

<b>Snohomish County Standard Consultant Agreement Supplement</b>		Consultant/Address/Telephone <b>WSP USA, Inc.</b> 33301 Ninth Avenue South, Suite 300 Federal Way, WA 98003	
Supplement Number <b>Supplement No.18</b>		Contact Name / E-Mail Address Robert L. Fernandes / bob.fernandes@wsp.com	
Agreement Number <b>CCF07-13</b>		Execution Date <i>August 8, 2013</i>	Completion Date <i>December 31, 2023</i>
Project Title <b>Structural Engineering, Geotechnical Design, Survey and Mapping Services for the Index Galena Road (MP 6.4 – 6.9) Flood Repair Project</b>		New Maximum Amount Payable <b>\$4,140,149.00</b>	
Description of Work <i>Provide Structural Engineering, Geotechnical Design, Survey and Mapping Services for the Index Galena Road (MP 6.4 – 6.9) Flood Repair Project. The Index-Galena Road is located along the Skykomish River in the Mount Baker – Snoqualmie National Forest in southeast Snohomish County. During Fall 2006 it was severely damaged by flooding and was washed out between mile posts 6.4 and 6.9.</i>			

WHEREAS, Snohomish County desires to supplement the Agreement entered into with **WSP USA, Inc.** and executed on the 8th day of August, 2013, as amended by Supplement No.1 on the 13<sup>th</sup> day of May, 2014, Supplement No.2 on the 24<sup>th</sup> day of February, 2015, Supplement No.3 on the 21<sup>st</sup> day of October, 2015, Supplement No.4 on the 17<sup>th</sup> day of December, 2015, Supplement No.5 on the 28<sup>th</sup> day of April, 2016, Supplement No.6 on the 27<sup>th</sup> day of July, 2016, Supplement No.7 on the 2<sup>nd</sup> day of November, 2016, and Supplement No.8 on the 26<sup>th</sup> day of September, 2017, Supplement No.9 on the 20<sup>th</sup> day of June 2018, Supplement No.10 on the 20<sup>th</sup> day of March 2019, Supplement No. 11 on the 21<sup>st</sup> day of May 2019, Supplement No. 12 on September 17, 2019, Supplement No. 13 on December 5, 2010, Supplement No. 14 on May 27, 2020, Supplement No. 15 on August 12, 2020, Supplement No. 16 on February 26, 2021, Supplement No. 17 on April 8, 2021, and identified as Agreement No. **CCF07-13**. All provision of the basic agreement remain in effect except as expressly modified by this supplement.

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:

1. The “Total Amount Authorized” amount on the Agreement title page is amended as follows:

Total Amount Authorized                    ~~(\$2,981,821.00)~~ **\$4,140,149.00**

2. The “Completion Date” amount on the Agreement title page is amended as follows:

Completion Date                                ~~(June 30, 2021)~~ **December 31, 2023**

3. Section **II Scope of Work**, is hereby amended to read:

The Scope of Work and projected level of effort required for this PROJECT is detailed in Exhibit “A” comprised of Exhibit A-1, Exhibit A-1a, Exhibit A-1b, Exhibit A-1c, Exhibit A-1d, Exhibit A-1e, Exhibit A-1f, Exhibit A-1g, Exhibit A1h, Exhibit A-1j and Exhibit A-1k attached hereto and by this reference made a part of the AGREEMENT.

4. **EXHIBIT A-1k Supplemental Scope of Work** attached hereto is added to and incorporated into the Agreement.
5. **EXHIBIT E-1k Supplemental Consultant Fee Determination – Budget**, attached hereto is added to and incorporated into the Agreement.

6. **EXHIBIT Gh Supplemental Subcontracted Work** attached hereto is added to and incorporated into the Agreement.
7. **EXHIBIT G-1h Supplemental Subconsultant Fee Determination – Budget**, attached hereto is added to and incorporated into the Agreement.
8. **EXHIBIT G-2 Subconsultant Fee Determination – Summary Sheet Fee Schedule**, attached hereto and incorporated into the previously amended agreement as an additional Fee Schedule for Sitts & Hill, Inc.

IN WITNESS WHEREOF, the parties hereto have executed this Supplement No.18 on the date set forth under their signatures below, and effective as of the date of the last party to sign.

**SNOHOMISH COUNTY**

**WSP USA, INC.**

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Title*

\_\_\_\_\_  
*Title*

**CONTRACT TEMPLATE ONLY  
REVIEWED AND APPROVED:**  
Rebecca J. Guadamud  
Deputy Prosecuting Attorney  
Date: 11/26/14

**CONTRACT TEMPLATE ONLY  
REVIEWED AND APPROVED:**  
Keith Mitchell  
County Risk Manager  
Date: 12/5/14

**EXHIBIT A-1k**  
**Supplemental Scope of Work**

**PROJECT DESCRIPTION**

The above referenced project restores the roadway connection of the Index-Galena Road between project design Mileposts 6.088 and 7.032 by constructing a new roadway realigned to the south and east of the original roadway that was damaged during flooding of the North Fork of the Skykomish River in November of 2006.

This scope of work assumes that the COUNTY will manage the construction contract and will be supported by the COUNTY'S design staff and CONSULTANT staff as described in the following scope of work.

**CONSTRUCTION PHASE SERVICES**

The CONSULTANT (WSP USA) along with SUBCONSULTANTS (Shannon & Wilson and Sitts & Hill) shall provide the following Engineer-of-Record Design Construction Support Services and Limited Construction Observations Services during construction of the project as requested by and/or directed by the COUNTY.

