

## **SULTAN CITY COUNCIL AGENDA ITEM COVER SHEET**

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ITEM NO: A-2  
DATE: January 28, 2010  
SUBJECT: Sultan Basin Road and US 2 Realignment  
CONTACT PERSON: Deborah Knight, City Administrator

### **ISSUE:**

The issue before the city council is to discuss Phase III of the Sultan Basin Road Realignment Project and provide direction to staff.

### **STAFF RECOMMENDATION:**

Discuss Phase III of the Sultan Basin Road Realignment. Explore alternative designs and cost cutting measures. Provide direction to staff.

Preparing alternatives is not a part of the current scope of work with WHPacific (Attachment A). The city council will need to amend its contract with WHPacific to cover out-of-scope work.

### **SUMMARY:**

The city council received an update from WHPacific, the city's consulting engineer on the project in May 2009, October 2009 and January 14, 2010.

In October 2009, the project estimate was approximately \$2.8 million. During the October meeting, the city council discussed adding bike lanes and sidewalks to both sides of the project and directed the consultant to proceed with design work.

Since October 2009, WHPacific has provided project costs estimates of between \$3.7 million and \$4.7 million. The current estimate is \$4.296 million. The city has received federal grants totaling \$2.2 million. The city needs to find matching funds or grant funding that does not require a "match" to complete the project.

The estimated project cost is based on the scope of work (i.e. adding sidewalks and bike lanes increases the cost), the cost of raw materials, and the current economic climate. The city has little or no control over some of these cost drivers.

The city's total match requirement is 13.5% or \$579,960 for the complete project (design, acquisition and construction). The city's current match requirement is \$77,000 for work completed. This is the maximum match the city can pay at this time and covers design and environmental permit expenses.

The project must be put on hold until matching funds are available for right-of-way acquisition and construction.

The city is seeking \$249,295 in matching funds from the state legislature through a legislative proviso in the 2010 capital budget to complete construction of Stage I – Cascade View Drive to the Burlington Northern Railroad crossing.

This report is an opportunity for the city council to review the project, discuss alternatives with city staff and direct staff to areas of concern.

## **BACKGROUND:**

### Project Description

The city has started the third and final phase of the Sultan Basin Road and US 2 realignment project. Improvements will consist of adding the fourth leg of Sultan Basin Road connecting Foundry Drive (now South Sultan Basin Road) and Cascade View Drive with US 2. There will be additional traffic control signals, lighting, and left turn lanes on US 2.

Because of the topography, the project requires considerable grading and fill and a significant retaining wall between US 2 and Cascade View Drive. WHPacific is ready to begin negotiations with adjacent property owners to purchase land needed to accommodate the retaining wall, stormwater detention, and right-of-way.

The project includes curb, gutter, sidewalks and bike lanes on both sides of the south leg between US 2 and the Burlington Northern railroad tracks. The sidewalks and bike lanes will connect the industrial park, residential neighborhood, park and ride lot and downtown commercial area.

Cascade View Drive at Foundry Dr



Proposed Improvement



## Current Activity

WHPacific completed the following tasks during the last billing period ending December 22, 2009:

- 90% of plans and cost estimate.
- Prepared, finalized and submitted environmental letter of “no effect” to WSDOT. No effects letter approved by WSDOT.
- Prepared, finalized and submitted the Draft Critical Areas report to Sultan and US Army Corps of Engineers.
- Revised wall layout to reduce construction costs. Update the wall plans, site plans and traffic plans.
- Prepared for right-of-way acquisitions.
- Coordinated with WSDOT local programs on federal environmental report (NEPA) and noise study requirements.

## Next Steps

Right of way acquisition will start after NEPA is approved by the Federal Highway Administration (FHWA) and funding has been obligated.

The noise study will be submitted to WSDOT in January/February 2010. Right of way acquisition could begin in February/March 2010 with funding.

Submittal of the channelization and signal plans to WSDOT are on hold until the city decides if the project is going to move forward as is or with a revised sidewalk/roadway section.

## Project Benefits

The project provides a long-term solution to remedy existing problems with limited street widths and lack of controlled intersection access to US 2. Currently, all left turns on to US 2 from the industrial park are routed to an uncontrolled, substandard access 1/3 mile to the east on Cascade View Drive. The access point enters US 2 approaching the 50-mile per hour section of the highway. Improvements to the intersection will provide additional safety for vehicles entering and leaving the highway.

The Sultan Basin Road and US 2 Realignment will directly affect the economic development opportunities of the industrial park serving the ROMAC Foundry by providing improved access for large delivery trucks. The project provides street and road improvements serving 40 residences in the Skywall subdivision and the undeveloped Ramirez plat south of the Burlington Northern Rail Road tracks. Additional residential development is not expected due to the floodplain designation of the residential area.

## Project Funding

The project has \$2,203,754 in secured federal funding and \$77,000 secured local match for a total of \$2,280,754 in secured funding. WHPacific estimates the city will need \$2,015,246 to complete the project. Depending on the funding source, the city may need to secure \$512,460 in city or state revenues to match federal funds (\$478,000 R/W acquisition + \$3,318,000 construction = \$3,796,000 x 13.5% match).

In September 2009, the city was awarded \$876,150 in construction funds (included in the \$2.2 million of secured funding). In order to receive the funds, the city agreed to break the project into two stages and use the \$876,150 to construct improvements on the “south half” from Cascade View Drive to the Burlington Northern railroad tracks. The city is seeking funds to construct Stage 2 (“north half”) including the fill and retaining wall between Cascade View Drive and US 2.

	Council Presentation May. 2009	Updated Jan. 2010	Alternatives		Staged Construction	
			No Sidewalk East Side	No Sidewalks/ Bike Lanes South of Cascade View	Stage I South half Cascade View Dr. to RR Xing	Stage II North half US 2 to Cascade View Dr.
Design/ Environmental	\$ 400,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 250,000	\$ 250,000
R/W Acquisition	\$ 560,000	\$ 478,000	\$ 478,000	\$ 478,000	\$ 400,000	\$ 78,000
Construction	\$ 1,880,000	\$ 3,318,000	\$ 2,900,000	\$ 2,750,000	\$ 1,767,000	\$ 1,551,000
<b>Total</b>	<b>\$ 2,840,000</b>	<b>\$ 4,296,000</b>	<b>\$ 3,878,000</b>	<b>\$ 3,728,000</b>	<b>\$ 2,417,000</b>	<b>\$ 1,879,000</b>
Secured Federal Funding	\$ (1,327,604)	\$ (2,203,754)	\$ (2,203,754)	\$ (2,203,754)	\$ (2,090,705)	\$ (113,049)
Secured City Match	\$ (179,226)	\$ (77,000)	\$ (77,000)	\$ (77,000)	\$ (77,000)	\$ -
<b>Shortfall</b>	<b>\$ 1,333,170</b>	<b>\$ 2,015,246</b>	<b>\$ 1,597,246</b>	<b>\$ 1,447,246</b>	<b>\$ 249,295</b>	<b>\$ 1,765,951</b>

## Funding Sources

State Funding through the Transportation Improvement Board (TIB) was taken last year to balance the state budget. If TIB has a program, it will be very small and Sultan Basin Road South doesn't fit their criteria (the project scored very low when we applied a few years ago). There are a number of potential federal funding sources:

1. Federal Appropriations for Transportation Projects. Senator Patty Murray called for projects in mid-January. Applications are due February 12, 2010
2. Stimulus Transportation funds will be announced in February, 2010 for Transportation Projects that will be “Shovel Ready” within 60 – 90 days (more than likely, the federal government will push projects ready within 60 days).

3. Rural Town Corridors Grant Program. Call for projects in May, 2010
4. State Transportation Program (STP) – Federal funding passed through to the state. STP(rural) call for projects in May, 2011 or 2012. Puget Sound Regional Council doesn't have a firm date from the federal government funding agency.

## **ALTERNATIVES:**

Since 2009, the total estimated cost to complete the project has increased from \$2.8 million to \$4.296 million a 51% increase. Cost drivers include fill material and the retaining wall between Cascade View and SR 2; sidewalks and bike lanes on both sides of the road from US 2 to the rail road tracks; and required environmental reviews.

The city council may want consider the pros and cons of continuing the project or stopping the project and seeking a more cost effective alternative to connect the area to US 2.

### Modify the west entrance of Cascade View Drive

Cascade View Drives connects to US 2 at two points. The west entrance is east of the Wagley Creek bridge and west of the Sultan Basin Road/US 2 intersection. One alternative suggested by members of the public during the presentation to council on January 14, 2010 was to remove restrictions to turning west from Cascade View Drive onto US 2.

Unfortunately, WSDOT will not approve modifying the west entrance to allow left turns from Cascade View Drive onto west bound US 2. One of the conditions of realigning Sultan Basin Road to its present location was closure of the left turn movement onto US 2 at Cascade View Drive. WSDOT has concerns because drivers can't see on-coming west bound traffic due to sight distance limitations caused by the road grade.

### Signalize east entrance of Cascade View Drive

Another alternative would be to request approval from the Washington State Department of Transportation (WSDOT) to add a signal at the intersection of US 2 and Cascade View Drive. In early discussions with WSDOT, senior staff expressed concerns about locating traffic signals at Rice Road, Sultan Basin Road, and Fifth Street. WSDOT standards for state highways discourage traffic signals which slow traffic especially during peak hours.

WSDOT may be supportive of roundabouts at Cascade View and Rice Road. Rice Road would be a better fit for a roundabout because of the availability of land to accommodate two lanes of traffic. WSDOT considered roundabouts the preferred alternative for intersections in Sultan in order to keep traffic moving

Signalizing the east entrance of Cascade View Drive and US 2 was considered by city staff and consultants during initial discussions of the southern extension of Sultan Basin Road. A signal at Cascade View Drive and US 2 was initially rejected because of the

constraints of the Fire District property on the west and county property on the east. However, this may be a viable alternative given the cost increases of the Sultan Basin Road and US 2 Realignment.

The other difficulty is funding. If the council stops the project, city staff are not certain the state and federal grant funds could be reallocated to another project. If the council decides to stop the project, the city could lose \$1.5 million in state and federal grants.

### Reduce the Project Scope

The council discussed reducing the scope of the project. Options include removing sidewalks and bike lanes on one or both sides of South Sultan Basin Road. The table above provides some cost estimates for council discussion. City staff recommend keeping sidewalks at least on one-side of the roadway to connect the Sky Wall neighborhood to the city's downtown business district and park and ride lot on US 2.

### RECOMMENDED ACTION:

Discuss Phase III of the Sultan Basin Road Realignment. Explore alternative designs and cost cutting measures. Provide direction to staff.

