

**BOARD OF COUNTY COMMISSIONERS
COUNTY OF KITTITAS
STATE OF WASHINGTON**

RESOLUTION NO. 2015-122


**TO AUTHORIZE CHAIR SIGNATURE FOR PROFESSIONAL ENGINEERING TASK ORDER
FOR KITTITAS COUNTY ROAD SAFETY IMPROVEMENTS PROJECT**

- WHEREAS:** The Federal Highway Administration (FHWA) authorized \$594,900 to Kittitas County Public Works (KCPW) for road safety enhancements to Westside and Huntzinger Roads; and
- WHEREAS:** Funds are administered through the Washington State Department of Transportation (WSDOT) Local Programs; and
- WHEREAS:** The construction project will provide spot road side safety enhancements to Westside and Huntzinger Roads including guardrail, reflective markers and a bridge rail retrofit; and
- WHEREAS:** Sargent Engineers already provided some design for Westside Road requiring the completion of the design for construction; and
- WHEREAS:** Sargent Engineers provided a signed task assignment to perform engineering design of the project for \$73,671; and
- WHEREAS:** On February 3, 2015 the BOCC approved the chair to sign an on-call engineering services contract with Sargent Engineers through Resolution 2015-021.

NOW, THEREFORE BE IT RESOLVED that the Board of County Commissioners, in the best interest of the public, does hereby authorize the chair to sign the task order for professional engineering services for the Kittitas County Road Safety Improvements project.

DATED this 1st day of September, 2015, at Ellensburg, Washington.

**BOARD OF COUNTY COMMISSIONERS
KITTITAS COUNTY, WASHINGTON**



Gary Berndt, Chair



Obie O'Brien, Vice-Chair



Paul Jewell, Commissioner



Formal Task Assignment Document

Task Number: 2

The general provisions and clauses of Agreement BOCC Res. No. 2015-021 shall be in full force and effect for this Task Assignment.

Location of Project: Huntzinger Road and West Side Road

Project Title: Huntzinger Road and West Side Road Improvements

Maximum Amount Payable Per Task Assignment: \$73,671.00

Completion Date: December 31, 2016

Description of Work:

(Note attachments and give brief description)

See attached Exhibit A and Exhibit D.

Agency Project Manager Signature  Date: 04/10/15

Oral Authorization Date: _____ See Letter Dated: _____

Consultant Signature:  Date: 2/20/15

Agency Approving Authority:  Date: 9/1/15

Consultant: Sargent Engineers, Inc.
320 Ronlee Lane NW
Olympia, WA 98502
(360) 867-9284

Exhibit A

This project involves the improvement to two roads. Huntzinger Road will be improved by the addition of signage from mile post 0.24 to mile post 2.70. Westside Road will be improved by widening the road, adding guard rail, and improving the bridge rail over the canal.

HUNTZINGER ROAD

The environmental permitting, performed by Widener and Associates, will include the following tasks:

1. Environmental Classification Summary/Documented Categorical Exclusion. The Consultant will prepare a Local Agency Environmental Classification Summary (ECS) with supporting documentation as required by WSDOT for projects that receive federal funding through WSDOT (Environmental Procedures Manual, Section 310.07). The ECS will include the recommended NEPA determination (assumed to be a Class II, Documented Categorical Exclusion). We will document this assumption following the WSDOT Local Agency Guidance (LAG) manual. The ECS will also include an effect determination for species listed under the Endangered Species Act (ESA) and Essential Fish Habitat (EFH) evaluation, a determination of project impacts on cultural resources, and a Section 4(f) analysis (see the following scope items).

Assumptions:

The Huntzinger Road project will be determined to be a Class II Documented Categorical Conclusion and neither a NEPA Environmental Impact Statement nor an Environmental Assessment will be required.

Deliverables:

- An electronic and paper copy of the draft ECS in Adobe PDF.
- An electronic and six (6) paper copies of the final ECS in Adobe PDF.

2. Biological Assessment (BA) and Essential Fish Habitat Evaluation (EFH). The Consultant will prepare a brief effect determination letter on species listed as threatened under the ESA (assumed to be "no effect" and completed on as part of the ECS) and an EFH evaluation. They will obtain updated species lists from the agencies web sites and also request site specific habitat information from the Washington State Department of Fish and Wildlife priority habitats and species database. Evaluation of specific project details such as construction techniques and equipment used, timing of construction, temporary sediment and erosion control measures, and best management practices will be based on information developed under Work Element 1.

