw Rates | | \$103.00 | \$104.14 | \$89.75 | \$71.99 | \$81.84 | \$68.93 | \$55.08 | \$43.79 | \$37.55 | \$52.95 | \$50.88 | \$31.13 | \$44.51 | \$50.24 | \$69.27 | \$74.72 | | |
| | | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | |
| 1.0 | Project Management | | | | | | | | | | | | | | | | | | |
| 1.1 | Project Management Plan | | | | | | | | | | | | | | | | | | |
| 1.2 | Quality Plan | | | | | | | | | | | | | | | | | | |
| 1.3 | Project Schedule | | 24 | | | | | | | | | | | | | | | 24 | |
| 1.4 | Direction and Review | | | | | | | | | | | | | | | | | | |
| 1.5 | Document Management | | | | | | | | | | | | | | | | | | |
| 1.6 | Monthly Progress Reports and Invoicing | | | | | | | | | | | | | | | | | | |
| 1.7 | Budget Monitoring and Projections | | | | | | | | | | | | | | | | | | |
| 1.8 | Issue and Change Management | | 40 | | | | | | | | | | | | | | | 40 | |
| 1.9 | Subconsultant Management | | 8 | | | | | | | | | | | | | 8 | | 8 | |
| | Task 1.0 Total | | 72 | | | | | | | | | | | | | 8 | | 80 | |
| 4.0 | Right of Way | | | | | | | | | | | | | | | | | | |
| 4.4 | Support for Surplus Parcels | | 2 | | | 8 | | 16 | | | | | 16 | | | | | 10 | |
| 4.5 | Supplemental Building Demolition Permitting | | | 42 | | | | | | | | | | | | | | 74 | |
| 4.6 | Supplemental Property Management | | 6 | | | | | | | | | | | | | | | 6 | |
| 4.7 | Supplemental Rights of Entry | | | | | | | | | | | | | | | 2 | | 2 | |
| | Task 4.0 Total | | 8 | 42 | | 8 | 16 | | | | | 16 | | | | 2 | | 92 | |
| 5.0 | Supplemental Design | | | | | | | | | | | | | | | | | | |
| 5.7 | Supplemental Design | | 80 | 360 | | 360 | 170 | | | 180 | | 120 | | | | | 64 | 1334 | |
| | Task 5.0 Total | | 80 | 360 | | 360 | 170 | | | 180 | | 120 | | | | | 64 | 1334 | |
| 9.0 | Geotechnical Investigations | | | | | | | | | | | | | | | | | | |
| 9.1 | Supplemental Geotechnical Investigation and Analysis | | | 16 | | 8 | | | | | | | | | | 4 | | 28 | |
| 9.1.1 | Site reconnaissance, subsurface exploration, and laboratory testing | | | | | | | | | | | | | | | | | | |
| 9.1.2 | Updated Geotechnical Design Recommendations | | | | | | | | | | | | | | | | | | |
| | Task 9.0 Total | | | 16 | | 8 | | | | | | | | | | 4 | | 28 | |
| 12.0 | Agency Coordination, Documentation and Approvals | | | | | | | | | | | | | | | | | | |
| 12.4 | Supplemental Utilities Coordination | | 4 | 8 | | 18 | 16 | | | | | | | | | | | 62 | |
| 12.6 | Additional Agency Coordination as Directed | | 16 | 6 | | 8 | 24 | | | | | | | | | | | 54 | |
| | Task 12.0 Total | | 20 | 14 | | 26 | 40 | | | | | | | | | | | 116 | |
| 14.0 | SPU Add on | | | | | | | | | | | | | | | | | | |
| | SEE attached | | 73 | 151 | | 167 | 32 | 74 | 236 | | 12 | 140 | 86 | 38 | 10 | 6 | 420 | 1445 | |
| | Task 14.0 Total | | 73 | 151 | | 167 | 32 | 74 | 236 | | 12 | 140 | 86 | 38 | 10 | 6 | 420 | 1445 | |
| TOTALS | | | 253 | 583 | | 569 | 258 | 74 | 236 | | 180 | 12 | 276 | 86 | 38 | 10 | 20 | 500 | 3095 |