Engineer-of-Record Design Construction Support Services (DCSS), provides continuity of the design team through the construction process. Services to be provided by the CONSULTANT during construction will include shop drawing review, submittal review, and responses to contractor requests for information (RFIs). Services may also include adjustments to the project design to work around unforeseen site conditions or other changes required during construction to implement the intent of the design. Services will include limited site visits and limited attendance at project meetings, review of record drawings, and providing a bridge load rating report.

Under DCSS, nine basic tasks will be provided as follows.

- Task 1.0 - Project Management
- Task 2.0 – Communication & Coordination
- Task 3.0 – Requests for Information, Submittal Reviews, and Civil3D Surface Evaluation
- Task 4.0 – Change Orders and Value Engineering Change Proposal Review
- Task 5.0 – Review Record Drawings
- Task 6.0 – Bridge Load Rating
- Task 7.0 – Construction Observations
- Task 8.0 – Geotechnical and Hydraulic Engineering Services (Shannon & Wilson)
- Task 9.0 – Surveying Support Services (Sitts & Hill)

The proposed scope of services is based on discussions with the COUNTY and understanding of work as described in the following detailed scope of work. The estimated level of effort associated with the following detailed scope of work is based upon the assumptions and task descriptions provided with the detailed scope of work. The COUNTY and the CONSULTANT agree that efforts to complete these tasks can vary from the effort assumed for the preparation of the level of effort shown in Exhibits E and G. Some budget items may cost more and others may cost less. The CONSULTANT shall monitor total costs expended under this agreement and shall notify the COUNTY if funds need to be reallocated between tasks.

## **CONSTRUCTION PHASE SCOPE OF SERVICES**

### **Task 1.0 Project management**

The CONSULTANT will provide project management and coordination of its staff during the construction of the project.

#### **Task 1.1 Project Coordination**

The CONSULTANT will perform project management tasks as follows.

- Prepare and submit monthly invoices during active work period with progress reports summarizing the status of the budget, highlights, details, issues, and approved changes. Assumed that there are 30 active work months for WSP and 24 active work months for their sub-consultants during the 3-year construction period.
- Prepare subconsultant agreements and perform ongoing subconsultant coordination.

#### **Task 1.2 Management of Subconsultants**

CONSULTANT will manage the subconsultant firms of Shannon & Wilson and Sitts & Hill. This includes preparation, review, and execution of subconsultant agreements and supplements to those agreements if required. An allowance for period meetings and phone calls has been provided for the purpose of directing and monitoring the work activities of subconsultants and reviewing subconsultant work products.

### **Task 2.0 Communication and Coordination**

The CONSULTANT will attend meetings at the project site as requested by the COUNTY. It is assumed the CONSULTANT will attend the assumed number of meetings shown in Exhibits E-1k and G-1h.

This task also includes phone calls, e-mails, and teleconferences during the construction phase for communications and coordination between the CONSULTANT, the COUNTY, and the COUNTY's Construction Administration and Inspection (CA&I) consultant. It is assumed the COUNTY will prepare all meeting notes, if required, and send them to the CONSULTANT for review, as applicable. Hours assumed for phone calls, e-mails, and teleconferences are shown in Exhibits E-1k and G-1h.

### **Task 3.0 REQUESTS FOR INFORMATION, SUBMITTAL REVIEWS, AND CIVIL3D SURFACE EVALUATION**

The CONSULTANT will provide engineering reviews and evaluations as required to support the construction of the Index-Galena Road Realignment project.

#### **Task 3.1 Request for Information**

The CONSULTANT will respond to questions and requests for information (RFIs) by the contractor as assigned by the COUNTY.

Deliverable(s)

- Responses to COUNTY to support RFIs review, as required.

#### Assumptions

- Up to 160 RFI's will be submitted for review by the CONSULTANT.
- It is assumed that each RFI will require the time shown in Exhibits E-1k and G-1h.

### **Task 3.2 Submittal Reviews**

The CONSULTANT will review contractor submittals as assigned by the COUNTY. Assumed submittal reviews are shown in Exhibits E-1k and G-1h.

#### Deliverable(s)

- Responses to COUNTY to support anticipated submittal reviews.

#### Assumptions

- This scope assumes the COUNTY will provide the Buy America compliance reviews. For contractor submittals, the baseline is assumed to be two cycles of review effort by the CONSULTANT for each submittal, with 30% of submittals reviewed assumed to require three cycles of review effort for each.
- One review per submittal unless annotated otherwise in Exhibits E and G. Additional reviews of a submittal will require a supplement.

### **Task 3.3 Civil3D Surface Evaluation**

The CONSULTANT will evaluate survey data provided by the Contractor to determine the volume change between the original surface (or previous surface) and the post clearing ground surface and provide updated excavation and earthwork quantities based on the new ground surface information. The CONSULTANT will coordinate with the COUNTY to obtain the survey information; prepare a report after each new survey (e.g. monthly) that highlights these volume changes and any discrepancies, if found; and discuss the finding of the evaluation.

#### Deliverable(s)

- Civil3D surface model prepared from an XYZ point file or a CAD file provided by the Contractor or the COUNTY's CA&I consultant.
- Report highlighting volume changes between the Civil3D surface prepared from the previously provided data and the Civil3D surfaced prepared for the newly provided data. The report will also compare the earthwork volumes that were used in bidding to the updated earthwork volumes based on the new ground surface information. The report will be tabulated by station range and also highlight any discrepancies, if found.

#### Assumptions

- Contractor to perform a preconstruction survey after clearing and grubbing is completed and then periodically as requested by the COUNTY.
- The COUNTY may obtain drone survey data provided under a separate CA&I contract to the CONSULTANT to evaluate in addition to the data provided by the Contractor.
- It is estimated that the above survey evaluations will occur eight times per year for the next 3 years for a total of 24 times. Additional evaluations requested beyond this total number will be provided as a supplemental service if required.
- The hours estimated to coordinate with the COUNTY, prepare and evaluate the surfaces, and prepare the report are as are shown in Exhibits E and G.

