

**CITY OF MARYSVILLE AGENDA BILL**

**EXECUTIVE SUMMARY FOR ACTION**

**CITY COUNCIL MEETING DATE: February 12, 2018**

<b>AGENDA ITEM:</b>	
State Avenue Corridor Widening Project (100th St. NE to 116th St. NE) - Supplemental Agreement No. 1 with HDR Engineering, Inc. for Engineering Services including Design, Environmental Documentation & Permitting and Right of Way	
<b>PREPARED BY:</b>	<b>DIRECTOR APPROVAL:</b>
Jay Cooke, Project Manager	
<b>DEPARTMENT:</b>	
Public Works / Engineering	
<b>ATTACHMENTS:</b>	
PSA, Supplemental Agreement No. 1	
<b>BUDGET CODE:</b>	<b>AMOUNT:</b>
30500030.563000	\$470,288.53
<b>SUMMARY:</b>	
<p>HDR Engineering, Inc. (HDR) has been providing preliminary engineering services to the City on the corridor widening of State Avenue to 5-lanes. As a requirement of WA State TIB construction funding, HDR completed a Value Engineering (VE) Study for this project which recommended several design changes.</p> <p>The most significant design change revises the original box-culvert structure located at the Quil Ceda Creek crossing to a single-span pile-supported bridge. This proposed design change is expected to save the overall project an estimated \$1.2M in retaining wall structure and soil improvement construction costs, as well as reduce the construction risk across the Quil Ceda Creek. Other VE recommendations and design additions include stormwater facilities, Right-of-way acquisition and survey, addition of a HAWK signal, installation of a Joint Utility Trench, preparation of hazardous materials report and assistance in federal construction project funding.</p> <p>This supplement agreement increases the original agreement compensation by \$470,288.53 to a total of \$2,135,833.62.</p>	

**RECOMMENDED ACTION:** Staff recommends that Council authorize the Major to sign and execute the attached Supplemental Agreement No. 1 to the original Professional Services Agreement with HDR Engineering, Inc., increasing the contract.

**SUPPLEMENTAL AGREEMENT NO. 1 TO  
PROFESSIONAL SERVICES AGREEMENT BETWEEN  
CITY OF MARYSVILLE  
AND HDR ENGINEERING, INC.**

**THIS SUPPLEMENTAL AGREEMENT NO. 1** (“Supplemental Agreement”) is made and entered into as of the date of the last signature below, by and between the City of Marysville, a Washington State municipal corporation (“City”) and HDR Engineering, Inc., a Nebraska corporation (“Consultant”).

WHEREAS, the parties hereto have previously entered into an agreement for the State Ave. Corridor Improvement Project (100<sup>th</sup> St NE to 116<sup>th</sup> St NE) consisting of widening the highway to 5-lanes (the “Original Agreement”), said Original Agreement being dated April 11, 2017; and

WHEREAS, both parties desire to supplement the Original Agreement, by expanding the Scope of Services to provide for revising the roadway design crossing of Quil Ceda Creek using an elevated bridge span and other project design related items and to provide compensation therefore;

NOW THEREFORE, in consideration of the terms, conditions, covenants, and performances contained herein or attached and incorporated, and made a part hereof, the parties hereto agree as follows:

1. Exhibit A, as referenced and incorporated in Section 1 of the Original Agreement, “SCOPE OF SERVICES”, shall be amend by Exhibit A-1, attached hereto and by this references made part of this Supplemental Agreement No. 1, and a part of the Original Agreement.

2. Section 3 of the Original Agreement, “COMPENSATION”, is amended to include the additional Consultant fee of \$470,288.53 and shall read as follows: “In no event shall the compensation paid to Consultant under this Agreement exceed \$2,135,833.62 within the term of the Agreement, including extensions, without the written agreement of the Consultant and the City.”

The total compensation payable to the Consultant is summarized as follows:

Original Agreement	\$1,665,545.09
Supplemental Agreement No.1	\$470,288.53
Grand Total	\$2,135,833.62

3. Each and every provision of the Original Agreement for Professional Services dated April 11, 2017, shall remain in full force and effect, except as modified herein.

DATED this \_\_\_\_\_ day of February, 2018.

CITY OF MARYSVILLE

HDR ENGINEERING, INC.

By \_\_\_\_\_  
Jon Nehring, Mayor

By \_\_\_\_\_  
Paul Ferrier  
Its: Vice President

ATTEST/AUTHENTICATED:

\_\_\_\_\_, Deputy City Clerk

Approved as to form:

\_\_\_\_\_  
Jon Walker, City Attorney

**State Avenue Corridor Widening Project  
(100th Street NE to 116th Street NE)  
SUPPLEMENTAL AGREEMENT NO. 1**

**Supplemental Scope of Services for Design,  
Environmental Documentation & Permitting and  
Right-of-Way Services**

February 2018

City of Marysville

Prepared by:



500 108th Avenue NE  
Bellevue, WA 98004-5549

## CONTENTS

INTRODUCTION.....	4
Background Information.....	4
Scope of Work .....	5
Major Milestone Schedule Revisions .....	5
Project Assumptions .....	5
<b>TASK 1.    PROJECT MANAGEMENT &amp; ADMINISTRATION .....</b>	<b>7</b>
1.1. Project FTP Site, Project Set up, Management Plan, HASP .....	7
1.3. Project Schedule .....	7
1.7. Project Team Management .....	7
<b>TASK 2.    CLIENT COMMUNICATIONS AND COORDINATION .....</b>	<b>7</b>
<b>TASK 3.    QUALITY ASSURANCE/QUALITY CONTROL.....</b>	<b>8</b>
<b>TASK 4.    DATA COLLECTION/REVIEW OF EXISTING INFORMATION.....</b>	<b>8</b>
<b>TASK 5.    SURVEY AND MAPPING .....</b>	<b>8</b>
5.4 Right-of-Way and Parcel Resolution, Easements, Exhibits, and Legal Descriptions .....	8
<b>TASK 6.    GEOTECHNICAL ENGINEERING .....</b>	<b>8</b>
6.2 Subsurface Explorations and Laboratory Testing:.....	9
6.3 Geotechnical Design Services: .....	9
<b>TASK 7.    WATERMAIN &amp; SANITARY SEWER DESIGN .....</b>	<b>10</b>
7.2 60% Submittal.....	10
7.3 90% Submittal .....	11
<b>TASK 8.    TRAFFIC ANALYSIS.....</b>	<b>11</b>
<b>TASK 9.    PRELIMINARY ENGINEERING .....</b>	<b>11</b>
<b>TASK 10.   30% DESIGN .....</b>	<b>11</b>
<b>TASK 11.   VALUE ENGINEERING (VE) STUDY.....</b>	<b>11</b>
<b>TASK 12.   ENVIRONMENTAL DOCUMENTATION &amp; PERMITTING .....</b>	<b>11</b>
12.2 SEPA/Permitting Stakeholder Meetings and Agency Coordination .....	12

12.5	Cultural Resources Assessment.....	12
12.6	Endangered Species Act Compliance – Biological Assessment Update.....	13
12.7	Critical Area Report Update.....	13
12.8	Hazardous Materials.....	13
12.11	Permit Support.....	13
12.12	NEPA Documentation and Approval.....	14
12.13	Noise Memorandum.....	14
12.14	Air Quality Qualitative Memorandum.....	15
12.15	Visual Quality Technical Memorandum.....	15
<b>TASK 13.</b>	<b>FINAL DESIGN - PS&amp;E .....</b>	<b>16</b>
13.3	Typical Roadway Sections.....	16
13.10	Drainage System Plans & Details.....	16
13.12	Fish Passage Bridge Design and Details.....	17
13.12.1	Structures Technical Memorandum.....	17
13.13	Pavement Marking.....	17
13.14	Signing Plans, Schedules & Details.....	17
13.15	Signals, Illumination, & ITS.....	18
13.18	Utility Design and Concrete Panel Potholing.....	18
13.19	60% Submittal.....	18
13.19.1	60% Plans.....	18
13.19.2	60% Specifications.....	20
13.19.3	60% Engineer’s Opinion of Cost.....	20
13.20	90% Submittal.....	20
13.20.1	90% Plans.....	20
13.20.2	90% Specifications.....	20
13.20.3	90% Engineer’s Opinion of Cost.....	20

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13.21	Ad-Ready Submittal.....	20
<b>TASK 14.</b>	<b>CONSTRUCTABILITY ANALYSIS/MOCK BID EXERCISE.....</b>	<b>21</b>
<b>TASK 15.</b>	<b>REAL ESTATE SERVICES.....</b>	<b>21</b>
15.2	Property Descriptions and Valuations. Manage the preparation of a PFE, AOS reports, Appraisals for up to thirty-eight (38) parcels.....	21
15.3	Right-of-Way Acquisitions and Negotiations.....	21
<b>TASK 16.</b>	<b>FUNDING SUPPORT.....</b>	<b>22</b>
<b>TASK 17.</b>	<b>BIDDING PHASE ASSISTANCE.....</b>	<b>22</b>

## INTRODUCTION

During the term of this PROFESSIONAL SERVICES AGREEMENT (AGREEMENT), HDR Engineering, Inc. (CONSULTANT) shall perform professional services for the City of Marysville (CITY) in connection with the following project: **State Avenue Corridor Improvement Project (100th Street NE to 116th Street NE) (PROJECT)**

This Supplemental Agreement No. 1 authorizes additional work necessary for the successful completion of the PROJECT, described generally as:

- Revising the design of the Quilceda Creek crossing from a box culvert structure to a single-span bridge;
- Adding the design of a HAWK signal;
- Revising the stormwater collection, treatment, and discharge system; and
- Adding the design of a Joint Utility Trench (JUT).

### Background Information

The 30% Design efforts and Value Engineering (VE) Study identified certain design alternatives where the overall quality and functionality of the corridor improvements could be improved.

During the development of the 30% Design, geotechnical analysis determined that the existing fill supporting the road section over Quilceda Creek consisted of loosely compacted materials and was underlain by soft, liquefiable soils. The work to stabilize and reinforce the existing soils was determined to be significantly expensive and not consistent with the PROJECT's cost-benefit goals. The Design Team completed the 30% Design of a box-culvert structure in accordance with the scope of services, identified the issue and began exploring other alternative designs. The VE Study confirmed the Design Team's findings and provided additional design recommendations. The Design Team then reviewed the VE Study recommendations and provided three (3) recommendations to the City. It was determined that a single-span bridge was the best value alternative.