### ATTACHMENT

- A – WHPacific Scope of Work
  - B – Supplemental No. 1
  - C – Supplemental No. 2
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### COUNCIL ACTION:

DATE:

**CONSULTANT FEE ESTIMATE**



Exhibit D-1

Client: **City of Sultan**  
 Project: **US2 - Sultan Base Road Phase III**

**LABOR:**

TASK NO.	TASK (Scope of Services)	WHPACIFIC PROJECT TEAM								TOTAL HOURS	LABOR COST
		Principal 70.00	Project Manager 80.00	Design Engineer 45.00	CADD Technician 20.00	Survey Party Chief 40.00	Survey - 2 Pers. Draw 50.00	Project Board 25.00	Clerical 22.00		
<b>1.0</b>	<b>PROJECT MGMT AND ADMIN</b>	16	128	24	0	0	0	36	20	224	\$11,220
1.01	Monthly Invoices		12						12		
1.02	Monthly Progress Reports		12					12			
1.03	Manage and Coordination with Subs		40					24			
1.04	QA/QC	16	40								
1.05	Project Meeting / Minutes (6 meetings)		24	24					8		
<b>2.0</b>	<b>DATA COLLECTION &amp; REVIEW</b>	0	8	12	24	0	0	0	0	44	\$1,740
2.01	Initial Site Visit by Key Personnel		8	8	8						
2.02	Review Existing Data Pertinent to the Project			4	16						
<b>3.0</b>	<b>UTILITY COORDINATION</b>	0	8	8	8	0	0	0	0	24	\$1,080
3.01	Meetings		8	8	8						
<b>4.0</b>	<b>FIELD SURVEYS AND BASE MAPPING</b>	0	7	0	40	12	96	6	0	161	\$7,050
4.01	Research, Recon and Set Up		1			4		1			
4.02	Recover and Set Additional H&V Control and Tie Control Mns					8	8				
4.03	Field Topo		2				88	4			
4.04	Office Processing Topo (CAD)				40			1			
4.05	Check, Review, QA/QC		4								
<b>5.0</b>	<b>GEOTECHNICAL</b>	LANDAU ASSOCIATES									
<b>6.0</b>	<b>ENVIRONMENTAL</b>	LANDAU ASSOCIATES									
<b>7.0</b>	<b>PRELIMINARY DESIGN AND SUPPORT</b>	0	21	120	80	0	0	0	0	221	\$9,060
7.01	Project Summary		1	16							
7.02	Preliminary Engineering		4	24							
7.03	Evaluation of Design Alternatives		8	24	24						
7.04	Construction Cost Estimate		2	16	16						
7.05	Preliminary Improvement Plans		4	24	24						
7.06	Address Review Comments		2	16	16						
<b>8.0</b>	<b>ROADWAY STORM DRAINAGE ANALYSIS &amp; REPORT</b>	0	8	80	8	0	0	0	2	98	\$4,364
8.01	Analysis		4	40	8						
8.02	Report		4	40					2		
<b>9.0</b>	<b>WSDOT APPROVALS</b>	0	24	56	104	0	0	0	0	184	\$7,080
9.01	Channelization Plan		16	40	80						
9.02	Signal Plan		8	16	24						
<b>10.0</b>	<b>RIGHT OF WAY PLAN</b>	0	6	16	52	0	0	0	0	74	\$2,640
10.01	Plan		4	16	40						
10.02	Legal Description		2		12						
<b>11.0</b>	<b>FINAL DESIGN (60%, 95%, 100%)</b>	0	72	496	684	0	0	0	16	1268	\$47,512
11.01	Cover Sheet				4						
11.02	Typical Sections and Details		2	8	36						
11.03	Misc Details		2	12	16						
11.04	Waterline Plan		2	40	60						
11.05	Erosion Control Plan		2	40	72						
11.06	Traffic Control		2	40	80						
11.07	Roadway, Storm Drainage and Utility Plan/Profile		4	80	120						
11.08	Signal Plans		4	120	120						
11.09	Channelization, Signing and Illumination Plans		2	20	32						
11.10	Landscape Plans		2	32	40						
11.11	Wall Plans		2	40	64						
11.12	Specifications		40	40					16		
11.13	Cost Estimate		8	24	40						
<b>12.0</b>	<b>ADVERTISE AND AWARD</b>	0	29	10	20	0	0	0	0	59	\$2,790
12.01	Addendums		4	8	16						
12.02	Questions		24								
12.03	Bid Tabulation		1	2	4						
<b>Labor Subtotal</b>		16	311	822	1020	12	96	42	38	2357	\$94,536

Overhead Percentage: 173.40% x Direct Salary Cost (DSC) \$163,925  
 Fixed Fee Percentage: 32.00% x Direct Salary Cost (DSC) \$30,252  
**Labor Total: \$289,713**

**EXPENSES:**

ITEM	QUANTITY	UNIT COST	EXPENSES COST
Mileage	1000	\$0.585	\$585
Plots and Reproductions	250	\$3.00	\$750
Title Reports	4	\$500	\$2,000
<b>Expenses Total:</b>			<b>\$3,335</b>

**SUBCONSULTANTS:**

SUBCONSULTANT	MARK UP	FEE	SUBCONSULTARY COST
Landau Associates	1.0	\$69,795	\$69,795
<b>Subconsultants Total:</b>			<b>\$69,795</b>

**TOTAL PROJECT FEE: \$361,843**

## **Exhibit B-1 Scope of Work**

### **City of Sultan/WHPacific US 2/Sultan Basin Road Improvements Project Phase III**

The work to be accomplished under this Agreement will be for WHPacific (CONSULTANT) to provide engineering design services to the City of Sultan (CITY) for the improvements to add the south leg to the Sultan Basin Road intersection with US 2. The planned improvements will include extending Sultan Basin Road southerly to its intersection with Cascade View Drive to provide a 12-foot wide travel lane in each direction, a 12-foot wide left turn lane and a 5-foot bicycle lane and 6-foot wide sidewalk on both sides of the roadway. The new roadway will connect to a new intersection with Cascade View Drive and taper down in width to match the existing roadways to the south of Cascade View Drive intersection. Modifications to the existing US 2 and Sultan Basin Road will include improvements along US 2 to provide a new right turn lane, restriping for a southbound left turn lane and traffic signal modifications. Modifications to the existing storm drainage system, new water quality treatment and detention pond facilities will be added. Additionally, a new 12-inch waterline will be installed along Sultan Basin Road from the US 2 intersection to Cascade View Drive.

The project designs and PS&E will be based on the requirements of the City of Sultan Standards, the Washington State Department of Transportation Local Agency Guidelines and Design Manuals, MUTCD, and AASHTO design standards.

#### **1.0 Project Management and Administration**

The CONSULTANT will provide contract management and administration services for the project, to include: developing and maintaining project scope and budget, liaison with CITY staff, and preparing monthly narrative progress reports and invoices.

The CONSULTANT will attend project coordination meetings, provide information for CITY staff coordination meetings (as requested), and respond to public concerns through communication with CITY staff. The CONSULTANT will attend up to six (6) monthly project coordination meetings with the CITY staff to review schedule, budget, status of designs and plan review comments. The CONSULTANT will prepare meeting notes and distribute to participants.

The CONSULTANT will complete a quality control check prior to submitting work for the CITY's review. A quality control check will be used to confirm that the design work follows CITY and LAG Manual standards and that the work is professional quality meeting industry standards. The quality control check will include review of engineering, drafting and clerical errors or omissions.

#### Deliverables:

- Monthly Progress Reports/Invoices
- Project Coordination Meeting Agendas and Notes

#### **2.0 Data Collection and Review**

The CONSULTANT will collect existing data pertinent to the project that is available from the CITY, other agencies, franchise utilities, and appropriate sources. The data will include survey control data, right-of-way information, legal descriptions, topographic surveys, existing utility locations, planned utility locations, plans for other roadway improvements common to this project, information from recent and proposed private developments including plans and reports, planning documents, and previous reports and documents pertaining to the project corridor.

The CONSULTANT's key project personnel will visit the project site and familiarize themselves with the site conditions and the data that is collected for the project. Ground-level photographs will be obtained during the site visits for design references. The CITY will be responsible for obtaining and maintaining right-of-entry permits for the CONSULTANT to enter properties adjacent to the project. Site conditions review will not commence until rights of entry have been secured.

### **3.0 Utility Coordination**

The CONSULTANT will collect and review existing utility information pertinent to the project that is available from the CITY and other utility companies. The data will include existing and planned utility locations. The CONSULTANT will attend up to two (2) meeting with the CITY and private utility companies to coordinate and resolve impacts on this project on the utility systems. We will prepare meeting notes and distribute to all meeting participants.

The anticipated utility companies involved are power, telephone (several), cable, and gas.

### **4.0 Field Surveys and Base Mapping**

The CONSULTANT will research Snohomish County records to recover monumentation controlling the Site and establish a horizontal (NAD 83/91) and vertical (NAVD 88) datum.

The CONSULTANT will perform a topographic survey of an area approximately 6.5 acres in size, sufficient for the development of 2-foot contours, on the parcels affected by the proposed realignment. As part of that survey, conifer trees over 10-inch caliper and deciduous trees over 12-inch caliper will be located.

The CONSULTANT will perform a topographic survey of adjoining roads, specifically Cascade View Drive and Foundry Drive, 1000 feet each direction from the point of new road alignment and its intersection with Cascade View Drive.

The CONSULTANT will prepare a topographic base map suitable for design purposes. Base maps will be prepared at a scale of one inch equals twenty feet (1"=20'). Existing ground line profiles will be plotted from the field survey information. Base mapping will be tied to existing monumentation and defined on the plans.

#### Deliverables:

- An electronic (Adobe .PDF, AutoCAD .DWG) copy of survey basemap.

### **5.0 Geotechnical Review**

#### **Geotechnical Engineering**

The CONSULTANT will compile and review readily available geologic and geotechnical information and other data relevant to the project. This information will be used to gain a general understanding of past human activities (filling, construction, etc.) and the underlying geology in the project area. Possible data sources include information in Landau Associates' and the CITY's files (construction drawings, utility layouts, geotechnical reports prepared for projects in the vicinity, etc.), and published geologic and topographic maps.

After reviewing the available data, a geologic reconnaissance of the project area will be completed to collect information on the general nature and physical features of the project site and to mark out proposed exploration locations for the one-call utility locate service. Following the site reconnaissance, two exploratory borings will be advanced to depths of 15 to 30 feet along the proposed alignment to characterize soil and groundwater conditions. Washington State Department of Archeology and Historic Preservation approval of the Area of Potential Effects (see Task 5) must be completed for the exploratory borings to commence. The project includes construction of a

new signal pole at the intersection of US 2 and Sultan Basin Road. Past explorations completed in the intersection during earlier phases of the project will be used to evaluate soil conditions within the intersection.

A drilling contractor under subcontract to Landau Associates will complete the exploratory borings. For the purpose of the cost estimate, it is assumed that the site will require a limited-access drill rig to order to complete the proposed borings. Landau Associates will also arrange for underground utility locates ("call before you dig") prior to performing field activities. The exploratory borings will be located along the proposed alignment of Sultan Basin Road, which is located on private property. A private underground utility locating service under subcontract to our firm will check the planned exploration locations for potential conflicts. It is assumed that the CITY will obtain permission to enter private property for all exploratory borings located beyond the public right-of-way.