#### **Task 4.0 change orders and value engineering change proposal review**

The CONSULTANT shall provide revised plans and specifications as required to execute change orders and provide reviews of Value Engineering Change Proposals (VECPs) as requested.

##### Deliverable(s)

- Revised plans and specifications for change orders will be provided, as required.
- Independent estimates for proposed change orders.
- VECP evaluation when requested.

##### Assumptions

- This scope does not include design of alternatives or proposed redesign of contract elements. If needed, this effort will be provided as a supplemental service.
- Change order form to be in a format approved by the COUNTY.

#### **Task 5.0 Review record drawings (WSP USA)**

The CONSULTANT shall conduct a single review to support the production of a record set of drawings prepared by the COUNTY. The record drawings shall reflect field changes (additions, modifications, or deletions) to the bid drawing set during construction. The record drawing set shall include any drawings revised or reissued during construction as a result of change orders and shall include changes resulting from RFI responses.

The review by the CONSULTANT shall be conducted from a set of bid drawings redlined with changes by the COUNTY following the COUNTY's record drawing procedures. The intent of the record drawing set is to provide the best information available to capture significant field changes but not necessarily every minor change that may occur.

##### Deliverable(s)

- One set of reviewed record drawings annotated with review comments (11x17 PDF format for drawings) and excel file spreadsheet with comments/responses, per each review.

#### **Task 6.0 bridge load rating (WSP USA)**

The CONSULTANT shall load rate the bridge in accordance with WSDOT load rating procedures.

##### Deliverable(s)

- Load rating calculations and copies, PDF format

#### **Task 7.0 limited construction OBSERVATIONS**

CONSULTANT civil and structural design staff, geotechnical engineers, hydraulic engineers, and civil/drainage will provide part-time, special observations on an as-needed or as-desired basis. Assumed 40 site visits for CONSULTANT staff are as shown in Exhibits E-1k. Possible specialized observations may include the following.

- Observations of the bridge drilled shaft operations, during excavation and concrete and CSL testing, including transition pours, preparation of the shaft reinforcement cage, and concrete placement.
- Observations of bridge substructure and wall construction.

- Observations of bridge superstructure construction, including falsework and formwork installation, placement of reinforcing steel, concrete placement, bridge deck construction, and bridge rail construction.
- Observations of box culvert vented ford construction, including falsework and formwork installation, placement of reinforcing steel, concrete placement, roadway deck and railing construction.
- Observations of culvert concrete headwall construction and anchor installations.
- Survey verifications of contractor-provided surveys of all project elements as requested.
- Geotechnical Engineer observations of the bridge drilled shaft operations.
- Geotechnical Engineer observations of structural earth wall (SEW) construction including subgrade preparation, fill placement and compaction, and settlements.
- Geotechnical Engineer observations of geosynthetic reinforced slope (GRS) construction including subgrade preparation, fill placement and compaction, and settlements.
- Geotechnical Engineer observations of rock excavations, in particular at locations where bedrock is expected to be encountered, approximately from STA 24+00 to STA 30+00.
- Geotechnical Engineer observations and evaluation of subgrade beneath the Index Galena roadway.
- Geotechnical Engineer observations and evaluation of unsuitable subgrade or slope materials.
- Hydraulic Engineer observations of large woody debris placement and anchorage.

**Schedule for services**

The duration of the project construction is assumed to be 36 months, including three construction seasons, with 2021 being the first year. A winter shut-down period is assumed between construction seasons beginning in November through March, during which minimal on-site construction activities are expected.

The accompanying fee estimate, as shown in Exhibits E-1k and G-1h, is based on an evaluation of the conceptual construction project schedule. It is recognized by both the CONSULTANT and the COUNTY that this schedule and associated work durations are estimated and that the Contractor’s schedule will become the “real” schedule against which staffing plans must be made. Key assumed milestones in this estimate of construction duration are as follows.

Contractor NTP Date	15 March 2021
Substantial Completion	September 2023
Physical Completion	October 2023
Contract Completion	December 2023

In-Water Work Window Year 1	July 1 through 31 October 2021
In-Water Work Window Year 2	July 1 through 31 October 2022
In-Water Work Window Year 3	July 1 through 31 October 2023

**ESTIMATED LEVEL OF EFFORT**

The estimated level of effort to provide these services are as shown in Exhibits E-1k and G-1h and is based upon the scope of work, assumptions, and task descriptions provided in the preceding. It is recognized by both parties that efforts to provide services under this agreement can vary considerably from estimates used to develop the amount payable for this agreement. Some budget items may cost more and other items may cost less. Budgets for some subconsultants may not be expended and may be used by CONSULTANT and/or other subconsultants if needed with COUNTY approval.