The original scope of services included coordination with Community Transit (CT) for locations of transit stops and the identification of need for a High Intensity Activated Crosswalk Beacon (HAWK) pedestrian signal. It was determined that a southbound transit stop should remain located in the vicinity of 106th Street NE and that a HAWK signal should be included to enhance safety for pedestrians crossing State Avenue.

The VE Study recommended certain revisions to the stormwater system including relocating one of the stormwater detention/infiltration ponds and shifting a segment of the storm drain pipe to provide additional clearance from a retaining wall structure near the creek crossing.

The Design Team coordinated with franchise utilities during the 30% Design efforts to place existing overhead communications and power utilities underground, in a joint utility trench (JUT). The discussion included potential options including requiring the utility companies would accomplish this work ahead of the PROJECT and including the JUT as part of the State Avenue reconstruction contract. The VE Study included evaluation



of the options in its review. The VE Study recommendations supported the alternative incorporating the construction of the JUT (installation of conduits) in the State Avenue reconstruction contract. The original design scope of services assumed that the utility companies would perform this work prior to the road construction.

**Scope of Work**

This supplemental scope of work includes additional design and revisions to existing roadway design, geotechnical testing and evaluation, subsurface utility exploration, PS&E development, traffic engineering and analysis, surface water design, retaining wall and bridge design, utility coordination and design, permitting, right of way acquisition, environmental review and documentation, critical area delineation, stream and wetland mitigation, cultural resources review, grant application assistance, and Council reports/updates.

**Major Milestone Schedule Revisions**

The following are major schedule milestones for the project:

- Preliminary Design.....August 2017 - Completed
- 30% Design.....October 2017 - Completed
- JARPA/SEPÀ Submittal..... October 2017 - Completed
- 60% Design.....April 2018
- 90% Design.....August 2018
- ROW Acquisition Complete.....August 2018
- Ad-Ready.....December 2018
- Bidding Phase.....February 2019

**Project Assumptions**

**General Assumptions**

1. The General Assumptions remain unchanged except that the CITY has designated Jay Cooke, PE as the CITY's Project Manager.

**Design Standards and References**

- 1) The PROJECT Design Standards and References remain unchanged from the original scope of services, except as follows. State Publications
  - a) 2018 Standard Specifications for Road, Bridge, and Municipal Construction (M 41-10)

## Project Tasks

The CONSULTANT shall manage the work as described within the following major Work Elements:

### TASK 1. PROJECT MANAGEMENT & ADMINISTRATION

This task will be continuous throughout the project duration, which is assumed to be 24 months. The additional work includes the work to update the scope, schedule and budget, and subconsultant agreements; additional project coordination with the CONSULTANT staff and SUBCONSULTANTS; and management of the changes to the project scope, schedule and budget. Components of this work including planning the Project, executing the Project, managing change, and closing the Project, include:

#### 1.1. Project FTP Site, Project Set up, Management Plan, HASP

The CONSULTANT shall revise and update the Project scope and budget, project accounting and project management records to include the additional work of this Supplemental Agreement No.1.

#### 1.3. Project Schedule

The CONSULTANT shall revise the Project Schedule to include the additional work authorized by this Supplemental Agreement No.1. A Project schedule shall be developed by the CONSULTANT to establish Baseline Start and Baseline Finish dates for tasks and deliverables under this AGREEMENT, and shall be submitted to the CITY for review and approval, prior to commencement of any work under this AGREEMENT. The project schedule shall be developed using Microsoft Project software, and shall show a critical path leading to the project major milestone dates. The schedule for this project shall be updated bi-monthly and submitted to the CITY. The updated schedule will show Baseline, Actual and/or Projected Start and Finish dates that reflect the actual progress of the project.

#### 1.7. Project Team Management

The CONSULTANT project manage shall oversee and manage the work authorized by this Supplemental Agreement No.1.

#### Assumptions:

- The Revised Project Schedule shall become the Revised Baseline Schedule.

#### Deliverable(s):

- Draft and Final Revised Baseline Schedule

### TASK 2. CLIENT COMMUNICATIONS AND COORDINATION

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 3. QUALITY ASSURANCE/QUALITY CONTROL

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 4. DATA COLLECTION/REVIEW OF EXISTING INFORMATION

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 5. SURVEY AND MAPPING

The purpose of this task is to provide additional support to revise certain legal descriptions and provide preliminary location survey staking to aid in right-of-way negotiations.

### 5.4 Right-of-Way and Parcel Resolution, Easements, Exhibits, and Legal Descriptions

CONSULTANT will resolve adjacent parcel boundaries for up to three parcels within the project area.

It is estimated that three Title Reports will be needed to determine parcel boundaries and potential right of way acquisition areas, easements and permits. This task also includes the development and delivery of up to 9 Exhibits and Legal Descriptions in support of ROW acquisition or new easement requirements.

This task also includes the modification of two parcel's proposed acquisitions and easements.

#### Assumptions:

- The assumptions as defined in the original scope of services remain unchanged except as noted herein.
- Up to a maximum of 9 Exhibits and Legal Descriptions will require preparation or revision. Legal descriptions and Right-of-way Exhibits currently prepared using metes & bounds are sufficient and not anticipated to be revised to reference highway engineering stations. Revision of legal descriptions and exhibits is considered to be extra work not included in this supplement.