A geologist or geotechnical engineer from Landau Associates will supervise the explorations, obtain soil samples from the borings, and prepare field logs of conditions encountered in the explorations. Soil samples will be obtained from the exploratory borings on about a 2½- or 5-foot depth interval using the Standard Penetration Test (SPT) procedure, and returned to our laboratory for further examination and classification. Soil samples obtained from the explorations will be held in our laboratory for 30 days after submittal of the final report. After that date, the soil samples will be disposed of unless arrangements are made to retain them. Piezometers will not be installed to monitor groundwater levels; however, groundwater levels will be noted at the time of drilling. Upon completion of sampling and logging, the borings will be backfilled in accordance with the applicable sections of WAC 173-160.

The CONSULTANT will complete a limited geotechnical laboratory testing program consisting of natural moisture content and grain-size determinations on selected soil samples to aid in classifying the site soils. The budget provides for 10 moisture content and 4 grain-size determinations.

Information from the field investigation and laboratory testing program will be analyzed by a geotechnical engineer from Landau Associates to develop geotechnical engineering conclusions and recommendations for design and construction of the proposed intersection improvements. The results of the field explorations, laboratory testing, engineering analyses, and geotechnical engineering conclusions and recommendations will be summarized in a draft geotechnical report for review. Two (2) copies of the draft report will be provided for review by the project team. Upon receipt of review comments, the comments will be addressed and six (6) copies of a signed and sealed geotechnical report will be submitted. The geotechnical report will include:

- A site plan showing the locations of the explorations completed for this study (WHPacific will provide a base map in AutoCAD format).
- Results of laboratory testing and logs of the exploratory borings.
- A discussion of the near-surface soil and groundwater conditions observed in the explorations at the project site.
- Geotechnical conclusions and recommendations for the project, including:
  - a discussion of subgrade support characteristics along the project alignment
  - recommendations for subgrade preparation for new pavement sections, including reuse of site soil, and criteria for selection, placement, and compaction of structural fill
  - a discussion regarding stability of embankment fill slopes and overall global stability of proposed retaining walls
  - recommendations and geotechnical design parameters for retaining wall design
  - recommendations regarding pavement sections
  - recommended allowable soil stress for use in the WSDOT signal standard foundation design method

- recommendations for geotechnical monitoring and consultation during construction.

## 6.0 Environmental Review

CONSULTANT will prepare the required Environmental Classification Summary (ECS) for the project. This includes a National Environmental Policy Act (NEPA) determination. It is assumed that the project will be a Class II, Categorical Exclusion (CE). The following task will be completed for the final NEPA documentation:

### Effect Determination and Essential Fish Habitat Evaluation, and Environmental Classification Summary

The CONSULTANT will prepare an effect determination letter documenting no effects on species listed under the Endangered Species Act. The effect determination letter will also include an evaluation of project impacts on Essential Fish Habitat (EFH).

#### Assumptions:

- The project will include design components necessary to make a determination of no effect for listed species and critical habitat.
- No in-water work will occur.
- Meetings with agency staff [National Oceanic and Atmospheric Administration (NOAA), U.S. Fish & Wildlife Service (USFWS)] are not included in this proposal.
- The project will qualify as a Class II Categorical Exclusion.
- An air quality analysis and associated discipline report will not be required. The CITY is not in a carbon monoxide maintenance area.
- This task does not include efforts to perform six month updates of species listings, if necessary.

## Section 106 Cultural Historic Resources

A Landau Associates archaeologist will conduct a records search for the project at the Washington State Department of Archaeology and Historic Preservation (DAHP) prior to the field survey. Landau Associates cultural resources staff will review cultural resource records, reports, National Register of Historic Places (National Register) nomination forms, and historic property inventory forms on file at DAHP. This information will help determine if any archaeological or historic sites have been previously recorded on or near the property and draft an Area of Potential Effects (APE) letter for the client.

Following a records research and concurrence on the APE, two Landau Associates archaeologists will conduct a surface survey of the project area. A 10-meter (approximately 30 foot) interval pedestrian survey transect will be aligned along the proposed new street right-of-way for the survey. Subsurface probes will be used to search for buried archaeological resources. It is assumed that subsurface testing will require no more than six shovel probes excavated approximately every 20 meters (approximately 60 feet) along the centerline of the proposed new road segment, avoiding wetland areas. Each probe will measure 40 centimeters (cm) (approximately 16 inches) in diameter and will be excavated to a maximum of 100 cm (approximately 40 inches) below the ground surface to adequately cover proposed ground disturbance within the project area. Excavated matrix will be screened through ¼-inch mesh and examined for prehistoric and historic-period artifacts. If significant archaeological materials are discovered during the course of the survey, sites (a feature or more than two artifacts) and isolates (one artifact) will be photographed and documented on maps and appropriate DAHP forms.

A draft report will be prepared following the State of Washington Archaeological Survey and Reporting Standards. Site records and isolate forms will be attached if cultural resources are identified during the survey. Landau Associates will review relevant archaeological, ethnohistorical, and historical reports along with documents, historical aerial photographs, and maps available at the University of Washington libraries and other

local repositories. This information combined with that obtained from DAHP will assist in characterizing the culture history of the project area in order to determine the cultural context for the assessment report.

The report will include recommendations regarding the eligibility of archaeological resources identified in the project area for listing in the National Register provided that a reliable determination is possible based upon the results of the survey covered in this proposal. The report will also include an assessment of the potential effects of the proposed project on each significant cultural resource and recommendations for mitigation. If the significance of an archaeological site or historic property found in the project area cannot be determined from the site survey, formal subsurface investigations or other documentation may be required. Such methods, however, are not included in this scope. The report will be finalized after one round of review by WHPacific.

Assumptions:

- Site access will be reasonable and unrestricted.
- No archaeological monitoring of geotechnical or environmental site assessment ground disturbance will be required.
- No archaeological sites will be identified during the survey.
- No human skeletal remains or historical buildings or structures will be identified during the survey.
- If the significance of an archaeological site found in the project area cannot be determined from the site survey, additional formal subsurface investigations or other documentation may be required. Such methods, however, are not included in this scope.

## Noise Analysis

The Federal Highway Administration (FHWA) is the agency responsible for administering the federal-aid highway program. Before those funds can be used for projects, the projects must be approved by FHWA, which can only grant its approval for projects that are developed in accordance with federal statutes and regulations. One of these regulations requires that a noise study be accomplished to determine what noise impacts, if any, will result from the proposed improvement and what measures will be taken to lessen those noise impacts.

Based on our current understanding of the proposed project, one sensitive receiver is located within the project vicinity that may experience an increase in traffic related noise. If the residential home, located immediately adjacent to the proposed roadway alignment will remain (i.e., will not be purchased with a Right-of-Way acquisition), a noise impact evaluation will need to be completed. Under these circumstances, Landau Associates will conduct a noise analysis that meets the FHWA/WSDOT noise evaluation criteria. This effort will require the following activities:

- **Site Visit:** A site visit will be conducted to confirm the applicability of the screening criteria, to visually identify sensitive receivers, and to collect noise measurements.
- **Noise Screening Assessment:** Noise conditions of the existing project area and the future worst-case hourly noise levels will be predicted with the Traffic Noise Modeling 2.5 software. These estimated noise levels will be compared with the FHWA/WSDOT noise abatement criteria.
- **Noise Report:** A technical memorandum summarizing the existing conditions, future conditions, operational and construction impacts, and construction mitigation options will be prepared for review and approval by FHWA/WSDOT.

Assumptions:

- If the threshold for noise impacts is exceeded, a reasonable and feasible noise mitigation analysis will need to be included in the noise report. This effort has been included as a contingent item within the scope.

## Wetland Delineation, Mitigation Reporting, and Permitting Support

The purpose of this task is to prepare required documentation for permitting impacts to wetland and/or buffer habitat. Information from this task can also be used to provide complete information regarding natural resource elements on the site and can be used as a background document for permitting requirements and for State Environmental Policy Act (SEPA) requirements, if needed. This task includes the following subtasks, which are discussed in detail below:

- Wetland Delineation and Jurisdictional Determination
- Wetland Mitigation, Critical Area Report, Plans, and Specifications
- Permitting Support (JARPA).

### *Wetland Delineation and Jurisdictional Determination*

Landau Associates will conduct a wetland delineation in accordance with Ecology guidance and the 2008 U.S. Army Corps of Engineers (USACE) *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. Landau Associates will compile and review environmental information from readily available public domain resources to gain a general understanding of potential wetland issues at the site. Public domain resources include, but are not limited to:

- Soil Survey data for Snohomish County
- National Wetlands Inventory mapping
- U.S. Geological Survey (USGS) topographic mapping
- Recent aerial photography.

The field investigation will include an examination of vegetation, soils, and hydrology within the study area of the proposed roadway extension. Flagging will be placed along the wetland boundaries and will be confined to the project footprint (approximately 70 feet from the proposed roadway centerline). Any wetland habitat that extends beyond the project footprint, within 200 feet [as required for Critical Area study contents for wetlands and streams under the CITY's Critical Area Regulations (CAR)], will be estimated both visually and using public domain resources in order to assess wetland extent. Included in this task is time to provide the WHPacific surveyors with a hand-sketch of wetland boundaries to assist the surveyors to locate the wetland flagging. Also included is time to review the wetland survey map and request any necessary changes to accurately represent existing wetland conditions.

Wetlands within the study area will be rated in accordance with Ecology's *Washington State Wetland Rating System for Western Washington*, and buffer widths will be determined in compliance with the Sultan City Code, Chapter 16.80 Critical Areas Regulations. The WSDOT Wetland Function Evaluation will be completed for all delineated wetland habitat to characterize wetland functions.

Landau Associates will prepare a Draft Wetland Delineation Report in a format acceptable to the CITY and other regulating agencies that will include:

- A summary of the methodology used
- The size and rating of each wetland; a characterization of wetland vegetation, soils, and hydrology; and field data sheets
- A scaled site map showing the locations of wetland boundaries and wetland buffers, locations of wetland data plots, and site topography.
- A functional assessment of wetlands and/or buffers
- A description of preliminary impacts to wetlands and/or buffers

- Supporting photographs.

The draft report will be provided to WHPacific and the CITY for review. Comments will be reviewed and incorporated into a Final Wetland Delineation Report.

Landau Associates will request a Jurisdictional Determination (JD) from the USACE Seattle District in order to verify the wetland boundaries and regulation under the Clean Water Act. Landau Associates will make this request via submission of a Joint Aquatic Resources Permit Application (JARPA) to the USACE, including the wetland delineation report as an attachment. The JARPA will include a brief overview of the conceptual mitigation plan, including a schematic showing the preliminary design for mitigation that can be presented to regulatory agencies prior to completion of the mitigation design. This task is necessary in order make sure that all agencies support the plan and to reduce the need for multiple revisions of the agency review drafts prior to acceptance of the final mitigation plan.

A Landau Associates wetland biologist will meet on site with representatives from regulatory agencies. The USACE typically takes 1 to 3 months to set up a site visit for a JD visit. Following the JD, Landau Associates will prepare a memorandum documenting the outcome of this field meeting.