**EXHIBIT E-1k**  
**Supplemental Consultant Fee Determination – Budget**

EXHIBIT E-1, PROJECT FEE DETERMINATION  
WSP USA  
CONSTRUCTION PHASE SERVICES

Total Cost Summary  
4/16/2021

Index-Galena Road MP 6.4 to 6.9 Realignment  
Snohomish County - RC 1532 / UPI #06-0150

**WSP USA PERSONNEL**

<u>Position Classification</u>	<u>Hours</u>		<u>Billing Rate</u>		<u>Cost</u>
1 Director, Civil Engineer	302.0	X	\$ 238.83	= \$	72,127
2 Sr. Lead Consultant, Resident Engineer	892.0	X	\$ 180.70	= \$	161,184
3 Director, Structural Engineer	605.0	X	\$ 239.99	= \$	145,194
4 Consultant, Structural / Civil Engineer	422.0	X	\$ 111.07	= \$	46,872
5 Lead Consultant, Struct / Civil Engineer	12.0	X	\$ 161.18	= \$	1,934
6 Sr. Manager, Applications Support	216.0	X	\$ 153.47	= \$	33,150
7 Lead Design Support Specialist	84.0	X	\$ 133.57	= \$	11,220
8 Sr. Lead Consultant, Structural Engineer	344.0	X	\$ 139.67	= \$	48,046
9 Consultant, Project Accounting	152.0	X	\$ 113.71	= \$	17,284
WSP USA Hours, TOTAL		3,029	<b>SUBTOTAL COSTS = \$</b>		<b>537,011</b>
			Salary Escalation = 9.00%	\$	48,331
			<b>TOTAL SALARY COSTS = \$</b>		<b>585,342</b>

**EXPENSES / DIRECT NONSALARY COSTS (DNCS)**

Task 2.0 Mileage - County Office	1,250	miles @	\$ 0.560	\$	700
Task 7.0 Mileage - Site	2,500	miles @	\$ 0.560	\$	1,400
Task 7.0 Per Diem / Meals - B,L&D per person	20	days @	\$ 66.00	\$	1,320
Task 7.0 Per Diem / Lodging - per person	20	nights @	\$ 139.00	\$	2,780
Federal Express / Courier	4	each @	\$ 20.00	\$	80
<b>TOTAL REIMBURSABLE EXPENSES (DNCS) = \$</b>					<b>6,280</b>

**SUBTOTAL WSP USA COST = \$ 591,622**

**SUBCONSULTANTS**

Task 8.0 Shannon & Wilson - Geotechnical & Hydraulic Engineering Services	\$	302,444
Task 9.0 Sitts & Hill - Surveying Support Services	\$	264,262
<b>SUBTOTAL SUBCONSULTANT COSTS = \$</b>		<b>566,706</b>

**ESTIMATED TOTAL SUPPLEMENTAL COST = \$ 1,158,328**



**EXHIBIT E-1: PROJECT FEE DETERMINATION  
WSP USA**

4/16/2021

CONSTRUCTION PHASE SERVICES  TASK DESCRIPTION	Task Number	Director, Civil Engineer	Sr. Lead Consultant, Resident Engineer	Director, Structural Engineer	Consultant, Structural / Civil Engineer	Lead Consultant, Struct / Civil Engineer	Sr. Manager, Applications Support	Lead Design Support Specialist	Sr. Lead Consultant, Structural Engineer	Consultant, Project Accounting	Totals
		BILLING RATE ==>	\$ 238.83	\$ 188.78	\$ 238.89	\$ 111.87	\$ 181.18	\$ 153.47	\$ 133.57	\$ 138.67	
<b>TASK 1.0 - PROJECT MANAGEMENT</b>	<b>1.0</b>	162	160	70						144	536
Project Coordination	1.1	182	80							144	388
Project Involving (assume 10 months/yr and 3 yrs)		120	60							120	300
Prepare and Maintain Subconsultant Agreements		12								24	36
Management of Subconsultants	1.2	30	100	70							200
Project Correspondence (assume avg 4 hrs/mo for 30 months)		30	60	30							120
Meetings (assume 20 @ avg 2 hrs / ea)			20	20							40
Review of work products (assume 10 @ avg 4 hrs / ea)			20	20							40
<b>TASK</b>	<b>1.0</b>	\$38,880	\$28,812	\$18,798						\$18,374	\$ 100,778
<b>TASK 2.0 - COMMUNICATION &amp; COORDINATION</b>	<b>2.0</b>	120	232	72							424
Preconstruction Meeting		Not included in this contract									
Meetings at Field Offices (5 mtgs @ 8 hr ea; 40 hrs total)			40								40
Phone calls and Telecons (assume 3 hrs/ month for 24 months)		72	48	24							144
Project Correspondence (assume avg 10 hrs/mo for 24 mo)		48	144	48							240
<b>TASK</b>	<b>2.0</b>	\$28,880	\$41,822	\$17,278							\$ 87,881
<b>TASK 3.0 - RFIS AND SUBMITTAL REVIEWS</b>	<b>3.0</b>		224	319	224		216	4	320		1307
<b>Task 3.1: Requests for Information (RFIs)</b>	<b>3.1</b>		80	240					320		640
RFIs - Year 1 (80 assumed @ 4 hrs each)			40	120					160		320
RFIs - Year 2 (40 assumed @ 4 hrs each)			20	60					80		160
RFIs - Year 3 (40 assumed @ 4 hrs each)			20	60					80		160
<b>Task 3.2: Submittal Reviews</b>	<b>3.2</b>		24	79	224			4			331
(assume 1 submittal review each, unless noted otherwise)											
Construction Schedule (6 reviews)				1	2			4			7
Provide Bridge Deck Grades at tenth Points											
Verify Contractor Coordinates for Shafts											
Concrete Mix Designs - Bridge			8	2							10
Concrete Mix Designs - BCVF			8	2							10
Bridge Bearing Submittal (assume 2 submittal reviews)				4	16						20
Expansion Joints Shop Drawings				2	6						8
Bridge Railing Shop Drawings				2	8						10
Bridge Pier Reinforcing Steel				2	8						10
Bridge Deck Reinforcing Steel				2	12						14
Bridge Formwork / Girder Camber				2	6						8
Drilled Shaft Plan (assume 2 submittal reviews)				4	12						16
Drilled Shaft Reinforcing Steel (assume 2 submittal reviews)				1	2						3
Drilled Shaft Sonic Logs			4	2							6
Steel Girder Shop Drawings (assume 2 submittal reviews)				4	24						28
Steel Girder Erection Plan (assume 2 submittal reviews)				2	8						10
GRS Retaining Walls (assume 2 submittal reviews)				4	12						16
SEW Retaining Walls (assume 2 submittal reviews)				4	12						16
Temporary Access Retaining Walls (assume 2 submittal reviews)				4	12						16
Temporary In-Water Access											
Diversion Berms (2 locations)				2	6						8
Culvert Anchors (10 locations)				1	4						5
Culvert Headwalls (6 locations)				2	8						10
BCVF Culvert Structure				2	8						10
BCVF Concrete Slope Apron				1	4						5
BCVF Railing				2	6						8
Temporary Bridge Structures				4	16						20
LWD Timber				1							1
LWD Rock Anchors - Bolts & Grouting				1							1
LWD Placement				1							1
LWD Anchor Connections - Chains, Nuts & Bolts				1							1
Riprap Class D				1							1
Miscellaneous			4	16	32						52
<b>Task 3.3: CHIRSD Surface Evaluation</b>	<b>3.1</b>		120				216				336
Surface Prep and Eval (assume 24 evaluations @ 8 hrs ea)			48				182				240
Prepare Report (assume avg 4 hrs per evaluation)			72				34				96
<b>TASK</b>	<b>3.0</b>		\$40,477	\$78,667	\$24,880		\$33,160	\$634	\$44,884		\$ 220,281
<b>TASK 4.0 - CHANGE ORDERS AND VECP REVIEW</b>	<b>4.0</b>	20	20	40	70	12		80			242
Drawings (assume 4 chg; avg 5 dwgs/chg)			20	20	40			80			160