#### Deliverable(s):

- Revised Legal Descriptions and Exhibits.

## TASK 6. GEOTECHNICAL ENGINEERING

CONSULTANT will provide additional geotechnical engineering services needed to support the decision to change the design of the creek crossing from a culvert type structure to a single-span bridge structure and the

development of contract documents for the construction of improvements associated with the project. CONSULTANT services include:

## 6.2 Subsurface Explorations and Laboratory Testing:

With the decision to change the Quilceda Creek crossing alternative from a box-culvert structure to a single-span bridge, the CONSULTANT will perform additional subsurface explorations, laboratory testing, and geotechnical engineering analyses for the project.

**Conduct Subsurface Explorations:** CONSULTANT will conduct 2 additional borings at the proposed bridge abutment locations, to assess the subsurface soil and groundwater conditions. The borings will be drilled using hollow-stem or mud rotary drilling methods from a truck mounted or low overhead access drill rig. Preliminary subsurface locations and depths include:

- Two borings up to 200 feet deep at the north and south bridge abutment locations.

In-situ testing using a Standard Penetration Test (SPT) will occur at 5 foot intervals from a depth of approximately 30 feet to the bottom of the hole. SPT samples will be collected and returned to the CONSULTANT geotechnical laboratory for testing. The CONSULTANT will install a 2-inch diameter groundwater monitoring well in one boring to measure groundwater level at the site. Groundwater level measurements will be used to evaluate deep groundwater levels to assess deep foundation constructability.

Groundwater instrumentation (transducers) will be installed in each well to measure the groundwater fluctuations over time. We will visit the site one time to collect the recorded groundwater data.

CONSULTANT will observe the geotechnical explorations and prepare summary logs. It is estimated that it will take about 7 days to complete the two borings and perform the well installation.

CONSULTANT will perform geotechnical laboratory testing on select soil samples in accordance with ASTM International standards. Anticipated geotechnical laboratory testing includes visual classification, moisture content determination, grain size analyses, and Atterberg Limits.

## 6.3 Geotechnical Design Services:

CONSULTANT will develop geotechnical recommendations for the design and construction of the proposed bridge structure alternative. Anticipated geotechnical design services include the following:

**Soil Properties:** CONSULTANT will generate estimates of the soil strength and other properties needed to evaluate the effects that the subsurface conditions will have on the proposed improvements.

**Seismic Design Parameters and Geologic-Hazard Assessment:** CONSULTANT will determine the Site Class for seismic design and the design spectral acceleration parameters in accordance with the AASHTO Specifications for Road and Bridge. CONSULTANT will also evaluate the risk of geologic hazards at the site during the design-level ground motion, including liquefaction, lateral spreading, and fault rupture.

**Bridge Design Recommendations:** CONSULTANT will provide geotechnical recommendations for designing a single-span, pile-supported bridge structure as a replacement for the existing culvert. Recommendations will include deep foundation axial resistance evaluation for up to 3 foundation types/sizes, soil parameters for foundation lateral resistance analysis, and foundation settlement. In addition, global stability analyses will be performed for abutment walls and recommendations will be provided for lateral earth pressure and stability improvement, as needed. Geotechnical analyses and recommendations will incorporate applicable static and seismic design requirements in accordance with the WSDOT GDM.

**Quality Assurance/Quality Control (QA/QC):** CONSULTANT will have the design calculations, recommendations, and reports reviewed in accordance with its QA/QC plan.

**Draft Geotechnical Engineering Report:** CONSULTANT will prepare an addendum to the draft geotechnical engineering report for the project. The addendum will contain the results of the additional subsurface exploration program, including logs, laboratory test results, and a description of the subsurface conditions; a site plan showing exploration locations and other pertinent features; and geotechnical engineering recommendations for the design and construction of the proposed bridge improvements.

**Final Geotechnical Engineering Report:** CONSULTANT will include the additional geotechnical engineering information, relative to the bridge structure in the final geotechnical engineering report.

**Plan and Specification Review:** CONSULTANT will conduct a review of the project plans at the 60% and 100% milestone submittals to ensure that the additional geotechnical aspects of the project have been incorporated into the project documents.

**Assumption(s):**

- The assumptions outlined in the original scope of services remain unchanged.

**Deliverable(s):**

- Addendum to the Draft Geotechnical Engineering Report (Electronic copy as Adobe PDF)

## TASK 7. WATERMAIN & SANITARY SEWER DESIGN

The objective of this task is to prepare the design for the replacement of the existing ACP watermain with a new ductile iron water main the length of the project, and replace the adverse-grade sanitary sewer main at the south end of the project corridor, near the Quilceda Creek crossing. The design efforts will include temporary bypass watermain and sanitary sewer pipes to facilitate the construction of the Quilceda Creek crossing embankment.

### 7.2 60% Submittal

The CONSULTANT will make design adjustments as necessary to align and support the watermain and sanitary sewer lines across the bridge structure at the Quilceda Creek crossing.

**Deliverable(s):**

- Inclusion of design changes into the 60% Watermain and Sanitary Sewer Pipe Replacement Plans (incorporated into the overall 60% plans submittal)

**7.3 90% Submittal**

The CONSULTANT will make design adjustments as necessary to align and support the watermain and sanitary sewer lines across the bridge structure at the Quilceda Creek crossing.