Budget Estimate

City of Shoreline

145th Street Multimodal Corridor Project - SPU Add-on

12/14/2022

| SPU WATER - Task | Jacobs Hours | Jacobs Labor | Subcontracts | Expense Total | Overall Total |
|---|-----------------|----------------------|---------------------|---------------|----------------------|
| Project Management | 49 | \$ 8,622.61 | \$ - | \$ - | \$ 8,622.61 |
| Project Delivery and Project Coordination | 43 | \$ 8,300.06 | \$ - | \$ - | \$ 8,300.06 |
| Environmental Documentation | 11 | \$ 1,776.16 | \$ - | \$ - | \$ 1,776.16 |
| Survey, Potholing, Conflict Resolution | 85 | \$ 13,825.30 | \$ 32,400.00 | \$ - | \$ 46,225.30 |
| Phase 1 Contract Drawings Updates | 18 | \$ 2,598.13 | \$ - | \$ - | \$ 2,598.13 |
| Water Design | 796 | \$ 125,507.62 | \$ - | \$ - | \$ 125,507.62 |
| Management Reserve | | | | | \$0.00 |
| Total | 1001.3 | \$ 160,629.88 | \$ 32,400.00 | \$ - | \$ 193,029.88 |

| SPU DRAINAGE AND WASTEWATER - Task | Jacobs Hours | Jacobs Labor | Subcontracts | Expense Total | Overall Total |
|---|-----------------|---------------------|--------------------|---------------|---------------------|
| Project Management | 49 | \$ 8,622.61 | \$ - | \$ - | \$ 8,622.61 |
| Project Delivery and Project Coordination | 43 | \$ 8,300.06 | \$ - | \$ - | \$ 8,300.06 |
| Environmental Documentation | 11 | \$ 1,776.16 | \$ - | \$ - | \$ 1,776.16 |
| Survey, Potholing, Conflict Resolution | 21 | \$ 3,456.32 | \$ 8,100.00 | \$ - | \$ 11,556.32 |
| Phase 1 Contract Drawings Updates | 18 | \$ 2,598.13 | \$ - | \$ - | \$ 2,598.13 |
| Drainage and Wastewater Design | 302 | \$ 46,984.48 | \$ - | \$ - | \$ 46,984.48 |
| Management Reserve | | | | | \$0.00 |
| Total | 443.7 | \$ 71,737.77 | \$ 8,100.00 | \$ - | \$ 79,837.77 |

Expense Breakdown

| | |
|------------|-------------|
| Parametrix | \$3,000.00 |
| APS | \$37,500.00 |
| Total | \$40,500.00 |