**EXHIBIT E-1: PROJECT FEE DETERMINATION  
WSP USA**

4/16/2021

CONSTRUCTION PHASE SERVICES  TASK DESCRIPTION	Task Number	Director, Civil Engineer	Sr. Lead Consultant, Resident Engineer	Director, Structural Engineer	Consultant, Structural / Civil Engineer	Lead Consultant, Struct / Civil Engineer	Sr. Manager, Applications Support	Lead Design Support Specialist	Sr. Lead Consultant, Structural Engineer	Consultant, Project Accounting	Totals	
		\$ 238.83	\$ 189.79	\$ 239.99	\$ 111.87	\$ 181.18	\$ 153.47	\$ 133.57	\$ 138.87	\$ 113.71		
Specifications (assume 4 chg) Independent Cost Estimates (assume 6) Meetings & Coordination (assume 10 mtgs @ avg 3 hrs ea)		4		4	8						16	
		6		6	12	12					36	
		10		10	10						30	
	<b>TASK</b>	<b>4.0</b>	<b>\$4,777</b>	<b>\$3,814</b>	<b>\$8,800</b>	<b>\$7,776</b>	<b>\$1,884</b>		<b>\$10,688</b>		<b>\$ 38,865</b>	
TASK 5.0 - REVIEW RECORD DRAWINGS  Drawing Mark-up Review following Season 1 Drawing Mark-up Review following Season 2 Drawing Mark-up Review following Season 3	5.0		18	18	48						80	
			15	15	48						80	
	<b>TASK</b>	<b>5.0</b>		<b>\$2,881</b>	<b>\$3,840</b>	<b>\$5,331</b>					<b>\$ 12,082</b>	
TASK 6.0 - BRIDGE LOAD RATING	6.0			8	80				24	8	120	
	<b>TASK</b>	<b>6.0</b>			<b>\$1,820</b>	<b>\$8,888</b>			<b>\$3,352</b>	<b>\$910</b>	<b>\$ 16,067</b>	
TASK 7.0 - CONSTRUCTION OBSERVATIONS  Site Walk Bridge drilled shaft operations Bridge substructure and wall construction Bridge superstructure construction Box culvert vented ford construction Culvert concrete headwall construction and anchor installations TESC installations Culvert channel grading and culvert construction Bridge drilled shaft operations Structural earth wall (SEW) construction Geosynthetic reinforced slope construction Geotechnical observations of rock excavations Subgrade beneath the Index Galena roadway Unsuitable subgrade or slope materials Erosion protection areas construction Large woody debris placement and anchorage Site Visit Allowance (40 assumed @ 8 hrs per ea; 1 staff)	7.0		240	80							320	
	<b>TASK</b>	<b>7.0</b>		<b>\$43,388</b>	<b>\$18,199</b>							<b>\$ 82,687</b>
TASK 8.0 - GEOTECHNICAL & HYDRAULIC ENGINEERING	8.0	See Shannon & Wilson Hours										
TASK 9.0 - SURVEYING SUPPORT SERVICES	9.0	See Pitts & Hill Hours										
<b>WSP TOTAL HOURS =</b>		<b>302</b>	<b>892</b>	<b>605</b>	<b>422</b>	<b>12</b>	<b>216</b>	<b>84</b>	<b>344</b>	<b>152</b>	<b>3,029</b>	
		<b>\$ 72,127</b>	<b>\$ 181,184</b>	<b>\$ 146,184</b>	<b>\$ 46,872</b>	<b>\$ 1,884</b>	<b>\$ 33,160</b>	<b>\$ 11,220</b>	<b>\$ 48,048</b>	<b>\$ 17,284</b>	<b>\$ 637,011</b>	

## **EXHIBIT Gh**

### **Supplemental Subcontracted Work**

The County permits subcontracting for the following portions of the work of this AGREEMENT.