**Deliverable(s):**

- Inclusion of design changes into the 90% Watermain and Sanitary Sewer Pipe Replacement Plans (incorporated into the overall 90% plans submittal).

## TASK 8. TRAFFIC ANALYSIS

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 9. PRELIMINARY ENGINEERING

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 10. 30% DESIGN

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 11. VALUE ENGINEERING (VE) STUDY

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 12. ENVIRONMENTAL DOCUMENTATION & PERMITTING

The purpose of this task is to provide additional environmental and documentation services needed to support the decision to change the design of the creek crossing from a culvert type structure to a single-span bridge structure and the potential relocation of stormwater detention facilities.

## 12.2 SEPA/Permitting Stakeholder Meetings and Agency Coordination

The CONSULTANT will organize and conduct up to one project overview and site visit meeting with agency permitting staff to review proposed change in the design of the creek crossing. Attendees may include staff from the Corps, WDFW, CITY planning, and representatives from tribal interests.

## 12.5 Cultural Resources Assessment

The CONSULTANT, utilizing a SUBCONSULTANT, will prepare an addendum to the Cultural Resources Assessment to address two potential locations of a stormwater pond, either just south of Furniture World to the parcel just north of the store. The SUBCONSULTANT will conduct the following tasks:

- Conduct an Archaeological field survey will be completed in one day at the proposed stormwater detention pond sites:
  - Field mobilization efforts will include: 1) communication with appropriate tribes, 2) arranging a utilities' locate, and 3) completing job-specific safety forms. The Tulalip Tribes and the Stillaguamish Tribe of Indians will be contacted about the project to solicit any additional concerns about heritage resources and to inform them when field investigations will take place. A utilities locate will be arranged by SWCA prior to archaeological field work, pursuant to RCW 19.122 "Underground Utilities," which requires notification to the State Public Works Office at least 3 days before digging but no more than 10 days before digging. Note that delays in utility flagging have the potential to delay the project.
  - At the discretion of the Project Archaeologist up to 10 shovel probes will be excavated in accessible portions of the project area that have not undergone significant modern disturbance. Any artifacts will be described, photographed, returned to the probe of origin, and reburied. Notes about content and sediments encountered will be recorded on standard forms. All shovel probes will be recorded with a GPS. The survey will verify field conditions and identify historic properties. An important part of the fieldwork will be to document historic and modern disturbance and to document the specific locations of any newly discovered cultural resources.
- Conduct an Architectural History Survey: Review databases for historical buildings adjacent to proposed stormwater detention pond sites. If historical buildings are present that were not previously documented, record and photograph all buildings and structures constructed within or adjacent to the project area prior to 1967, or older than 50 years in age.
- Prepare an addendum letter addressing cultural resources findings for the proposed stormwater detention pond sites. This letter will be submitted to the USACE as a supplement to the SWCA Cultural Resources Assessment that was submitted to the USACE under the original scope of work.

### Assumption(s):

- CITY will ensure access to the stormwater detention pond sites, including the exterior of any historical buildings to be recorded even if they are on private property.
- No archaeological resources are present within the project area. Discovery of an archaeological site during survey may require additional work beyond the present scope and budget to establish boundaries, evaluate significance, and arrive at appropriate assessments of adverse effects and treatment measures.
- Up to one day of field time for archaeological monitoring of geotechnical investigations.



- Monitoring of additional geotechnical investigations is not included in this task.

**Deliverable(s):**

- Draft and Final Cultural Resources Assessment Addendum Letter

## 12.6 Endangered Species Act Compliance – Biological Assessment Update

The Consultant will revise the Biological Assessment (BA) to evaluate the changes in design of the creek crossing and stormwater detention facilities in terms of its potential impacts to any species listed or proposed for listing as threatened or endangered under Section 7 of the Endangered Species Act (ESA).

The BA will be updated by a WSDOT certified author (to cover any potential future NEPA process) and include detailed descriptions of all project activities, status and occurrence of listed species in project area, direct and indirect effects to all listed species and critical habitat, and conservation measures. The BA will include an updated effects determination for each listed species and critical habitat. An update of Essential Fish Habitat (EFH) will be completed as part of the BA and will also include an effects determination.

## 12.7 Critical Area Report Update

The Critical Area Report that was being drafted under the original scope of work will be updated to address change in design of the creek crossing.

## 12.8 Hazardous Materials

CONSULTANT's hazardous materials regulatory agency database review completed under the original scope of work identified several sites of concern are located within or near the Project Area, which may have impacted the soil and groundwater within the Project Area:

- Texaco Station 120445, 10210 Old Hwy 99
- Ed's Transmission (SOC #7), 10228 Smokey Point Boulevard
- Universal Fleet Serv (SOC #6), 10219 State Avenue
- Marysville Shell and Food Court (SOC #2), 11601 State Avenue
- 7-Eleven (SOC #9), 10013A Shoultes Road

Based on the identification of sites of concern, as well as the potential for additional sites of concern to be identified through review of historical sources, site reconnaissance, and interviews with property owners, HDR would prepare a full Hazardous Materials Analysis (HMA) Report for the Project Area. The HMA Report would be prepared in accordance with the WSDOT Local Agency Guidelines (LAG) for Hazardous Materials Analysis Reports.