Deliverables:

- An electronic (Adobe PDF) copy of the draft and final wetland delineation report.
- An electronic (Adobe PDF) copy of the draft JARPA as submitted to the agencies (City and USACE and/or Ecology).
- An electronic (Adobe PDF) copy of the JD meeting documentation (as prepared by Landau Associates).

*Wetland Mitigation, Critical Area Report, Plans, and Specifications*

Landau Associates will prepare a Draft Critical Area Report for Streams and Wetlands in accordance with the CITY's CAR, and in order to meet standards of other state or federal regulatory agencies. The report will include information from the Wetland Delineation report, and incorporate any necessary mitigation. This will include:

- The Wetland Delineation Report
- A summary of the methodology used
- A description of impacts to wetlands and/or buffers
- A wetland and/or buffer mitigation planting plan including: mitigation goals, objectives, and performance standards; a timeline for mitigation monitoring and reporting; and contingency plans
- Planting lists and specifications that can be used for plant installation by a qualified landscaper to help assure success.

The draft report will be provided to WHPacific and the CITY/agencies for review. Comments will be reviewed and incorporated into a Final Critical Area Report for Streams and Wetlands

Deliverables:

- An electronic (Adobe PDF) and paper copy of the Draft Critical Area Report for Streams and Wetlands.
- An electronic (Adobe PDF) and paper copy of the Final Critical Area Report for Streams and Wetlands.
- Electronic text of specifications for quality assurance will be delivered to WHPacific for incorporation into the document bid package.

*Permitting Support (JARPA)*

The JARPA form will be completed for submittal to USACE and/or the CITY to request approval for unavoidable wetland and/or buffer impacts, if necessary. This task includes time for coordination and revisions with WHPacific and/or agencies as needed to provide accurate information on the JARPA, including figures.

Deliverables:

- An electronic (Adobe PDF) and paper copy of the JARPA.

Assumptions:

- Wetland flagging will only be placed within the project boundaries where accessible.
- Wetland grading plans and specifications (for wetland creation) will not be required.
- Wetland mitigation can be accommodated on site (within the project limits). If offsite mitigation is required, the CITY will identify a suitable site to accommodate the required mitigation.
- Mitigation plans and specifications will be incorporated by WHPacific into the overall design package.
- If wetland impacts are regulated by the USACE, they will be authorized under a Nationwide permit (NWP).
- Up to 8 hours of time is included for a Landau Associates biologist to coordinate with WHPacific, the CITY, regulatory agencies, and other consultants as needed, either by phone or in meetings, regarding wetland construction design and mitigation specifications.
- A Landau Associates wetland biologist will meet onsite for one visit (up to 2 hours on site) with representatives from regulatory agencies for the JD.

### State Environmental Policy Act Checklist

Using the information from the above tasks, a SEPA checklist will be prepared for the project. It is assumed that the CITY's final determination will be a declaration of Non-Significance and that there will be no public comments or public hearing. It is also assumed that the CITY will circulate the SEPA and conduct the required public comment procedures.

Assumptions:

- The project will not require preparation of a SEPA Environmental Impact Statement, and either a Determination of Non-Significance (DNS) or a mitigated DNS will be issued for the project.
- CITY staff will prepare and publish the DNS (or mitigated DNS).
- Landau Associates staff will not attend a public hearing should one be necessary.
- One Landau Associates staff member will conduct one site visit.
- One Landau Associates staff member will attend no more than one agency coordination meeting in Sultan, Washington.
- Information to prepare the SEPA Checklist will be gathered from interviews with agency/utility provider representatives and from readily available public documents; no field work or other primary investigations will be required.
- Landau Associates will provide a draft copy of the SEPA Checklist to the CITY for review. The CITY will provide one set of consolidated comments to Landau Associates, who will prepare a final SEPA Checklist for publication based on those comments. Should additional rounds of review and comment be requested by the CITY, a scope and budget amendment will be required.
- This proposal does not include time for Landau Associates to respond to any public or resource agency comments on the SEPA Checklist after the Checklist has been published for public comment.

### 7.0 Preliminary Design and Report

The CONSULTANT will develop two (2) geometric design alternatives for the new roadway that reviews retaining wall verses fill slope options and intersection layout for Cascade View Drive. Each design alternative will include a plan, profile, typical section and cross sections. The CONSULTANT will prepare a brief design memorandum that will provide the basis for final design and plan preparation. The design memorandum will include the following elements:

- A. **Project Summary** – A review of the project objectives and how the designs meet those objectives.
- B. **Preliminary Engineering** – A discussion of the methodology, existing conditions and design criteria, and standards used in the approach to the preliminary designs.
- C. **Evaluation of Design Alternatives** – A presentation of design alternatives studied, and justification for selection or non-selection. Evaluation and recommendation of two (2) design alternatives will consider costs, right-of-way acquisition, storm water collection, potential utility conflicts, environmental and permitting issues.
- D. **Proposed Improvements** – A review of the technical elements comprising the proposed improvements including turning radii, sight distance and intersection geometry.
- E. **Cost Estimate** – A summary of the estimated costs associated with the completion of the proposed improvements. Anticipated costs will be identified for design engineering, right-of-way acquisition, construction, and construction management.
- F. **Preliminary Improvement Plans** – Plans for the improvements will consist of a channelization plan, plans and profile, typical section and cross sections. The scale of the plan sheets will be one inch equals twenty feet (1"=20'). The plans will be prepared using AutoCAD 2008 software and APWA standard symbols.
- G. **Review Comments** – CITY review comments will be addressed and incorporated into the preliminary design plans and report.

Assumptions:

- CITY will review preliminary plan documents and provide one set of review comments.

Deliverables:

- An electronic (AutoCAD 2008) copy and paper copy of preliminary plans.
- An electronic (PDF) copy and paper copy of design memorandum.

## 8.0 Roadway Storm Drainage Analysis and Report

The CONSULTANT will develop a stormwater management system that will convey stormwater collected from the roadway pavements to detention and treatment facilities. The storm management system design will be based on the Washington State Department of Ecology (WSDOE) 2005 Stormwater Management Manual. Treatment and detention facilities will be evaluated to determine recommended type, size and location for accommodating roadway runoff. Facility layouts will include contour grading lines and elevations for ponds and swales, inlet/outlet details, and miscellaneous details.

The CONSULTANT will prepare a brief technical memorandum, summarizing the roadway stormwater management system analysis and design. The report will include a project description, roadway corridor basin delineation map, summary of existing/proposed conditions hydrologic models, stormwater facility calculations, conveyance calculations, and a preliminary design proposed storm drainage system. The CITY will assist the CONSULTANT in identifying and recommending potential locations for stormwater facilities. Hydrologic and hydrologic models will be developed using Hydraflow software, by Autodesk. The CONSULTANT will prepare a draft Memorandum for CITY and Agency review, respond to comments on the draft Memorandum, and prepare a final document.

Deliverables:

- Stormwater System Technical Memorandum (Draft and Final) - (2) hard copies, electronic (.pdf) file

## 9.0 WSDOT Approvals

### Channelization Plan

CONSULTANT will prepare and submit channelization plans to WSDOT for approval meeting WSDOT Design Manual Requirements. CONSULTANT will address WSDOT review comments and make revisions as needed. It is anticipated three (3) submittals will be made to WSDOT.

### Signal Plan

CONSULTANT will submit to WSDOT for approval preliminary and final signal plans. CONSULTANT will address WSDOT review comments and make revisions as needed. It is anticipated three (3) submittals will be made to WSDOT.

## 10.0 Right of Way Plans

The CONSULTANT will prepare a right-of-way plan that shows existing right-of-way and proposed right-of-way along with permanent and temporary easements needed to accommodate the planned improvements.

The right-of-way plans will be drawn at a scale of one inch equals twenty feet (1"=20'). The base information on the maps will include surveyed topographic base mapping, property lines, right-of-way lines, easements, names of property owners, parcel areas, sections, townships, ranges and survey control information.

The CONSULTANT will obtain title reports needed to establish right-of-way. CONSULTANT will prepare legal descriptions and exhibit maps for those portions of the Site directly affected by the Sultan Basin Road realignment, specifically Snohomish County Tax Parcel Numbers 28083300303900, 28083300305200, 27080400201100 and 27080400201700.

### Deliverables:

- An electronic (AutoCAD 2008) copy and paper copy of right of way plans.
- Signed Word document of Legal Descriptions and exhibit for all four parcels.

## 11.0 Final Design (60%, 90%, 100%)

### Construction Plans

The CONSULTANT will prepare detailed construction plans of the proposed improvements, including:

- Plans will be prepared with such provision and in such detail to permit convenient layout in the field for construction. The plans will be prepared using AutoCAD 2000 supported by Land Development Desktop Rel. 2i software.
- The plans will include complete details for construction of the proposed improvements. The improvement plans will include details for excavating; placing embankment; pavement grinding; pavement/surfacing; sidewalks; storm drainage/water quality facilities; channelization, and pavement markings; landscaping; erosion control; signing; illumination; signal modification; traffic control; utility adjustments; and property/site restoration.
- Plans will include plans and profiles, typical sections, and special details other than standard details available from the CITY, WSDOT, and the APWA Standard Drawings.
- The scale for the plan and profiles will be one inch equals twenty feet (1"=20') horizontally, and one inch equals five feet (1"=5') vertically.
- The complete plan set for the project will include the following plan sheets:

<u>Estimated Sheets</u>	<u>Description</u>
1	Cover sheet
2	Typical roadway sections, details and note sheets
1	Miscellaneous details
10	Roadway, storm drainage, waterline, and utility plans and profile.
2	Temporary erosion control plans
4	Channelization/Signing/Illumination Plans
3	Traffic Signal Plans
2	Landscape Plans
3	Wall Plans
2	Traffic Control Plans
<hr/>	
<b>30 Total</b>	

### Specifications

The CONSULTANT will prepare the specifications for the project in conformance with the WSDOT 2008 Standard Specifications. CONSULTANT will assemble the complete specifications document for the project at 60%, 90%, and 100% complete submittals. CITY will provide the "Boiler Plate" version of the specification and general special provisions. The "Boiler Plate" version will be edited by supplementing as necessary with project specific information and by deleting unnecessary special provisions.

### Cost Estimate

The CONSULTANT will prepare bid items and quantities and engineer's estimate of probable cost for the proposed improvements at 60%, 90% and 100% complete design. The engineer's estimate of probable cost will be based upon the construction plans, bid item quantities, and current bid prices for similar work.

### Review Documents

The CONSULTANT will provide five (5) half-size review plan sets, one (1) construction cost estimate, and one (1) specifications document for CITY review at the 60% and 90% complete submittal. Periodically during plan development, CONSULTANT will provide the CITY with a copy of the current working drawings. CITY will provide CONSULTANT with "redline" review comments on one set of plans and specifications.