#### **Task 8.0 Geotechnical and hydraulic engineering services (Shannon & Wilson)**

Shannon & Wilson, Inc., (SUBCONSULTANT) under a subconsultant agreement with CONSULTANT, will provide geotechnical and hydraulic engineering services as required to support the construction of the Index-Galena Road Realignment project.

#### **Task 8.1 Project Management**

SUBCONSULTANT will perform project management services for geotechnical and hydraulic engineering tasks including invoicing, scheduling of work, communications with CONSULTANT, communications with COUNTY, and QA/QC.

#### **Task 8.2 Communication & Coordination**

SUBCONSULTANT will attend meetings via teleconferences, at the project site, or at COUNTY offices as requested by the COUNTY. It is assumed S&W will attend the assumed number of meetings are as shown in Exhibit G.

This task also includes phone calls, e-mails, and teleconferences during the construction phase for communications and coordination between SUBCONSULTANT and the COUNTY's Construction Administration and Inspection (CA&I) consultant. Hours assumed for phone calls, e-mails, and teleconferences are as shown in Exhibit G-1h.

#### **Task 8.3 Requests for Information and Submittal Reviews**

SUBCONSULTANT will respond to questions and requests for information (RFIs) by the contractor and shall review contractor submittals as assigned by the COUNTY or CONSULTANT.

##### **Assumptions**

- Assumptions for submittals are the same as shown under Task 3.0 and assumed list of submittals to be reviewed are as shown in Exhibits E-1k and G-1h.
- Up to 40 RFI's will be submitted for review by SUBCONSULTANT.
- It is assumed that each RFI will require the time shown in the fee estimate.

##### **Deliverable(s)**

- Responses to COUNTY to support RFIs and submittal review, as required.

#### **Task 8.4 Change Orders and Value Engineering Change Proposal Review**

SUBCONSULTANT will provide technical assistance as required to execute change orders and provide reviews of Value Engineering Change Proposals (VECPs) as requested. Assumptions for this task are the same as shown under Task 4.0.

##### **Deliverable(s)**

- Revised sketches and/or specifications for change orders as required.

- Independent estimates for proposed change orders.
- VECP evaluation assistance when requested.

**Task 8.5 Limited Construction Observations**

SUBCONSULTANT’s geotechnical and hydraulic engineers will provide part-time, special observations on an as-needed or as-desired basis. Possible specialized observations may include the applicable discipline items listed under Task 7.0. Assumed 32 site visits for S&W staff as shown in Exhibits G-1h.

**Deliverable(s)**

- Daily inspection reports will be provided whenever SUBCONSULTANT is on site to conduct these inspections.

**Task 9.0 Surveying support services (Sitts & Hill)**

Sitts & Hill , (SUBCONSULTANT) under a subconsultant agreement with CONSULTANT, will provide surveying support services as required to support the construction of the Index-Galena Road Realignment project.

**Task 9.1 Project Management**

SUBCONSULTANT will perform project management services for surveying tasks including invoicing, scheduling of work, and coordination with CONSUTLANT and the COUNTY. This task includes phone calls and e-mail correspondence and is based on an average number of hours for this coordination and correspondence each month as shown in Exhibit G-1h.

**Task 9.2 Construction Staking**

SUBCONSULTANT will perform construction staking based on an as-needed or as-desired basis. Assumed surveying hours are shown in Exhibit G-1h.

Surveying needs that are anticipated may include the following.

- Re-stake Centerline Alignment. This assumes refreshing the existing staking once.
- Re-stake Right-of-Way. This assumes refreshing the existing staking once.
- Perform Verification of Piers 1 & 2. This assumes five days of field work. Additional field work, if needed, will be performed under Miscellaneous Spot Checks.
- Perform Verification of Retaining Walls (5 Walls). This includes bottom face and top face of wall alignment or as necessary.
- Miscellaneous Spot Checks. This will be based on requests from the COUNTY and assumes there will be 24 occurrences or requests.
- Complete As-Built of Survey Monuments.

**EXHIBIT G-1h**  
**Supplemental Subconsultant Fee Determination – Budget**

**EXHIBIT G-1, SUBCONSULTANT FEE**  
**SHANNON & WILSON**  
**CONSTRUCTION PHASE SERVICES**

**S&W Summary**  
4/16/2021

**Index-Galena Road MP 6.4 to 6.9 Realignment**  
**Snohomish County - RC 1532 / UPI #06-0150**

**GEOTECHNICAL & HYDRAULIC ENGINEERING SERVICES**

SHANNON & WILSON PERSONNEL

<u>Position Classification</u>	<u>Hours</u>		<u>Billing Rate</u>		<u>Cost</u>
1 Officer / VP / PIC	317.0	X	\$240.00	= \$	76,080
2 Senior Associate	526.0	X	\$208.85	= \$	109,855
3 Associate	32.0	X	\$191.13	= \$	6,116
4 Senior Professional III	316.0	X	\$156.25	= \$	49,375
5 Professional IV	128.0	X	\$127.70	= \$	16,346
6 Senior CAD / GIS	0.0	X	\$114.53	= \$	-
7 Senior Administrative	60.0	X	\$114.78	= \$	6,887
8 Administrative	0.0	X	\$89.28	= \$	-
Total Hours		1,379	<b>SUBTOTAL COSTS = \$</b>		<b>264,659</b>
			Salary Escalation =	9.00%	\$ 23,819
			<b>TOTAL SALARY COSTS = \$</b>		<b>288,478</b>

DIRECT NONSALARY COSTS (DNSC)