## 12.11 Permit Support

The CONSULTANT will revise and resubmit the Joint Aquatic Resource Protection Application (JARPA) and JARPA specific graphics to the US Army Corps of Engineers to reflect change in design of the creek crossing.

**CITY Responsibilities:**

- The City responsibilities outlined in the original scope of services remain unchanged.

**Assumption(s):**

- The assumptions outlined in the original scope of services remain unchanged.

**Deliverable(s):**

- Revised Draft and Final Biological Assessment.
- Revised Draft and Final JARPA for Corps/Ecology.
- Draft and Final Hazardous Materials Analysis (HMA) Report

**12.12 NEPA Documentation and Approval**

The CONSULTANT shall complete appropriate NEPA documentation based on the studies and analysis provided above. The CONSULTANT shall complete NEPA environmental documentation in accordance with Chapter 24 of the LAG Manual and other appropriate WSDOT and/or FHWA guidance documents. The Local Agency Environmental Classification Summary form (ECS) is the assumed NEPA document for a Documented Categorical Exclusion (DCE). The CONSULTANT shall prepare the Environmental Classification Summary Form to satisfy NEPA requirements following the format and procedures specified in the WSDOT Environmental Procedures Manual and Local Agency Guidelines. The CONSULTANT shall coordinate with the WSDOT Highways and Local Programs Area Engineer during document preparation and review cycle. The CONSULTANT shall coordinate with WSDOT to address comments on the ECS. The CONSULTANT presently anticipates a NEPA DCE.

**Assumption(s):**

- NEPA documentation is assumed to be a DCE, and the preparation of an environmental assessment (EA) or environmental impact statement (EIS) is not included in this scope of work.
- Document preparation will begin upon the selection of a preferred alternative.
- The project will be processed by WSDOT and FHWA as a DCE.
- Reports prepared by HDR and others under Task 6 – Geotechnical Engineering - and Task 12 – Environmental Documentation and Permitting - in the original scope of work and as updated in Supplemental Agreement No. 1 will provide sufficient information to address project effects in applicable sections of Parts 4 and 5 of the ECS.
- CITY revisions and WSDOT comments on the ECS are minor edits and do not require additional technical analysis.

**Deliverables:**

- Draft and Final NEPA ECS (electronic)

**12.13 Noise Memorandum**

A qualitative noise assessment shall be prepared to support the ECS. The Consultant shall conduct a noise study to meet the requirements of the Federal Highway Administration (FHWA). A noise assessment and

technical memorandum will be prepared to document existing and project-related noise levels in the study area.

The Consultant shall monitor noise levels at a maximum of 4 (4) locations to use in validation of the noise model and documentation of existing noise levels. In locations where other sources dominate, a description of the contributing sources will be provided. Photographs of microphone placement will be taken at each monitoring location.

The Consultant shall prepare a draft Noise Qualitative Memorandum to document existing conditions, current regulations, and explain why more detailed noise modeling is not warranted for this project

**Assumption(s):**

- One City and one WSDOT review and comment response cycle is anticipated.
- WSDOT will concur with this methodology. If they request noise modeling, it will require a scope and budget amendment.

**Deliverables:**

- Draft and Final Noise Qualitative Memorandum (electronic)

### 12.14 Air Quality Qualitative Memorandum

A qualitative air quality memorandum is proposed to support the ECS. The memorandum will document the existing conditions, regulations, and explain why the EPA Moves model is not warranted. No modeling is proposed since the area is considered to be in attainment.

**Assumption(s):**

- One City and one WSDOT review and comment response cycle is anticipated.
- WSDOT will concur with this methodology. If they request air quality modeling, it will require a scope and budget amendment.

**Deliverables:**

- Draft and Final Air Quality Qualitative Memorandum (electronic)

### 12.15 Visual Quality Technical Memorandum

The purpose of this memorandum is to document the visual effects of the project to support the ECS. The CONSULTANT shall complete a visual impacts analysis addressing the potential visual impacts of the project. The analysis will be completed per the requirements of Chapter 459 of the EPM. This analysis will evaluate potential visual impacts, including aesthetics, light, glare, and night sky impacts. The analysis will document the baseline visual conditions and evaluate the potential effects of the proposed project on potential viewers of the project. The project team will choose viewpoints in consultation with City staff, existing maps, aerial photos, GIS data, and photos of the project areas. Up to 3 viewpoints will be used for the analysis that will represent the visual environment of the project area. A map will be included showing the viewpoints, view

directions, and visible areas of these three viewpoints. A photo simulation will be developed for each viewpoint to show how the constructed project may appear from the viewpoints.

**Assumption(s):**

- One City and concurrent WSDOT review and comment response cycle is anticipated
- The City will participate in the determination of appropriate viewpoints.
- Up to 3 viewpoints will be chosen.
- Visual simulations may be sketches, renderings, or photos.

**Deliverables:**

- Draft and Final Visual Quality/Aesthetics Technical Memorandum (electronic)

## TASK 13. FINAL DESIGN - PS&E

The CONSULTANT shall follow the guidelines set forth in the CITY's Design Standards and Plans Preparation Manual when preparing the 60%, 90%, and Ad-Ready plans, specifications, and estimate.