### Final PS&E Documents

The CONSULTANT will provide the CITY with all final plan sheets on standard 22-inch by 34-inch Mylar. CONSULTANT will provide design calculations, cost estimate, and specifications on 8.5-inch by 11-inch sheets. The electronic files for the AutoCAD plan drawings and specifications will be copied on a compact disc. The CONSULTANT will provide one (1) set of half size contract plans on bond paper and one (1) set of contract documents and specifications for contractor bidding purposes. CITY will be responsible for reproduction and distribution of these documents.

### 12.0 Schedule for Completion

The CONSULTANT will begin work upon the CITY issuing a notice-to-proceed for the work. A detailed schedule will be developed within the first month of work.

### 13.0 Advertise and Award

The CONSULTANT will assist the CITY in preparing the advertisement and responding to contractor calls. The CONSULTANT will prepare up to two (2) addendums as necessary for the CITY to distribute to plan holders. CONSULTANT will evaluate the bids received and prepare a recommendation for the CITY's review.

#### Deliverables:

- Project advertisement
- Award recommendations

- Bid tabulation

#### **14.0 Construction Engineering**

The CITY reserves the right to supplement this contract to provide all or a portion of the following work during the construction phase of this project: construction management, inspection, and arranging for geotechnical and material testing services to be provided during construction as needed.

#### **15.0 Optional Services**

Upon written approval by the CITY, the CONSULTANT will provide engineering services beyond this Scope of Work. Services may include additional meetings, adding additional or increasing the existing design tasks, right-of-way acquisition services, construction services or other work deemed necessary by the CITY. Such work will be specified in a written supplement to this agreement, which will establish the scope and costs.



August 18, 2008

WHPacific  
3350 Monte Villa Parkway  
Bothell, Washington 98021

Attn: Mr. Sam Richard

**RE: PROPOSAL FOR GEOTECHNICAL ENGINEERING AND NATURAL RESOURCE SERVICES  
SULTAN BASIN ROAD REALIGNMENT, PHASE III  
SULTAN, WASHINGTON**

Dear Mr. Richard:

Landau Associates is pleased to present this proposed scope of services and cost estimate for geotechnical engineering and natural resource services for the Sultan Basin Road Realignment Project, Phase III, in Sultan, Washington. The proposed scope of services presented in this letter is based on discussions with and information provided by WHPacific and a site reconnaissance. Presented below is a summary of our project understanding and proposed scope of services.

**PROJECT BACKGROUND**

We understand that the City of Sultan (City) plans to realign Sultan Basin Road south of U.S. Highway 2 (U.S. 2) to complete the intersection improvements at Sultan Basin Road and U.S. 2. In particular, the project involves a new segment of roadway from U.S. 2 south to Cascade View Drive. The proposed roadway improvements will result in a four-way intersection at Sultan Basin Road and U.S. 2, thereby eliminating the U.S. 2-Cascade View Drive intersection.

We understand that the new segment of roadway south of U.S. 2 will require an embankment up to 30 feet (ft) in height and that retaining walls are planned to limit the extent of the embankment footprint. We also understand that federal funds through the Washington State Department of Transportation (WSDOT) have been authorized for the project. Thus, environmental documentation is necessary to satisfy federal requirements.

**PROPOSED SCOPE OF SERVICES**

The following sections define Landau Associates' tasks for geotechnical engineering and natural resource services for the proposed intersection improvements project.

ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

130 2nd Avenue South • Edmonds, WA 98020 • (425) 778-0907 • fax (425) 778-6409 • www.landauinc.com  
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**Task 1. Geotechnical Engineering**

We will compile and review readily available geologic and geotechnical information and other data relevant to the project. This information will be used to gain a general understanding of past human activities (filling, construction, etc.) and the underlying geology in the project area. Possible data sources include information in Landau Associates' and the City's files (construction drawings, utility layouts, geotechnical reports prepared for projects in the vicinity, etc.), and published geologic and topographic maps.

After reviewing the available data, we will complete a geologic reconnaissance of the project area to collect information on the general nature and physical features of the project site and to mark out proposed exploration locations for the one-call utility locate service. Following the site reconnaissance, we propose to advance two exploratory borings to depths of 15 to 30 ft along the proposed alignment to characterize soil and groundwater conditions. Washington State Department of Archeology and Historic Preservation approval of the Area of Potential Effects (see Task 3) must be completed for the exploratory borings to commence. The proposed project includes construction of a new signal pole at the intersection of U.S. 2 and Sultan Basin Road. We propose to utilize past explorations completed in the intersection during earlier phases of the project.

A drilling contractor under subcontract to Landau Associates will complete the exploratory borings. For the purpose of our cost estimate, it is assumed that the site will require a limited-access drill rig into order to complete the proposed borings. Landau Associates will also arrange for underground utility locates ("call before you dig") prior to performing field activities. The exploratory borings will be located along the proposed alignment of Sultan Basin Road, which is located on private property. A private underground utility locating service under subcontract to our firm will check the planned exploration locations for potential conflicts. It is assumed that the City will obtain permission to enter private property for all exploratory borings located beyond the public right-of-way.

A geologist or geotechnical engineer from Landau Associates will supervise the explorations, obtain soil samples from the borings, and prepare field logs of conditions encountered in the explorations. Soil samples will be obtained from the exploratory borings on about a 2½- or 5-ft depth interval using the Standard Penetration Test (SPT) procedure, and returned to our laboratory for further examination and classification. Soil samples obtained from the explorations will be held in our laboratory for 30 days after submittal of the final report. After that date, the soil samples will be disposed of unless arrangements are made to retain them. We do not plan to install piezometers to monitor groundwater levels; however, groundwater levels will be noted at the time of drilling. Upon completion of sampling and logging, the borings will be backfilled in accordance with the applicable sections of WAC 173-160.

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We will complete a limited geotechnical laboratory testing program consisting of natural moisture content and grain-size determinations on selected soil samples to aid in classifying the site soils. We have budgeted for 10 moisture content and 4 grain-size determinations.

Information from the field investigation and laboratory testing program will be analyzed by a geotechnical engineer from Landau Associates to develop geotechnical engineering conclusions and recommendations for design and construction of the proposed intersection improvements. The results of our field explorations, laboratory testing, engineering analyses, and geotechnical engineering conclusions and recommendations will be summarized in a draft geotechnical report for review by WHPacific. Two (2) copies of the draft report will be provided for review by the project team. Upon receipt of review comments, we will address the comments and submit six (6) copies of a signed and sealed geotechnical report. The geotechnical report will include:

- A site plan showing the locations of the explorations completed for this study (we assume that WHPacific will provide a base map in AutoCAD format).
- Results of laboratory testing and logs of the exploratory borings.
- A discussion of the near-surface soil and groundwater conditions observed in the explorations at the project site.
- Geotechnical conclusions and recommendations for the project, including:
  - a discussion of subgrade support characteristics along the project alignment
  - recommendations for subgrade preparation for new pavement sections, including reuse of site soil, and criteria for selection, placement, and compaction of structural fill
  - a discussion regarding stability of embankment fill slopes and overall global stability of proposed retaining walls
  - recommendations and geotechnical design parameters for retaining wall design
  - recommendations regarding pavement sections
  - recommended allowable soil stress for use in the WSDOT signal standard foundation design method
  - recommendations for geotechnical monitoring and consultation during construction.

**Task 2. Effect Determination and Essential Fish Habitat Evaluation, and Environmental Classification Summary**

We propose to prepare an effect determination letter rather than a biological assessment, documenting no effects on species listed under the Endangered Species Act. We assume that the project will not require any in-water work and that the design will follow either the WSDOT Highway Runoff

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Manual or the Washington State Department of Ecology's (Ecology's) 2005 manual for treatment and detention of stormwater. Information on new impervious surfaces, stormwater detention and water quality treatment, temporary erosion control measures, and best management practices will be provided by WHPacific. The effect determination letter will also include an evaluation of project impacts on Essential Fish Habitat (EFH).

We will prepare the required Environmental Classification Summary (ECS) for the project. This includes a National Environmental Policy Act (NEPA) determination. We assume the project will be a Class II, Categorical Exclusion (CE). This will include the Section 106 Cultural Resource investigations and noise analysis, which are discussed separately in the following sections, as well as the endangered species compliance included above.

*Assumptions:*

- The project will include design components necessary to make a determination of no effect for listed species and critical habitat.
- No in-water work will occur.
- Meetings with agency staff [National Oceanic and Atmospheric Administration (NOAA), U.S. Fish & Wildlife Service (USFWS)] are not included in this proposal.
- The project will qualify as a Class II Categorical Exclusion.
- An air quality analysis and associated discipline report will not be required. The City is not in a carbon monoxide maintenance area.
- This task does not include efforts to perform six month updates of species listings, if necessary.

**Task 3. Section 106 Cultural Historic Resources**

A Landau Associates archaeologist will conduct a records search for the project at the Washington State Department of Archaeology and Historic Preservation (DAHP) prior to the field survey. Landau Associates cultural resources staff will review cultural resource records, reports, National Register of Historic Places (National Register) nomination forms, and historic property inventory forms on file at DAHP. This information will help us determine if any archaeological or historic sites have been previously recorded on or near the property and draft an Area of Potential Effects (APE) letter for the client.

Following a records research and concurrence on the APE, two Landau Associates archaeologists will conduct a surface survey of the project area. A 10-meter (approximately 30 ft) interval pedestrian survey transect will be aligned along the proposed new street right-of-way for the survey. We will also

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excavate subsurface probes to search for buried archaeological resources. We assume that subsurface testing will require no more than six shovel probes excavated approximately every 20 meters (approximately 60 ft) along the centerline of the proposed new road segment, avoiding wetland areas. Each probe will measure 40 centimeters (cm; approximately 16 inches) in diameter and will be excavated to a maximum of 100 cm (approximately 40 inches) below the ground surface to adequately cover proposed ground disturbance within the project area. Excavated matrix will be screened through ¼-inch mesh and examined for prehistoric and historic-period artifacts. If significant archaeological materials are discovered during the course of the survey, sites (a feature or more than two artifacts) and isolates (one artifact) will be photographed and documented on maps and appropriate DAHP forms.

A draft report will be prepared following the State of Washington Archaeological Survey and Reporting Standards. Site records and isolate forms will be attached if cultural resources are identified during the survey. Landau Associates will review relevant archaeological, ethnohistorical, and historical reports along with documents, historical aerial photographs, and maps available at the University of Washington libraries and other local repositories. This information combined with that obtained from DAHP will assist in characterizing the culture history of the project area in order to determine the cultural context for the assessment report.

The report will include recommendations regarding the eligibility of archaeological resources identified in the project area for listing in the National Register provided that a reliable determination is possible based upon the results of the survey covered in this proposal. The report will also include an assessment of the potential effects of the proposed project on each significant cultural resource and recommendations for mitigation. If the significance of an archaeological site or historic property found in the project area cannot be determined from the site survey, formal subsurface investigations or other documentation may be required. Such methods, however, are not included in this scope. The report will be finalized after one round of review by WHPacific.