Task 8.2 Pre-Bid Site Visit	120	miles @	\$ 0.560	\$	68
Task 8.2 Meetings	1,200	miles @	\$ 0.560	\$	672
Task 8.3 Field Obs. Site Visit	5,760	miles @	\$ 0.560	\$	3,226
Field & Laboratory Quality Control Testing	1	Lump Sum @	\$ 10,000	\$	10,000
			<b>TOTAL REIMBURSABLE EXPENSES (DNSC) = \$</b>		<b>13,966</b>

<b>TASK 8.0 SUBTOTAL SHANNON &amp; WILSON COST = \$ 302,444</b>
---

**EXHIBIT G-1, SUBCONSULTANT FEE  
SHANNON & WILSON  
CONSTRUCTION PHASE SERVICES**

**S&W Geotech Hours  
4/16/2021**

TASK 8.0 - GEOTECHNICAL & HYDRAULIC ENGINEERING SERVICES	Shannon & Wilson Personnel								Total
	Officer / VP PKC	Senior Associate	Associate	Senior Professional	Professional IV	Senior CAD / GIS	Senior Admin.	Admin	
BILLING RATE	\$240.00	\$208.85	\$191.13	\$196.25	\$127.70	\$114.53	\$114.78	\$89.29	
<b>8.1 Project Management</b>	<b>124</b>	<b>148</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>296</b>
Progress Reports and Invoicing (assume 24 months)	24	96					24		144
Coordination with WSP	40	32							72
Coordination with Stinchcomb County	40	20							60
Permit Assistance	0	0		0			0		0
QA / QC	20								20
<b>8.2 Meetings and Phone Calls/Conferences</b>	<b>68</b>	<b>70</b>		<b>18</b>					<b>148</b>
<b>List of Anticipated Meetings</b>									
Pre-Construction Meeting (4 hr. mtg)	Not included in this contract								0
Final Tech. Assist. During Construction (assume 40 calls at 2 hr. each)	40	40		0					80
Drilled Shaft Sonic Logs (assume 5 meetings at 2 hrs. each)	5	5		5					15
GRS Retaining Walls (assume 3 meetings at 2 hrs. each)	6	12		6					24
SEW Retaining Walls (assume 3 meetings at 2 hrs. each)	6	12		6					24
<b>8.3 Requests for Information and Submittal Reviews</b>	<b>65</b>	<b>198</b>	<b>32</b>	<b>148</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>428</b>
RFIs - Year 1 (20 assumed)	32	48	32	48	0	0	0	0	160
RFIs - Year 2 (10 assumed)	16	24	16	24					80
RFIs - Year 3 (10 assumed)	8	12	8	12					40
RFIs - Year 4 (10 assumed)	8	12	8	12					40
<b>Submittal Reviews (assume 1 submittal review each, unless noted otherwise)</b>	<b>28</b>	<b>148</b>	<b>0</b>	<b>98</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>269</b>
Construction Schedule (8 reviews)									0
Provide Bridge Deck Grades at tenth Points									0
Verify Contractor Coordinates for Shafts									0
Concrete Mix Designs - Bridge									0
Concrete Mix Designs - BCVP									0
Bridge Bearing Submittal									0
Expansion Joint Shop Drawings									0
Bridge Railing Shop Drawings									0
Bridge Pier Reinforcing Steel									0
Bridge Deck Reinforcing Steel									0
Bridge Formwork / Girder Camber									0
Drilled Shaft Plan	2	10		5					18
Drilled Shaft Reinforcing Steel									0
Drilled Shaft Sonic Logs	1	12		4					17
Steel Girder Shop Drawings									0
Steel Girder Erection Plan									0
GRS Retaining Walls (assume 2 submittal reviews)	2	20		10					32
SEW Retaining Walls (assume 2 submittal reviews)	2	20		10					32
Temporary Access Retaining Walls (assume 2 submittal reviews)	2	16		10					28
Temporary In-Water Access									0
Diversion Berms (2 locations)	1	8		4					13
Culvert Anchors (10 locations)	1	8		4					13
Culvert Headwalls (8 locations)									0
BCVP Culvert Structure	1	6		6					13
BCVP Concrete Slope Apron	1	6		4					11
BCVP Railing									0
Temporary Bridge Structures	1	8		8					17
LWD Timber	1	6		6					15
LWD Rock Anchors - Bolts & Grouting	1	6		6					13
LWD Placement	1	6		6					15
LWD Anchor Connectors - Chains, Nuts & Bolts	1	6		6					13
Recap Class D	1	2		4					7
Miscellaneous	4	8							12
<b>8.4 Change Orders and Value Engineering Change Proposal Review</b>	<b>48</b>	<b>48</b>		<b>24</b>			<b>18</b>		<b>138</b>
<b>8.5 Limited Construction Observations</b>	<b>32</b>	<b>64</b>	<b>0</b>	<b>128</b>	<b>128</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>372</b>
Assume Total of 37 On-Site Observations	32	64		128	128		20		372
<b>TASK 8.0 SUBTOTAL S&amp;W HOURS</b>	<b>317</b>	<b>628</b>	<b>32</b>	<b>316</b>	<b>128</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>1379</b>
<b>TOTAL COST</b>	<b>\$ 78,080</b>	<b>\$ 108,866</b>	<b>\$ 6,116</b>	<b>\$ 48,376</b>	<b>\$ 16,348</b>	<b>\$ -</b>	<b>\$ 6,887</b>	<b>\$ -</b>	<b>\$ 264,668</b>

EXHIBIT G-1: PROJECT FEE DETERMINATION  
**SITTS & HILL**  
**CONSTRUCTION PHASE SERVICES**

4/16/2021

Index-Galena Road MP 6.4 to 6.9 Realignment  
 Snohomish County - RC 1532 / UPI #06-0150