**Assumption(s):**

- The additional efforts outlined in this task description are necessary for the successful completion of the project and are a result of the decision to replace the culvert crossing of Quilceda Creek with a single-span bridge structure.
- The level of effort and fee estimate for this task is based on the number of sheets for each discipline as shown in the sheet list provided. The sheet list was prepared based on CONSULTANT's current knowledge of the project scope and anticipated work elements.
- CONSULTANT shall consult with the CITY prior to developing any sheets if the actual number of required sheets varies from the original sheet count estimate. If the CITY and CONSULTANT concur that total number of sheets required to detail the project exceeds the original estimate, the budget for this task may be amended.

### 13.3 Typical Roadway Sections

Additional roadway sections will be developed for State Avenue denoting roadway widths, right-of-way widths, sidewalks, medians, landscaping, pavement design, wall locations, and traffic lanes at the bridge location.

### 13.10 Drainage System Plans & Details

CONSULTANT will revise gravity drainage design and stormwater ponds to implement the accepted recommendations from the VE Study.

### 13.12 Fish Passage Bridge Design and Details

The CONSULTANT will revise and develop the design the fish passage structure to a single-span bridge structure meeting the structural requirements of AASHTO LRFD. The size of the single-span bridge is assumed to be 66' in width and 130' in length. CONSULTANT will design plan, profile, and detail sheets including the design parameters and construction sequencing.

The CONSULTANT will prepare plans, sections and details for the bridge, and upstream and downstream grading where required to match the existing channel. The plans will include typical sections of the channel within the reach, the depth and placement of the streambed material within the reach.

#### 13.12.1 Structures Technical Memorandum

A brief Bridge Structure Memorandum that documents the justification for the preferred alternative determined by the CITY in coordination with the CONSULTANT shall also be prepared and submitted. The considerations listed below shall be addressed in the Report where applicable and the Report shall discuss how these factors led to the preferred alternative and show how the constraints eliminated or supported the alternatives.

- Aesthetics
- Cost Estimates
- Right-of-way Impacts
- Geometric Constraints
- Project Staging and Stage Construction Requirements (if applicable)
- Traffic Impacts and Public Access During Construction
- Utility Coordination
- Feasibility of Construction
- Structural and Foundation Constraints
- Long-term Structure Maintenance
- Environmental Compliance with Fish Windows

### 13.13 Pavement Marking

CONSULTANT will include the design of additional pavement markings in the plans and details for the HAWK pedestrian signal.

### 13.14 Signing Plans, Schedules & Details

CONSULTANT will include the design of additional signage in the signing plans for the HAWK pedestrian signal.

### 13.15 Signals, Illumination, & ITS

CONSULTANT will prepare the design and signal modification plans, and details showing the proposed location for the HAWK pedestrian signal equipment, electrical hardware, and wiring diagrams. The proposed location of the HAWK signal is generally identified as near the State Avenue/106th Street NE intersection.

CONSULTANT will revise the illumination improvement design to incorporate the HAWK signal and provide appropriate light levels for a pedestrian crossing.

### 13.18 Utility Design and Concrete Panel Potholing

CONSULTANT will design and detail the location, alignment and cross-section of a joint utility trench (JUT) for relocation of overhead communications and power facilities to underground. Installation of the JUT and casing conduit will become a part of the road improvement project, as a result of acceptance of certain VE Study recommendations. Individual franchise utility providers will be responsible for coordinating with the roadway improvement project and relocating their facilities. One additional conduit for future use shall be included in the City's illumination trench.

#### Deliverable(s):

- JUT Utility Plans to support utility relocation by others

### 13.19 60% Submittal

The CONSULTANT will use the 30% design plans and progress to the 60% design and plan level. The CONSULTANT will take into consideration the 30% design review comments from the CITY and VE Study while advancing to the 60% level.

#### 13.19.1 60% Plans

The CONSULTANT will further develop the 30% plans to a 60% plan level including the sheets listed in the following table.

The anticipated sheet list for final design includes:

**60%, 90%, 100% & Ad-Ready Submittal Sheet List**

Sheet Description	60%	90%	100%
Cover Sheet with Vicinity Map and Index	1	1	1
Legend, General Notes, Abbreviations, and Project Key map	2	2	2
Roadway Typical Sections	6	6	6
Alignment, Profile, and ROW Plans	19	19	19
Site Preparation & TESC Plans	12	13	13
TESC Notes	1	1	1
TESC Details	2	2	2
Temporary Access Road Plans	2	2	2
Paving Plans	12	12	12
Paving Details	2	4	4
Intersection & Curb Ramp Grading Details	6	6	6
Drainage Plans and Profiles	14	14	14
Drainage Details	2	4	4
Retaining Wall Notes & Sequencing Plan	1	1	1
Retaining Wall Plan and Profiles	5	5	5
Retaining Wall Details	2	4	4
Bridge Plans	20	27	27
Stream Restoration Details	2	2	2
Pavement Marking & Signing Plans	12	12	12
Pavement Marking Details	1	1	1
Signing Schedule & Details	1	2	2
Signals, Illumination & ITS Plans	17	17	17
Signal Details (3 Intersections)	4	4	4
Illumination Schedule & Details	2	2	2
Landscaping and Irrigation Plans	6	6	6
Landscaping Details	-	2	2
Irrigation Details	-	1	1
Utility Plans and Profiles	20	20	20
Utility Details	6	6	6
Staging and Traffic Control Sequencing Notes	1	1	1
Staging and Traffic Control Plans	2	2	2
<b>Total # Sheets</b>	<b>183</b>	<b>201</b>	<b>201</b>

### **13.19.2 60% Specifications**

The 60% Specifications shall include the additional design considerations associated with the bridge structure, HAWK pedestrian signal, stormwater system changes, and joint utility trench.