*Assumptions:*

- Site access will be reasonable and unrestricted.
- Project boundaries will be clearly marked by WHPacific and readily identifiable by Landau Associates staff in the field.
- No archaeological monitoring of geotechnical or environmental site assessment ground disturbance will be required.
- No archaeological sites will be identified during the survey.
- No human skeletal remains or historical buildings or structures will be identified during the survey.

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- If the significance of an archaeological site found in the project area cannot be determined from the site survey, additional formal subsurface investigations or other documentation may be required. Such methods, however, are not included in this scope.

#### Task 4. Noise Analysis

The Federal Highway Administration (FHWA) is the agency responsible for administering the federal-aid highway program. Before those funds can be used for projects, the projects must be approved by FHWA, which can only grant its approval for projects that are developed in accordance with federal statutes and regulations. One of these regulations requires that a noise study be accomplished to determine what noise impacts, if any, will result from the proposed improvement and what measures will be taken to lessen those noise impacts.

Based on our current understanding of the proposed project, one sensitive receiver is located within the project vicinity that may experience an increase in traffic related noise. If the residential home, located immediately adjacent to the proposed roadway alignment will remain (i.e., will not be purchased with a Right-of-Way acquisition), a noise impact evaluation will need to be completed. Under these circumstances, Landau Associates will conduct a noise analysis that meets the FHWA/WSDOT noise evaluation criteria. This effort will require the following activities:

- **Site Visit:** A site visit will be conducted to confirm the applicability of the screening criteria, to visually identify sensitive receivers, and to collect noise measurements.
- **Noise Screening Assessment:** Noise conditions of the existing project area and the future worst-case hourly noise levels will be predicted with the Traffic Noise Modeling 2.5 software. These estimated noise levels will be compared with the FHWA/WSDOT noise abatement criteria.
- **Noise Report:** A technical memorandum summarizing the existing conditions, future conditions, operational and construction impacts, and construction mitigation options will be prepared for review and approval by FHWA/WSDOT.

#### Assumptions:

- WHPacific will provide traffic data from existing and future design year conditions in the project area.
- If the threshold for noise impacts is exceeded, a reasonable and feasible noise mitigation analysis will need to be included in the noise report. This effort has been included as a contingent item within the scope.

#### Task 5. Wetland Delineation, Mitigation Reporting, and Permitting Support

The purpose of this task is to prepare required documentation for permitting impacts to wetland and/or buffer habitat. Information from this task can also be used to provide complete information

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regarding natural resource elements on the site and can be used as a background document for permitting requirements and for State Environmental Policy Act (SEPA) requirements, if needed. This task includes the following subtasks, which are discussed in detail below:

- 5.1 Wetland Delineation and Jurisdictional Determination
- 5.2 Wetland Mitigation, Critical Area Report, Plans, and Specifications
- 5.3 Permitting Support (JARPA).

### 5.1 Wetland Delineation and Jurisdictional Determination

Landau Associates will conduct a wetland delineation in accordance with Ecology guidance and the 2008 U.S. Army Corps of Engineers (USACE) *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. Landau Associates will compile and review environmental information from readily available public domain resources to gain a general understanding of potential wetland issues at the site. Public domain resources include, but are not limited to:

- Soil Survey data for Snohomish County
- National Wetlands Inventory mapping
- U.S. Geological Survey (USGS) topographic mapping
- Recent aerial photography.

The field investigation will include an examination of vegetation, soils, and hydrology within the study area of the proposed roadway extension. Flagging will be placed along the wetland boundaries and will be confined to the project footprint (approximately 70 ft from the proposed roadway centerline). Any wetland habitat that extends beyond the project footprint, within 200 ft [as required for Critical Area study contents for wetlands and streams under the City's Critical Area Regulations (CAR)], will be estimated both visually and using public domain resources in order to assess wetland extent. Included in this task is time to provide the WHPacific surveyors with a hand-sketch of wetland boundaries to assist the surveyors to locate the wetland flagging. We also included time to review the wetland survey map and request any necessary changes to accurately represent existing wetland conditions.

Wetlands within the study area will be rated in accordance with Ecology's *Washington State Wetland Rating System for Western Washington*, and buffer widths will be determined in compliance with the Sultan City Code, Chapter 16.80 Critical Areas Regulations. The WSDOT Wetland Function Evaluation will be completed for all delineated wetland habitat to characterize wetland functions.

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Landau Associates will prepare a Draft Wetland Delineation Report in a format acceptable to the City and other regulating agencies that will include:

- A summary of the methodology used
- The size and rating of each wetland; a characterization of wetland vegetation, soils, and hydrology; and field data sheets
- A scaled site map showing the locations of wetland boundaries and wetland buffers, locations of wetland data plots, and site topography.
- A functional assessment of wetlands and/or buffers
- A description of preliminary impacts to wetlands and/or buffers
- Supporting photographs.

The draft report will be provided to WHPacific and the City for review. Comments will be reviewed and incorporated into a Final Wetland Delineation Report.

Landau Associates will request a Jurisdictional Determination (JD) from the USACE Seattle District in order to verify the wetland boundaries and regulation under the Clean Water Act. Landau Associates will make this request via submission of a Joint Aquatic Resources Permit Application (JARPA) to the USACE, including the wetland delineation report as an attachment. The JARPA will include a brief overview of the conceptual mitigation plan, including a schematic showing the preliminary design for mitigation that can be presented to regulatory agencies prior to completion of the mitigation design. This task is necessary in order to make sure that all agencies support the plan and to reduce the need for multiple revisions of the agency review drafts prior to acceptance of the final mitigation plan.

A Landau Associates wetland biologist will meet on site with representatives from regulatory agencies. The USACE typically takes 1 to 3 months to set up a site visit for a JD visit. Following the JD, Landau Associates will prepare a memorandum documenting the outcome of this field meeting.

*Deliverables:*

- An electronic (Adobe PDF) copy of the draft and final wetland delineation report.
- An electronic (Adobe PDF) copy of the draft JARPA as submitted to the agencies (City and USACE and/or Ecology).
- An electronic (Adobe PDF) copy of the JD meeting documentation (as prepared by Landau Associates).

*5.2 Wetland Mitigation, Critical Area Report, Plans, and Specifications*

Landau Associates will prepare a Draft Critical Area Report for Streams and Wetlands in accordance with the City's CAR, and in order to meet standards of other state or federal regulatory

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agencies. The report will include information from the Wetland Delineation report, and incorporate any necessary mitigation. This will include:

- The Wetland Delineation Report
- A summary of the methodology used
- A description of impacts to wetlands and/or buffers
- A wetland and/or buffer mitigation planting plan including: mitigation goals, objectives, and performance standards; a timeline for mitigation monitoring and reporting; and contingency plans
- Planting lists and specifications that can be used for plant installation by a qualified landscaper to help assure success.

The draft report will be provided to WHPacific and the City/agencies for review. Comments will be reviewed and incorporated into a Final Critical Area Report for Streams and Wetlands

*Deliverables:*

- An electronic (Adobe PDF) and paper copy of the Draft Critical Area Report for Streams and Wetlands.
- An electronic (Adobe PDF) and paper copy of the Final Critical Area Report for Streams and Wetlands.
- Electronic text of specifications for quality assurance will be delivered to WHPacific for incorporation into the document bid package.

*5.3 Permitting Support (JARPA)*

The JARPA form will be completed for submittal to USACE and/or the City to request approval for unavoidable wetland and/or buffer impacts, if necessary. This task includes time for coordination and revisions with WHPacific and/or agencies as needed to provide accurate information on the JARPA, including figures.

*Deliverables:*

- An electronic (Adobe PDF) and paper copy of the JARPA.

*Assumptions:*

- Wetland flagging will only be placed within the project boundaries where accessible.
- WHPacific will supply survey information in AutoCAD format to Landau Associates pertaining to the wetland delineation and project plans, including the limits of clearing and grading, the final project footprint, drainage and erosion control plans, and construction phasing details.
- Wetland grading plans and specifications (for wetland creation) will not be required.

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- Wetland mitigation can be accommodated on site (within the project limits). If offsite mitigation is required, the City will identify a suitable site to accommodate the required mitigation.
- Mitigation plans and specifications will be incorporated by WHPacific into the overall design package.
- WHPacific will provide Landau Associates with the areas of impact and amount of fill and/or grading within wetlands and wetland and/or buffer.
- If wetland impacts are regulated by the USACE, they will be authorized under a Nationwide permit (NWP).
- WHPacific will prepare the bid package documents. Landau Associates will supply information as requested by WHPacific to support preparation of these documents.
- WHPacific will be responsible for coordination with the City and Landau Associates during review and finalization of the document bid package. Landau Associates will not coordinate directly with the City regarding revisions to the contract document.
- We have included up to 8 hours of time for a Landau Associates biologist to coordinate with WHPacific, the City, regulatory agencies, and other consultants as needed, either by phone or in meetings, regarding wetland construction design and mitigation specifications.
- A Landau Associates wetland biologist will meet onsite for one visit (up to 2 hours on site) with representatives from regulatory agencies for the JD.

#### Task 6. State Environmental Policy Act Checklist

Using the information from the above tasks, we will prepare a SEPA checklist for the project. We assume that the City's final determination will be a declaration of Non-Significance and that there will be no public comments or public hearing. We also assume that the City will circulate the SEPA and conduct the required public comment procedures.

##### *Assumptions:*

- The project will not require preparation of a SEPA Environmental Impact Statement, and either a Determination of Non-Significance (DNS) or a mitigated DNS will be issued for the project.
- City staff will prepare and publish the DNS (or mitigated DNS).
- Landau Associates staff will not attend a public hearing should one be necessary.
- One Landau Associates staff member will conduct one site visit.
- One Landau Associates staff member will attend no more than one agency coordination meeting in Sultan, Washington.

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- Information to prepare the SEPA Checklist will be gathered from interviews with agency/utility provider representatives and from readily available public documents; no field work or other primary investigations will be required.
- Landau Associates will provide a draft copy of the SEPA Checklist to the City for review. The City will provide one set of consolidated comments to Landau Associates, and we will prepare a final SEPA Checklist for publication based on those comments. Should additional rounds of review and comment be requested by the City, a scope and budget amendment will be required.
- This proposal does not include time for Landau Associates to respond to any public or resource agency comments on the SEPA Checklist after the Checklist has been published for public comment. Should the City or WHPacific request Landau Associates' involvement in responses or revisions to the SEPA Checklist based on public or agency comments, a scope and budget amendment will be required.

**ESTIMATED COST**

We estimate the cost for our proposed scope of services will be \$69,795 in general accordance with the following approximate breakdown:

Geotechnical Engineering Services	\$16,695
Natural Resources Services	
• Effect Determination Letter, Essential Fish Habitat Evaluation, and Environmental Classification Summary	\$10,000
• Section 106 Cultural Historic Resources	\$12,000
• Noise Analysis	\$12,100
• Wetland Delineation and Conceptual Mitigation	\$13,700
• SEPA Checklist	\$5,300
<b>ESTIMATED TOTAL</b>	<b>\$69,795</b>

We propose to provide the above-described services on a cost plus fixed fee basis according to the budget set forth above. In the event that project requirements change or unexpected conditions are disclosed that appear to require further field effort, study, or analysis, we will contact you and seek your approval for modification to the scope of services and budget, as appropriate.