Sitts & Hill Personnel

<u>Project Function</u>	<u>Hours</u>		<u>Billing Rate</u>		<u>Cost</u>
1 Principal Surveyor	81.0	X	\$ 118.52	= \$	9,600
2 Project Surveyor	323.0	X	\$ 92.02	= \$	29,722
3 Chief of Parties	0.0	X	-	= \$	-
4 Survey Party Chief	520.0	X	\$ 178.95	= \$	93,054
5 Survey Crew Member	520.0	X	\$ 182.96	= \$	95,139
6 Survey Technician	68.0	X	\$ 64.55	= \$	4,389
Sitts & Hill Hours, TOTAL		1,512	SUBTOTAL COSTS = \$ 231,905		
			Salary Escalation = 9.00%	\$	20,871
			TOTAL SALARY COSTS = \$ 252,777		

<u>EXPENSES / DIRECT NONSALARY COSTS (DNCS)</u>	<u>Qty</u>		<u>Unit Cost</u>	<u>Per</u>	<u>Cost</u>
Field Supplies (Lath)	200	\$	0.550	/ lath \$	110
Field Supplies (Hubs)	200	\$	0.370	/ hub \$	74
Field Supplies (Flagging)	8	\$	1.33	/ roll \$	11
Field Supplies (Paint)	8	\$	3.33	/ can \$	27
Field Supplies (Rebar)	20	\$	1.790	/ rebar \$	36
Lodging (WSDOT per Diem)	38	\$	115.00	/ night \$	4,370
Meals - B (WSDOT per Diem)	38	\$	16.000	/ day \$	608
Meals - L (WSDOT per Diem)	52	\$	17.00	/ day \$	884
Meals - D (WSDOT per Diem)	38	\$	28.00	/ day \$	1,064
Mileage (WSDOT)	7,680	\$	0.560	/ mile \$	4,301
			TOTAL REIMBURSABLE EXPENSES (DNCS) = \$ 11,485		

**SUBTOTAL SITTS & HILL COST = \$ 264,262**

**EXHIBIT G-1: PROJECT FEE DETERMINATION  
SITTS & HILL**

4/16/2021

SURVEYING SERVICES ESTIMATE		Task Number	Survey Principal	Project Surveyor	Chief of Parties	Survey Party Chief	Survey Crew Member	Survey Technician	Totals
TASK DESCRIPTION		BILLING RATE --->	\$ 118.52	\$ 92.02	\$ -	\$ 178.95	\$ 182.96	\$ 64.55	
<b>TASK 9.0 - SURVEYING SUPPORT</b>		<b>9.0</b>							
<b>Project Management</b>		<b>9.1</b>	81	111					192
Project Invoicing (assume 18 months)			36	36					72
Coordination and Scheduling (assume 8 hr / month for 15 months)			45	75					120
<b>Construction Staking</b>		<b>9.2</b>		212		520	520	88	1320
Recover and Refresh Horizontal and Vertical Survey Control				4		30	30	4	68
Restake Centerline Alignment (Assumes one staking event to refresh)				16		40	40		96
Restake Right-of-Way (Assumes one staking event to refresh)				20		40	40		100
Perform Verification of Piers 1 & 2 (Assumes five days of field work; extra if needed will be via miscellaneous)				40		90	90	16	236
Perform Verification of Retaining Walls (5 Walls) (Includes bottom face and top face of wall alignment)				40		100	100	16	256
Miscellaneous Spot Checks (Assume 24 Occurrences)				60		200	200	24	484
Complete As-Built of Survey Monuments				16		20	20	8	64
Review Monument Destruction Permits and Procedures				16					16
<b>TASK</b>		<b>9.0</b>	81	323		520	520	88	1612
<b>Total Cost</b>			\$ 8,800	\$ 28,722.48	\$ -	\$ 93,054.00	\$ 95,198.20	\$ 4,388.40	\$ 231,805



**EXHIBIT G-2**  
**Subconsultant Fee Determination – Summary Sheet**  
**Fee Schedule – PREVAILING WAGE**

Subconsultant: **Sitts & Hill Engineers, Inc.**

**PREVAILING WAGE**

Position Classification	Prevailing Wage Rate	Less Benefit Amount	Required Hourly Rate	ICR @148.93%	Profit @25.75%	Rate Per Hour
Survey Party Chief (Construction Site Surveyor)	\$73.49	\$8.34	\$65.15	\$97.03	\$16.78	\$178.95
Survey Crew Member (Assistant Construction Site Surveyor)	\$72.28	\$5.67	\$66.61	\$99.20	\$17.15	\$182.96

LNI Prevailing Wage Rates: <https://secure.lni.wa.gov/wagelookup/>

**Benefit Code Key for 4/15/2021**

**Note:** Select View under \*Risk Class to verify workers compensation insurance on your project. Use this tool to find and understand the insurance risk classifications to pay for the trade and occupations you are utilizing on your project. Workers' compensation risk classifications are determined by the nature of your project, nature of business or phase of construction.

County	Trade	Job Classification	Wage	Holiday	Overtime	Note	*Risk Class
Snohomish	Surveyors	Assistant Construction Site Surveyor	\$72.28	<u>7A</u>	<u>3K</u>	<u>8X</u>	<u>View</u>
Snohomish	Surveyors	Chainman	\$69.12	<u>7A</u>	<u>3K</u>	<u>8X</u>	<u>View</u>
Snohomish	Surveyors	Construction Site Surveyor	\$73.49	<u>7A</u>	<u>3K</u>	<u>8X</u>	<u>View</u>

The indirect cost rate (ICR), profit, and rate per hour listed above are the required rates payable under this AGREEMENT for the listed Position Classifications.