Assumptions:

The project will have no effect on listed species or their designated critical habitat and a detailed Biological Assessment will not be required.

Deliverables:

No deliverable; the results of the Section 7 investigation will be documented as part of the ECS (Work Element 1)

3. Cultural Resource Investigation. The Consultant will conduct the required National Historic Preservation Act Section 106 Cultural Resources Survey. Work would consist of the following tasks necessary to comply with Section 106:
 - Conduct a background search to identify known cultural resources within the project area of potential effect (APE) and assess the potential for the APE to contain cultural resources.
 - Conduct a pedestrian field reconnaissance to complete the assessment of the potential for the APE to contain cultural resources.

Assumptions:

- We will assist the Kittitas County with APE definition.
- No historic properties within the APE.
- The project qualifies as exempt under WSDOT's programmatic Agreement.
- No human burials or archaeological sites will be encountered.

Deliverables:

- No deliverable; the results of the Section 106 investigation will be documented as part of the ECS (Work Element 1).

4. SEPA Checklist: This project is assumed to be SEPA exempt under the repair and maintenance provisions of the WAC.

Assumptions:

- The project will not require ROW acquisition.

Deliverables:

- SEPA exemption letter

The plans, specifications, and estimate (contract documents) will be prepared by Sargent Engineers. A site visit will be made to confirm areas for the installation of signage. The plans will be prepared from some plans of the road that the County has on file. These documents will be part of the same contract documents as Westside Road for bidding.

WESTSIDE ROAD

Kittitas County would like to improve Westside Road from the most recent stationing of 209+00 to 229+00 and 291+00 to 312+00. The improvements will include: widening the road, improving shoulder slopes, improving guardrails, improving bridge rails, beveling culverts, and improving sight distance at intersections. Sargent Engineers has been asked to complete the environmental documentation, complete the geotechnical study, and complete the plans, specifications, and estimate for the project. In order to do this, Sargent Engineers will perform the following tasks:

GEOTECHNICAL STUDY

PanGEO will perform all geotechnical engineering for the project.

All improvements within the defined work areas will be contained within existing right-of-ways. Because of these right-of-way limitations, the consultant will develop recommendations for cut and fill slopes that are steeper than typical standards. The consultant will also provide recommendations for gravity (ecology) block walls and soldier piles walls at other locations where steepened slopes are not feasible. Accordingly, the following provides the scope of work to finish the geotechnical design report within the above constraints.

GEOTECHNICAL ENGINEERING ANALYSES

Geotechnical recommendations for design of the roadway widening will be developed in general accordance with a load and resistance factor design (i.e., AASHTO LRFD Bridge Design Specifications and the current WSDOT Bridge Design Manual). The consultant's analyses will include:

Widening Alternatives Analysis – Considering the roadway geometry and underlying soil and groundwater conditions, the consultant will develop schematic widening support options that will include cantilever soldier pile walls, gravity (ecology block) walls, and cut and fill slopes. They will prepare sketches of these options for your review and concurrence before developing specific design recommendations for viable alternatives.

Wall Design Recommendations - Pending concurrence on feasible alternatives for the roadway widening, the consultant will develop recommendation for the embankment support including:

- Cut and Fill Slopes
- Lateral Earth Pressures
- Minimum Foundation Embedment
- Foundation Soil Bearing Capacity
- Coefficient of Base Friction
- Passive Earth Pressures
- Soldier Pile Design Parameters
- Drainage Considerations
- Constructability Considerations
- Wall Backfill Material Type and Compaction
- Embankment Fill Stability (static & seismic)

Seismic Site Characterization – This will include developing recommendations for design peak ground accelerations that have a 7% probability of exceedance in 75 years in accordance with AASHTO and the WSDOT Bridge Design Manual. The acceleration will be recommended based on existing seismic hazard mapping. Site-specific ground response analysis will not be performed. The appropriate AASHTO soil profile type will be identified.

Construction Considerations and Advisory Specifications – Construction considerations will be identified and discussed for the feasible foundation types. Where appropriate, advisory specifications consistent with the current WSDOT Standard Specifications, General Special Provisions or Bridge Special Provisions will

be developed for inclusion in the contract special provisions regarding geotechnical issues and ground conditions expected to be encountered.