Percentage

| |
|-------|
| 1.6% |
| 19.4% |

| Jacobs | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total |
|---|---|-------------------|------------|-----------------|-----------------|--------------------|-----------------|---------------|-----------------|-----------------|-----------|------------------------|---------------------|----------------|-----------------------|------------------|-----------------|----------------|-----------|
| Task | Task Description | Senior Consultant | QA/QC Lead | Project Manager | Senior Engineer | Environmental Lead | Design Engineer | Lead Engineer | Design Engineer | Design Engineer | Designer | Environmental Engineer | Lead CAD Technician | CAD Technician | Office/Administration | Project Controls | Contracts Admin | Utilities Lead | CH2M |
| | Raw Rates | \$118.47 | \$103.00 | \$104.14 | \$89.75 | \$71.99 | \$81.84 | \$68.93 | \$55.08 | \$43.79 | \$37.55 | \$52.95 | \$50.88 | \$31.13 | \$44.51 | \$50.24 | \$69.27 | \$74.72 | Total |
| | | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs |
| 14.1 Project Management | | | | | | | | | | | | | | | | | | | |
| 14.1.1 | Project Schedule | | | 6 | | | | 6 | | | | | | | | | | | 12 |
| 14.1.2 | Direction and Review | | | 10 | | | | | | | | | | | | | | | 10 |
| 14.1.3 | Document Management | | | | | | | | | | | | | | 14 | | | | 14 |
| 14.1.4 | Monthly Progress Reports and Invoicing | | | 10 | | | | | | | | | | | 20 | | | | 30 |
| 14.1.5 | Budget Monitoring and Projections | | | 10 | | | | | | | | | | | | 10 | 6 | | 26 |
| 14.1.6 | Issue and Change Management | | | 5 | | | | | | | | | | | | | | | 5 |
| | Task 1.0 Total | | | 41 | | | | 6 | | | | | | | 34 | 10 | 6 | | 97 |
| 14.2 Project Delivery and Project Coordination | | | | | | | | | | | | | | | | | | | |
| 14.2.1 | Project Management Team Meetings (City Coord) | | | 4 | | | | | | | | | | | | | | | 16 |
| 14.2.2 | Risk Management | | | 6 | | | | | | | | | | | | | | | 6 |
| 14.2.3 | removed from scope | | | | | | | | | | | | | | | | | | |
| 14.2.4 | Consultant Project Team Meetings | | | | | | 8 | | | | | | | | | | | | 32 |
| 14.2.5 | SPU Coordination | | | | | | 10 | | | | | | | | | | | | 10 |
| | Task 2.0 Total | | | 10 | | | 18 | | | | | | | | | | | | 58 |
| 14.3 Environmental Documentation | | | | | | | | | | | | | | | | | | | |
| 14.3.1 | NEPA Reevaluation | | | 4 | | | | 6 | | | | | 12 | | | | | | 22 |
| | Task 3.0 Total | | | 4 | | | | 6 | | | | | 12 | | | | | | 22 |
| 14.4 Survey, Potholing, Conflict Resolution | | | | | | | | | | | | | | | | | | | |
| 14.4 | Supplemental Survey for Water, Sewer, Drainage improvements | | | 2 | | | | 8 | | | | | 4 | | | | | | 14 |
| 14.5 | Utility Potholing and Conflict Resolution | | | | 24 | | | | | 12 | | | | 16 | | | | | 40 |
| | Task 4.0 Total | | | 2 | 24 | | | 8 | | 12 | | | 4 | 16 | | | | | 40 |
| 14.6 Phase 1 Contract Drawings Updates | | | | | | | | | | | | | | | | | | | |
| 14.6 General Plans | | | | | | | | | | | | | | | | | | | |
| 14.6.1 | General Plans | | | | | | | 2 | | | | | 4 | | | | | | 2 |
| 14.6.3 | Construction Sequence and Traffic Control Plans | | | | | | | 2 | | | | | 4 | | | | | | 2 |
| 14.6.4 | Site Preparation and Temporary Erosion Control | | | | | | | 8 | | | | | 12 | | | | | | 20 |
| | Task 5.0 Total | | | | | | | 12 | | | | | 20 | | | | | | 4 |
| 14.8 Water Design | | | | | | | | | | | | | | | | | | | |
| 14.8 Water Plans | | | | | | | | | | | | | | | | | | | |
| 14.8.1 | Basis of Design | | | 4 | | | | | | | | | | | 4 | | | | 40 |
| 14.8.2 | Water Plans | | | | | | | | | 100 | | | 60 | | | | | | 140 |
| 14.8.3 | Water Profile Plans | | | | | | | | | 124 | | | 40 | | | | | | 48 |
| 14.11 Submittals | | | | | | | | | | | | | | | | | | | |
| 14.11.3 | 90 Percent Submittal / Comment Resolution | | | 2 | 6 | | | | | | | | 4 | | | | | | 20 |
| 14.11.4 | 100 Percent Submittal / Comment Resolution | | | 1 | 4 | | | | | | | | 2 | | | | | | 12 |
| 14.11.5 | Final Submittal | | | 1 | 1 | | | | | | | | 2 | | | | | | 4 |
| 14.12 Quality Control | | | | | | | | | | | | | | | | | | | |
| 14.12.3 | 90% QA/QC | | | 1 | 10 | | 10 | | | | | | | | | | | | 21 |
| 14.12.4 | 100% QA/QC | | | 1 | 10 | | 10 | | | | | | | | | | | | 21 |
| 14.12.5 | Final QA/QC | | | 1 | 2 | | 8 | | | | | | | | | | | | 11 |
| 14.13 Cost Estimating | | | | | | | | | | | | | | | | | | | |
| 14.13.1 Quantities | | | | | | | | | | | | | | | | | | | |
| | 90% Quantities | | | 2 | | | 16 | | | | | | | | | | | | 18 |
| | 100% Quantities | | | 2 | | | 10 | | | | | | | | | | | | 12 |
| | Final Quantities | | | 1 | | | 2 | | | | | | | | | | | | 3 |
| 14.13.2 Engineer's Estimate | | | | | | | | | | | | | | | | | | | |
| | 90% Estimate | | | 16 | | | | | | | | | | | | | | | 8 |
| | 100% Estimate | | | 1 | | | | | | | | | | | | | | | 4 |
| | Final Estimate | | | 1 | | | | | | | | | | | | | | | 4 |
| 14.14 Specifications | | | | | | | | | | | | | | | | | | | |
| 14.14.2 | 90% Specs | | | 16 | | | | | | | | | | | | | | | 20 |
| 14.14.3 | 100% Specs | | | 8 | | | | | | | | | | | | | | | 8 |
| 14.14.4 | Final Specs | | | 1 | 2 | | | | | | | | | | | | | | 2 |