**AUTHORIZATION**

We anticipate that you will develop a subconsultant agreement consistent with other agreements between WHPacific and Landau Associates to formalize our working relationship on this project. Please let us know how we can assist you in that process.

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We appreciate the opportunity to work with WHPacific and the City of Sultan on this project. Please contact us if you have any questions about our proposed scope of services and budget for this project.

LANDAU ASSOCIATES, INC.

Steven J. Quarterman  
Senior Project Scientist

Steven R. Wright, P.E.  
Senior Associate

SJQ/SZW/kes

- Attachments:
- Table 1 – Geotechnical Fee Determination Summary Sheet
  - Table 2 – Effect Determination/EFH, ECS Fee Determination Summary Sheet
  - Table 3 – Cultural Resources Fee Determination Summary Sheet
  - Table 4 – Noise Fee Determination Summary Sheet
  - Table 5 – Wetland, Mitigation, and Permitting Fee Determination Summary Sheet
  - Table 6 – SEPA Fee Determination Summary Sheet

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**Washington State  
Department of Transportation**

<b>Supplemental Agreement Number <u>1</u></b>		Organization and Address WHPacific 12100 NE 195th Street Ste 300 Bothell, WA 98011 Phone: 425-951-4800	
Original Agreement Number <u>1</u>			
Project Number <u>STPR-31 AK (001)</u>		Execution Date <u>9/5/2008</u>	Completion Date <u>12/31/2009</u>
Project Title <u>Sultan Basin Road Phase III</u>		New Maximum Amount Payable <b>\$ 407,223.00</b>	
Description of Work <u>Design and right of way acquisition services</u>			

The Local Agency of Sultan, WA  
desires to supplement the agreement entered into with WHPacific  
and executed on 9/5/2008 and identified as Agreement No. 1

All provisions in the basic agreement remain in effect except as expressly modified by this supplement.

The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:

add right of way acquisition services, see attached exhibit

II

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: remains the same 12/31/09

III

Section V, PAYMENT, shall be amended as follows:

adds \$45,380 to contract, see attached exhibit

as set forth in the attached Exhibit A, and by this reference made a part of this supplement.

If you concur with this supplement and agree to the changes as stated above, please sign in the appropriate spaces below and return to this office for final action.

By: DAVID WILLIAMS

Consultant Signature

By: Carolyn Eshick

Approving Authority Signature

4-2-2009

Date



<b>Supplemental Agreement Number <u>1</u></b>		Organization and Address WHPacific 12100 NE 195th Street Ste 300 Bothell, WA 98011 Phone: 425-951-4800	
Original Agreement Number <u>1</u>		Execution Date 9/5/2008	
Project Number <u>STPR-31 AK (001)</u>		Completion Date 12/31/2009	
Project Title Sultan Basin Road Phase III		New Maximum Amount Payable <b>\$ 407,223.00</b>	
Description of Work Design and right of way acquisition services			

The Local Agency of Sultan, WA  
desires to supplement the agreement entered into with WHPacific  
and executed on 9/5/2008 and identified as Agreement No. 1

All provisions in the basic agreement remain in effect except as expressly modified by this supplement.

The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:

add right of way acquisition services, see attached exhibit

II

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: remains the same 12/31/09

III

Section V, PAYMENT, shall be amended as follows:

adds \$45,380 to contract, see attached exhibit

as set forth in the attached Exhibit A, and by this reference made a part of this supplement.

If you concur with this supplement and agree to the changes as stated above, please sign in the appropriate spaces below and return to this office for final action.

By: David Williams

Consultant Signature

By: Carolyn Eslick, Mayor

Approving Authority Signature

4-2-2009  
Date

**Exhibit A-1  
Scope of Work  
City of Sultan  
US2/Sultan Basin Road Improvements Phase III  
Supplement #1**

The work to be accomplished with this Supplemental Agreement will be to provide right of way acquisition services for acquiring two parcels. Work will be in accordance with WSDOT Local Agency Guidelines and by reference, WSDOT Right of Way Manual, parts 1 and 2.

**Task 1.0 Administration**

WHPacific (Consultant) will act as general right of way project manager and will use Certified Land Services to perform the acquisition services.

The Consultant will prepare a project schedule for the right of way phase. The Consultant will monitor and update the schedule as needed.

The Consultant will prepare and submit a monthly progress report of right of way activities that will include identification of work performed in the previous month's schedule, measures for mitigating schedule slippage, if necessary, and identification and discussion of potential problems that may arise, including issues resolution.

The Consultant will post status reports and complete document files electrically for City review and real time access of status reports and diaries monthly.

The Consultant will submit detailed monthly invoices.

The Consultant will attend up to three (3) meetings with the City, including a possible joint on-site meeting with the appraiser, and/or a public meeting.

The Consultant will assist the City in updating their existing Right of Way Procedures, including increasing the appraisal waiver limit to \$25,000.

**Task 10.5 Right of Way Acquisition**

**Preparation**

The Consultant will review all documents, files, maps, title reports, legal descriptions and other information provided. Errors, questions and clarifications will be reviewed and discussed.

**Appraisal**

**Assumptions:**

In accordance with funding source requirements the Consultant will determine parcels that may be acquired with appraisal waivers and those parcels that require full narrative appraisals.

The Consultant will prepare a preliminary funding estimate for the two fee take parcels describing each parcel, its ownership, the estimated cost of any acquisition, labor, escrow, condemnation and summary of total right of way phase project costs.

Appraisal Waivers will be written for those parcels valued under \$25,000 in the Preliminary Funding Estimate process (as per the City's Right of Way Procedures, which will be updated).

The Consultant will hire and manage appraisers who will provide full narrative before and after appraisals for parcels.

### **Appraisal Review**

#### **Assumptions:**

Appraisal Reviews are not necessary for parcels valued under \$25,000 according to state and federal funding source requirements.

The Consultant will hire and manage a review appraiser who will provide appraisal review services on any parcel valued over \$25,000 in the PFE and which was appraised.

The City will set just compensation for all parcels from which offers to property owners will be made.

### **Administrative**

#### **Assumptions:**

All forms and conveyance documents will be consistent with WSDOT templates.

The Consultant will provide signature ready legal documents that will be used to convey fee or temporary construction easement rights for all parcels.

The Consultant will maintain all records, files, documents and reports in accordance with statutory and WSDOT guidelines and regulations.

### **Negotiation**

#### **Assumptions:**

The Consultant will act in good faith at all times.

The Consultant will never coerce owners in an attempt to settle parcels.

The Consultant will provide the City with an Administrative Settlement letter for all requested administrative settlements.

The Consultant will prepare offer letters for all parcels.

The Consultant will make a maximum of three (3) personal contacts with each owner with the intent of reaching settlement for the conveyance of property or property rights needed from each parcel.

The Consultant will explain the City's offer verbally and in writing.

The Consultant will provide detailed written diaries for each parcel.

The Consultant will transmit organized parcel files containing all pertinent information, documents, forms, diaries, and Disclaimer Statements.

The Consultant will prepare a condemnation summary memo for any parcel that the City deems it is necessary to acquire through the exercising of its power of eminent domain.

### **Relocation**

#### Assumptions:

There will be one (1) mobile home relocation.

The Consultant will provide full relocation assistance services to all displacees.

The Consultant will prepare a relocation plan and submit it to WSDOT for approval.

The Consultant will review the approved relocation plan and act in accordance with it.

The Consultant will work closely with acquisition staff and the City in order to perform relocation tasks in a timely manner.

The Consultant will contact all owners or tenants that are displaced and inform them of their relocation rights and benefits.

The Consultant will prepare and deliver all relocation notices (at minimum notices are: General Notice of Relocation Rights, 90 Day Notice, Maximum Entitlement Notice).

The Consultant will survey each displacee and discuss their relocation issues, concerns and schedules.

The Consultant will determine each displacee's maximum relocation entitlement, and have the City review and approve this amount prior to informing displacees.

The Consultant will prepare moving cost estimates and other forms appropriate for the parcel.

The Consultant will provide relocation advisory assistance as needed and as directed by the City.

The Consultant will monitor each move and notify the City in writing when the property has been vacated.

The Consultant will work whatever hours are necessary, including evenings and weekends, in order to make themselves available to owners and their representatives.

The Consultant will provide detailed written diaries for each parcel.

The Consultant will transmit organized parcel files containing all pertinent information, documents, forms, and diaries.

The Consultant will coordinate payment and delivery of checks with the City as requested.

### **Closing and Conveyance**

#### Assumptions:

Title Clearance is not required on parcels valued under \$10,000 according to state and federal funding source requirements.

The City will close the full take parcel in escrow. The clearance of liens and encumbrances for that parcel will take place in escrow.

The Consultant will clear any liens and encumbrances on the partial take parcel that are in conflict with the City's intended use of the right of way acquired to ensure certification and that there are no conflicts of ownership or use of the land required during construction.

The City will pay property owners and/or lien holders / encumbrancers for any property or property rights acquired through the closing process.

The Consultant will review title for each parcel.

The Consultant will prepare any documents needed for clearing any liens or encumbrances on the partial take parcel as noted above.

The Consultant will provide the City with complete files at the close of negotiations for each parcel. Included in our transmittal packages will be conveyance documents ready for the city to record.

### **Certification**

#### **Assumptions:**

The Consultant will provide certification preparation and review.

### **Project Turnover**

The Consultant will, at the completion of acquisition and certification, present the City with a comprehensive package containing all pertinent project information.





<b>Supplemental Agreement Number <u>2</u></b>		Organization and Address WHPacific 12100 NE 195th Street Suite 300 Bothell, WA 98011 Phone: 425-951-4800	
Original Agreement Number <u>1</u>			
Project Number <u>STPR-31AK (001)</u>	Execution Date	Completion Date <u>3/31/2010</u>	
Project Title <u>Sultan Basin Road Phase III</u>	New Maximum Amount Payable <b>\$ 467,221.00</b>		
Description of Work <u>Design and right of way acquisition services</u>			

The Local Agency of Sultan, WA  
 desires to supplement the agreement entered into with WHPacific  
 and executed on 9/5/2008 and identified as Agreement No. 1

All provisions in the basic agreement remain in effect except as expressly modified by this supplement.

The changes to the agreement are described as follows:

I

Section 1, SCOPE OF WORK, is hereby changed to read:

adds additional services as outlined on attached Exhibit A-1

II

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the number of calendar days for completion of the work to read: extends contract time to 3/31/2010

III

Section V, PAYMENT, shall be amended as follows:

adds \$59,998 to the contract see attached Exhibit D-1

as set forth in the attached Exhibit A, and by this reference made a part of this supplement.

If you concur with this supplement and agree to the changes as stated above, please sign in the appropriate spaces below and return to this office for final action.