Draft Geotechnical Report

A draft geotechnical report will be prepared and submitted for review by Kittitas County. The consultant will meet with the design team to discuss any revisions that may be necessary for the final report.

Final Geotechnical Report

The consultant will incorporate comments or revisions to the draft report and submit a final geotechnical report for the project.

Please note that the proposed scope of work does not include evaluation of chemical properties of soil and groundwater, or the potential presence of hazardous materials on site. This proposal also does not include assessment of the presence or absence of wetlands at the project site.

ENVIRONMENTAL PERMITTING

Environmental Permits

Environmental permits will be completed by Widener and Associates.

Wetland Delineation

The wetland report will be completed for the project.

Deliverables

- Three copies of a revised draft Wetland Delineation Report, incorporating comments by USACE, for submittal for approval.

Section 106 Report (Cultural and Historic Resources)

The cultural study will be completed for the project.

Deliverables

- Three copies of a draft Section 106 Report will be prepared to describe cultural resources identified in the project area to meet state and federal standards for reporting as outlined in the guidelines provided by the OAHP. The report will include summary background information appropriate to a cultural resources assessment of the project area, including environment, previous cultural resources studies, ethnography/ethno history, and history. A discussion of agency and Tribal consultation, methodology, the results of the investigation, and a map of located archaeological sites will be provided. Recommendations will also be extended to any cultural resources that may be significant. Monitoring of construction excavation recommendations may also be included. The historic structures inventory form and/or archaeological site inventory form will be attached to the report as an appendix.
- Three copies of a revised draft Section 106 report incorporating County comments.
- Three copies of a final Section 106 report incorporating WSDOT comments.

In addition, the SEPA checklist, ECS, and Section 7 letter shall be completed for this project.

ROADWAY DESIGN

The consultant will prepare the design to improve the road by widening the present road section. This will include the improvement of the design of retaining walls, the improvement of slopes, the improvement of guard rails, the improvement of obstacles near the road, and improvement of culvert ends.

PLANS

The consultant will prepare the plans for the improvement of the road. The plans will follow the format that the County desires. They shall include at a minimum:

- Cover Sheet
- Quantities Sheet
- Roadway Sections
- Plan and Profile Sheets
- Guard Rail Details
- Drainage Details
- Retaining Wall Layouts
- Retaining Wall Details

SPECIFICATIONS

The consultant will prepare the specifications in WSDOT format using WSDOT bid items.

ESTIMATE

The consultant will prepare an estimate for the project.

PLANS, SPECIFICATIONS, AND ESTIMATE

The final contract documents for Huntzinger Road and Westside Road will be combined into one set of plans, specifications, and estimate.

BIDDING AND CONSTRUCTION ADMINISTRATION

The County will conduct the bidding and administer construction.

The consultant will submit plans for review to the County at the 60%, and 90% stages for review and comment.

Exhibit D					
Consultant Fee Determination					
Project: Westside Road - Station 209+00 to 229+00 and Station 291+00 to 312+00					
	Principal	Project Engineer	Design Engineer	Drafter II	Task Cost
Rate:	\$158.00	\$120.00	\$86.00	\$86.00	
Project Management	8				\$1,264
60% Documents					
Attend 1 meetings	7				\$1,106
Perform final roadway design			20		\$1,720
Prepare cover sheet			2	4	\$516
Prepare quantities sheets			2	4	\$516
Prepare roadway plans (11 sheets)			4	18	\$1,892
Prepare roadway cross-sections and details (8 sheets)			8	32	\$3,440
Prepare signing and striping plan (9 sheets)			4	9	\$1,118
Prepare final retaining wall design			8		\$688
Prepare retaining wall layout			2	8	\$860
Prepare retaining wall details			2	4	\$516
Prepare bridge rail retrofit			8		\$688
Prepare bridge rail details			2	8	\$860
Prepare special provisions			24		\$2,064
Prepare quantities			16		\$1,376
Prepare cost estimate			4		\$344
90% Documents					
Attend 1 meetings	7				\$1,106
Check final roadway design		10			\$1,200
Check cover sheet		1		2	\$292
Check quantities sheets		1		2	\$292
Check roadway plans		2		10	\$1,100
Check roadway cross-sections		4		16	\$1,856
Check signing and striping plans		2		4	\$584
Check retaining wall design		4			\$480
Check retaining wall layout		1		4	\$464
Check retaining wall details		1		2	\$292
Check bridge rail retrofit		4			\$480
Check bridge rail details		1		8	\$808
Check special provisions		12			\$1,440
Check quantities		16			\$1,920
Check cost estimate		4			\$480
Plans, Specifications and Estimate					
Make changes to plans, specifications and estimate	2	14	14	14	\$4,404
Produce bid document originals		8	8	8	\$2,336
Total Direct Salary Cost	24	85	128	157	\$38,502
Direct Non-Salary Costs					
Mileage	\$361.10				
Complete Geotechnical Study	\$12,842.00				
Complete Environmental Permitting	\$12,614.40				
Total Direct Non-Salary Costs					\$25,818
Total Westside Road					\$64,320