| Jacobs | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total |
|--------|--|-------------------|------------|-----------------|-----------------|--------------------|-----------------|---------------|-----------------|-----------------|-----------|------------------------|---------------------|----------------|-----------------------|------------------|-----------------|----------------|-----------|
| Task | Task Description | Senior Consultant | QA/QC Lead | Project Manager | Senior Engineer | Environmental Lead | Design Engineer | Lead Engineer | Design Engineer | Design Engineer | Designer | Environmental Engineer | Lead CAD Technician | CAD Technician | Office/Administration | Project Controls | Contracts Admin | Utilities Lead | CH2M |
| | | E6 | E6 | E6 | E6 | E5 | E5 | E4 | E3 | E2 | E1 | T5 | T2 | | | | | | Total |
| | Raw Rates | \$118.47 | \$103.00 | \$104.14 | \$89.75 | \$71.99 | \$81.84 | \$68.93 | \$55.08 | \$43.79 | \$37.55 | \$52.95 | \$50.88 | \$31.13 | \$44.51 | \$50.24 | \$69.27 | \$74.72 | |
| | | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs | Total hrs |
| | Task 6.0 Total | | | 8 | 86 | | 56 | | | 224 | | | 108 | | 4 | | | 310 | 796 |
| | Drainage and Wastewater Design | | | | | | | | | | | | | | | | | | |
| | 14.9 Sewer Plans | | | | | | | | | | | | | 16 | | | | 8 | 24 |
| | 14.10 Drainage Plans | | | | | | | | | | | | | | | | | | |
| | 14.10.1 Drainage Plans and Details | | | | | | 16 | | 20 | | | | | 30 | | | | | 66 |
| | 14.10.2 Drainage Profile Plans | | | | | | 8 | | 30 | | | | | 24 | | | | | 62 |
| | 14.10.3 Drainage and Hydraulic Modeling | | | | | | 16 | | 24 | | | | | | | | | | 40 |
| | 14.11 Submittals | | | | | | | | | | | | | | | | | | |
| | 14.11.3 90 Percent Submittal / Comment Resolution | | | 2 | 2 | | 8 | | | | | | 4 | | | | | | 16 |
| | 14.11.4 100 Percent Submittal / Comment Resolution | | | 1 | 2 | | 4 | | | | | | 2 | | | | | | 9 |
| | 14.11.5 Final Submittal | | | 1 | 1 | | 2 | | | | | | 2 | | | | | | 6 |
| | 14.12 Quality Control | | | | | | | | | | | | | | | | | | |
| | 14.12.3 90% QA/QC | | | 1 | 3 | | | | | | | | | | | | | | 4 |
| | 14.12.4 100% QA/QC | | | 1 | 3 | | | | | | | | | | | | | | 4 |
| | 14.12.5 Final QA/QC | | | 1 | 2 | | | | | | | | | | | | | | 3 |
| | 14.13 Cost Estimating | | | | | | | | | | | | | | | | | | |
| | 14.13.1 Quantities | | | | | | | | | | | | | | | | | | |
| | 90% Quantities | | | | 1 | | 8 | | | | | | | | | | | | 9 |
| | 100% Quantities | | | | 1 | | 4 | | | | | | | | | | | | 5 |
| | Final Quantities | | | | 1 | | 2 | | | | | | | | | | | | 3 |
| | 14.13.2 Engineer's Estimate | | | | | | | | | | | | | | | | | | |
| | 90% Estimate | | | | 1 | | 4 | | | | | | | | | | | | 5 |
| | 100% Estimate | | | | 1 | | 4 | | | | | | | | | | | | 5 |
| | Final Estimate | | | | 1 | | 4 | | | | | | | | | | | | 5 |
| | 14.14 Specifications | | | | | | | | | | | | | | | | | | |
| | 14.14.2 90% Specs | | | | 16 | | 7 | | | | | | | | | | | | 23 |
| | 14.14.3 100% Specs | | | | 4 | | 4 | | | | | | | | | | | | 8 |
| | 14.14.4 Final Specs | | | 1 | 2 | | 2 | | | | | | | | | | | | 5 |
| | Task 7.0 Total | | | 8 | 41 | | 93 | | 74 | | | 8 | 70 | | | | | 8 | 302 |
| | TOTALS | | | 73 | 151 | | 167 | 32 | 74 | 236 | | 12 | 140 | 86 | 38 | 10 | 6 | 420 | 1445 |