### **13.19.3 60% Engineer's Opinion of Cost**

The 60% Engineer's Opinion of Cost shall include the additional design considerations associated with the bridge structure, HAWK pedestrian signal, stormwater system changes, and joint utility trench.

## **13.20 90% Submittal**

The CONSULTANT will use the 60% design plans and progress to the 90% design and plan level. The CONSULTANT will take into consideration the 60% design review comments from the CITY while advancing to the 90% level.

### **13.20.1 90% Plans**

The CONSULTANT will further develop the 60% plans to a 90% plan level including the sheets listed in the previous table.

### **13.20.2 90% Specifications**

The CONSULTANT will update the specifications with any new or additional special provisions from the advancement of design and incorporation of CITY comments. The CONSULTANT shall run the "run-list" prior to submittal.

### **13.20.3 90% Engineer's Opinion of Cost**

CONSULTANT's Engineer's Estimate shall develop an opinion of cost and document the estimate with backup quantity calculations. Backup calculations (including quantity takeoff sheets), showing assumptions made in determining quantities for each bid item, shall be made available upon request. Backup calculations shall specifically include items measured by the appropriate unit. The Engineer's Estimate will include an itemized list in tabular form, describing; section, item, and number of units (quantity), estimated unit costs, and total cost, with the understanding that any cost opinion or Engineer's Estimate provided by the CONSULTANT will be on the basis of experience and judgment. The estimate shall be prepared using standard unit costs and lump sum prices. Ott- Sakai subconsultants will provide recommendations for unit costs and of estimate items. The 90% opinion of probably cost shall include contingencies for elements not yet fully defined. The "Bid Proposal" within the boilerplate specifications shall be prepared from this information by the CONSULTANT.

## **13.21 Ad-Ready Submittal**

CONSULTANT will use the 90% design plans and progress to the Ad-Ready design and plan level. The CONSULTANT will take into consideration the 90% design review comments from the CITY while advancing to the Ad-Ready level.



## TASK 14. CONSTRUCTABILITY ANALYSIS/MOCK BID EXERCISE

This Supplemental Agreement No. 1 makes no changes to this Task.

## TASK 15. REAL ESTATE SERVICES

The objective of this task is to provide assistance to the CITY in acquiring the necessary right-of-way, permanent easements and temporary construction easements to construct the roadway and utility improvements.

CONSULTANT will provide the following additional work:

### 15.2 Property Descriptions and Valuations. Manage the preparation of a PFE, AOS reports, Appraisals for up to thirty-eight (38) parcels.

1. Review and quality control (QC) legal descriptions, exhibits, and right-of-way plans revised by Survey Subconsultant (1-Alliance) for the transfer of the property rights needed for construction, including fee interests, permanent and temporary easements, for use by the right of way acquisition team. These revisions are required due to the changes in scope necessary from the outcome of the 30% Design Review and VE Study recommendations.
2. Revise appraisals previously accomplished to reflect the changes in stormwater facilities.

### 15.3 Right-of-Way Acquisitions and Negotiations.

1. Provide coordination with WSDOT Real Estate and Highways & Local Programs through conference calls and attendance at in-progress meetings held at the City of Marysville.
2. Prepare right-of-way acquisition documents and conduct negotiations as detailed in the original scope of services for one (1) additional parcel.

#### **CITY Responsibilities:**

1. CITY responsibilities remain unchanged from the original scope.

#### **Assumption(s):**

1. Assumptions remain unchanged from the original scope of services, except as defined herein.
2. Up to a maximum of 9 Exhibits and Legal Descriptions will require preparation or revision.
3. Right-of-way plans, legal descriptions and Right-of-way Exhibits currently prepared using metes & bounds are sufficient and not anticipated to be revised to reference highway engineering stations. Revision of legal descriptions and exhibits is considered to be extra work not included in this supplement.

**Deliverable(s):**

1. Revised Appraisal Reports, Appraisal QC Checklists, and Appraisal Reviews for parcels impacted by the change in location for the stormwater facilities.
2. Appraisal Report and Appraisal Review for the additional parcel.

## TASK 16. FUNDING SUPPORT

This Supplemental Agreement No. 1 provides for the additional effort to develop an overall funding strategy and implementation plan that includes state and federal grant funding sources and opportunities.

CONSULTANT will:

- In coordination with the City, develop an overall project funding strategy to include local, state and federal funding sources;
- prepare a strategic funding plan outlining the likely sources, grant opportunities and funding cycles;
- attend up to two (2) meetings with Puget Sound Regional Council (PSRC) for the purposes of promoting the PROJECT;
- prepare up to two (2) federal funding grant applications (1-Draft and 1-Final for each application);
- provide ongoing coordination with WSDOT Highways & Local Programs, Snohomish County Coordinating Committee, PSRC and the CITY through the application process and project development.

## TASK 17. BIDDING PHASE ASSISTANCE

This Supplemental Agreement No. 1 makes no changes to this Task.