Exhibit D					
Consultant Fee Determination					
Project: Huntzinger Road - MP 0.24 to 2.70					
	Principal	Project Engineer	Design Engineer	Drafter II	Task Cost
Rate:	\$158.00	\$120.00	\$86.00	\$86.00	
Project Management	2				\$316
Site Visit		8			\$960
Prepare cover sheet			1	2	\$258
Prepare quantities sheets			1	1	\$172
Prepare signing and striping plan (7 sheets)			4	16	\$1,720
Prepare special provisions			8		\$688
Prepare quantities			1		\$86
Prepare cost estimate			1		\$86
Check signing and striping plans		1		2	\$292
Check special provisions		1			\$120
Check quantities		1			\$120
Check cost estimate		1			\$120
Plans, Specifications and Estimate					
Make changes to plans, specifications and estimate	1	2	2	2	\$742
Produce bid document originals		2		2	\$412
Total Direct Salary Cost	3	16	18	25	\$6,092
Direct Non-Salary Costs					
Mileage	\$211.60				
Environmental Permitting	\$3,048.00				
Total Direct Non-Salary Costs					\$3,260
Total Huntzinger Road					\$9,352
Total Westside Road and Huntzinger Road Together					\$73,671

Exhibit E				
Environmental Permitting Services				
Huntzinger Road Improvements				
	Project Manager	Project Biologist		
Project Coordination				
Environmental Classification Summary (ECS)				
Draft	4	12		
Revise Draft	2	2		
Final	2	2		
Biological Assessment and Essential Fish Habitat		6		
Cultural Resources Investigation	2	8		
Total hours	10	30		
Summary	Hours	Rate	Cost	
Project Manager	10	\$64.00	\$640.00	
Project Biologist	30	\$21.00	\$630.00	
Total Labor				\$1,270.00
Overhead 110%				\$1,397.00
Profit 30%				\$381.00
TOTAL ESTIMATED COST				\$3,048.00

Exhibit E				
Environmental Permitting Services				
West Side Road Improvements				
	Project Manager	Project Biologist	Acheologist	
Project Coordination				
Environmental Classification Summary (ECS)				
Draft	12	40		
Revise Draft	2	2		
Final	2	2		
Biological Assessment and Essential Fish Habitat		12		
Cultural Resources Investigation	2	8	40	
SEPA	4	24		
Total hours	22	88	40	
Summary	Hours	Rate	Cost	
Project Manager	22	\$64.00	\$1,408.00	
Project Biologist	88	\$21.00	\$1,848.00	
Acheologist	40	\$50.00	\$2,000.00	
Total Labor				\$5,256.00
Overhead 110%				\$5,781.60
Profit 30%				\$1,576.80
TOTAL ESTIMATED COST				\$12,614.40

Exhibit E
Subconsultant Fee Determination - Summary Sheet
PanGEO Incorporated

Project: Westside Road

Salary Cost					
Task	Principal	Geotechnical Project Manager	Senior Geotechnical Engineer	Senior Geologist	Task Cost
Rate:	\$155.16	\$126.23	\$97.20	\$81.72	
Engineering Analysis					
Widening Alternatives Analysis	8				\$1,241
Wall Design Recommendations	8				\$1,241
Construction Considerations & Specs	8	8			\$2,251
Draft Geotechnical Report					
Draft Geotechnical Report	20	2		20	\$4,990
Final Geotechnical Report					
Final Geotechnical Report	4	1		8	\$1,401
Project Management and Meetings					
Meetings (1)	6				\$931
Project Management	4	1			\$747
Total Salary Costs					\$12,802
Reimbursables					
Reproduction and Field Consumables					\$40
Grand Total					\$12,842
Prepared By: Paul Grant	Date: February 5, 2015				