By: David Williams

By: \_\_\_\_\_

Consultant Signature

Approving Authority Signature

Date

**Exhibit A-1  
Scope of Work  
City of Sultan  
US2/Sultan Basin Road Improvements Phase III  
Supplement #2**

The work to be accomplished with this Supplemental Agreement will be to provide additional services for: topographic survey on Foundry Road and three adjoining parcels; geotechnical investigation; continued coordination with property owners; assisting CITY with funding agencies and preparing construction cost estimates for breaking the construction into two phases and performing additional drainage analysis and calculations for sidewalk and bike extension.

**Task 1.0 Project Management and Administration**

The CONSULTANT will provide contract management and administration services for the additional work, to include: developing and maintaining project scope and budget, liaison with CITY staff, and preparing monthly narrative progress reports and invoices.

The CONSULTANT will prepare and obtain right of use permits from the three Parcel Owners involved for the additional survey. The CITY will mail and obtain signatures.

The CONSULTANT will lead, take notes and coordinate with CITY on property owners' meetings. Two (2) meetings will be held with each of the four (4) business/property owners on site for a total of 8 meetings.

The CONSULTANT will prepare two (2) separate Local Agency Agreement Supplements to obligate additional federal funds.

The CONSULTANT will assist the CITY in reviewing letters, grant application, providing exhibits and attend up to two (2) meetings with WSDOT Local Programs and the Puget Sound Regional Council for obtaining permission to obligate the federal funding.

The CONSULTANT will prepare a supplement cost estimate and exhibit to break the project into two (2) construction phases.

The CONSULTANT will complete a quality control check of all work prior to submitting for the CITY's review.

**Task 2.0 Topographic Survey**

The CONSULTANT will prepare a topographic survey of an area approximately 1 acre in size, in sufficient detail to develop 2-foot contours. The area will extend south from Cascade View Drive to 149<sup>th</sup> Ave SE on Foundry Drive, 30 feet westerly and 40 feet easterly of Foundry Road, and 150 feet into the Bowman Parcel (due to a long driveway improvement).

Topographic survey will collect pavement, driveways, drainage features, utilities, buildings, landscape and parking within the designated area.

Additional topographic survey is required to address the following design issues:

- Proposed driveway improvements on the Bowman and storage unit parcels.
- Roadway fill on slope's impact to the Romac parcel.
- Extension of the new Sultan Basin Road profile further south to accommodate truck landing and turning movements at driveway entrances and Cascade View Drive.

#### Deliverable

- An electronic copy of survey basemap.

### **Task 3.0 Geotechnical**

The CONSULTANT will perform additional subsurface explorations along the project alignment in order to better define the extent and depth of the fill that is present within the proposed embankment footprint. The CONSULTANT will accomplish this by excavating 3 to 4 test pits to depths of 6 to 8 feet BGS within the proposed embankment footprint. The information collected from the test pits will supplement the information obtained from our previous explorations. The test pits will be excavated using a backhoe and operator provided by the CITY.

Prior to completing the test pits, the CONSULTANT will visit the project site and mark out the proposed test pit locations and arrange for underground utility locates ("call before you dig") prior to performing field activities. The test pits will be located along the proposed alignment of Sultan Basin Road, a portion of which is located on private property. A private underground utility locating service under subcontract to our firm will check the planned exploration locations for potential conflicts with underground utilities. The CITY will obtain permission to enter private property for all exploratory test pits located beyond the public right-of-way.

A geologist will supervise the test pit explorations, obtain soil samples from the test pits, and prepare field logs of conditions encountered in the explorations. Soil samples will be obtained from the exploratory test pits at regular intervals and where changes in soil type or geologic unit are observed. No additional laboratory testing will be performed on the samples collected; however, soil samples obtained from the explorations will be visually classified and will be held in our laboratory for 30 days after submittal of the final report. After that date, the soil samples will be disposed of unless arrangements are made to retain them. Groundwater, if encountered, will be noted at the time of excavation. Upon completion of sampling and logging, the test pits will be backfilled.

The depth of fill at each exploration location along with a site plan showing the test pit locations will be communicated via summary email and incorporated into our final geotechnical report.

#### **ASSUMPTIONS**

- The CITY will provide a backhoe and operator to excavate the proposed test pits. We estimate that the fieldwork will take about ½ to 1 day to complete.
- No traffic control personnel or devices will be required.
- Excess soil from the test pits, if any, will be spread on the site upon completion of our work (i.e., excess soil will not be disposed of at an offsite location).

- Restoration of landscaping and/or vegetation will not be required following completion of the field exploration program.

The CONSULTANT will conduct additional subsurface explorations in the proposed detention pond location and along the proposed wall alignments. The CONSULTANT will accomplish this by drilling two soil borings each to a depth of about 27 feet BGS (or until practical refusal, whichever depth is less) at the proposed detention pond location. The proposed detention pond site is currently wooded and not easily accessible. Therefore, we will complete the borings using a limited access, track-mounted drill rig equipped with hollow-stem augers. Additionally, we propose to drill two additional borings along the proposed retaining wall on Sultan Basin Road. One of the borings will be located at the north end of Foundry Drive, just south of the intersection with Cascade View Drive, where the proposed wall height is anticipated to be on the order to 15 to 20 feet. Although the site is relatively accessible, we propose to drill this boring concurrently with those for the proposed detention pond, and therefore the boring will be drilled using a limited access drill rig. A second boring is proposed near the toe of the US2 embankment, just south of the existing wetland near the footprint for the proposed culvert headwall. Lastly, we propose to advance two to three borings along the proposed wall footprints on the south side of US2. As recommended by the Washington State Department of Transportation (WSDOT), the borings will be spaced at about 150 to 200 feet along the alignment. Site access to the proposed borings along US2 and at the proposed culvert headwall location is relatively difficult. The borings along US2 will be located on a 2H:1V (horizontal: vertical) slope, which is currently vegetated with trees and brush. The boring location at the proposed culvert headwall is also heavily vegetated. Therefore, we propose to advance the borings along US2 and at the proposed culvert headwall location using a portable, limited access drill rig, capable of being set up on a slope, and packed by hand into wooded areas. Each boring along the proposed wall alignments will be advanced to a depth of about 20 feet BGS or until practical refusal, whichever depth is less.

Prior to performing field activities, the CONSULTANT will visit the project site, mark out the proposed boring locations, and arrange for underground utility locates (“call before you dig”). Because the borings for the proposed detention pond will be located on private property, a private underground utility locating service under subcontract to our firm will check the planned exploration locations for potential conflicts with underground utilities. The CITY will obtain permission to enter private property for all exploratory borings located beyond the public right-of-way.

A geologist will supervise the explorations, obtain soil samples from the borings, and prepare field logs of conditions encountered in the explorations. Soil samples will be obtained from the exploratory borings on about a 2½- or 5-foot depth interval using the Standard Penetration Test procedure, and returned to our laboratory for further examination and classification. Soil samples obtained from the explorations will be held in our laboratory for 30 days after submittal of the final report. After that date, the soil samples will be disposed of unless arrangements are made to retain them. The CONSULTANT will install one piezometer to monitor groundwater levels in the northernmost pond boring. Piezometers will not be installed in our other proposed boreholes; however, groundwater levels will be noted at the time of drilling. Upon completion of sampling and logging, the borings will be backfilled in accordance with the applicable sections of WAC 173-160.

Laboratory testing on the samples will consist of limited moisture content and grain-size testing. Three moisture content tests and one grain size analysis will be conducted on samples obtained from each of the borings along the proposed wall alignments. Additionally, two combined, grain-size and hydrometer analysis will be conducted on samples collected in the proposed pond footprint. The tests will be conducted on samples collected from depths of about 7 to 10 feet BGS; below the proposed pond bottom. Information collected from the combined analysis will be used to estimate long-term, design

infiltration rates of the soils encountered at the bottom of the proposed infiltration pond. The results and our recommendations regarding design infiltration rates in the proposed infiltration pond will be communicated via e-mail and incorporated into our final report. The results and additional findings related to the supplemental explorations proposed herein will be communicated via e-mail as needed, and incorporated into our final geotechnical report.

Depending on the results of the proposed supplemental field explorations, groundwater mounding analysis may be required. If it is required, we will perform groundwater mounding analysis based on the results of the field explorations and laboratory testing. The results of the analysis will be summarized in our final geotechnical report.

#### **ASSUMPTIONS**

- The proposed pond location is accessible using a track-mounted, limited access drill rig. It is assumed that a small amount of clearing (i.e., “bushwhacking”) may be required.
- The CITY will provide right-of-entry to the proposed pond location site.
- A traffic control permit will not be required for the boring just south of Cascade View Drive as it will be completed on the shoulder of the roadway using a small, limited access drill rig and traffic volume is anticipated to be minimal. We will provide cones and at least two traffic control signs to warn oncoming vehicles.
- A General Use permit from WSDOT will not be required for those borings located along the south side of US2. It is our understanding that this portion of US2 is under jurisdiction of the CITY.
- Excess soil from the borings at the proposed pond location, along the proposed walls on US2, and at the proposed culvert headwall may be spread on the site upon completion of our work (i.e., excess soil will not be disposed of at an offsite location). Cuttings generated from the boring located just south of Cascade View Drive will be drummed and removed from the site.
- Restoration of landscaping and/or vegetation will not be required following completion of the field exploration program.

#### **Deliverable**

- Draft and final updated geotechnical report.

#### **Task 4.0 Drainage Design for South End of Project**

The CITY authorized the CONSULTANT to proceed with alternative one which extends the sidewalk, curb and gutter southerly, beyond the intersection with Cascade View Drive to end of project. CONSULTANT scope assumed no curb and gutter, allowing runoff to disperse in a manner similar to its current flow paths. With the extension of the curb and gutter, road runoff is now concentrated, and must be properly managed. This results in a second storm water management system, including a conveyance system, stormwater treatment and infiltration system within the Right-of-way.

The CONSULTANT will perform a drainage analysis and calculations to support the design of the southern portion of the site. The CONSULTANT will make a field exploration to determine actual flow paths. The CONSULTANT will then update the existing Drainage Report. The CONSULTANT will prepare one additional Drainage Plan and Profile sheet and one additional Drainage Detail sheet to be incorporated into the plan set.

## **Schedule**

This supplement agreement extends the schedule by 4 weeks. The CONSULTANT will prepare an updated schedule upon completion of above named work.

# CONSULTANT FEE ESTIMATE



Client: **City of Sultan**

Project: **US2 - Sultan Basin Road Phase III**

Exhibit D-1

Supplement #2

**LABOR:**

TASK NO.	TASK (Scope of Services)	WHPACIFIC PROJECT TEAM										TOTAL HOURS	LABOR COST		
		Principal 70.00	Project Manager 60.00	Design Engineer 45.00	CADD Technician 30.00	Survey Party Chief 40.00	Survey - 2 Pers. Crew 50.00	Project Coord. 25.00	Clerical 22.00						
1.0	<b>PROJECT MANAGEMENT AND ADMINISTRATION</b>	0	58	56	6	0	0	4	4	0	0	4	4	128	\$6,368
	Contract Management and Administration		2	2								2			
	Right of Use Permits		2	2									2		
	Property Owners Meetings		16	32									2		
	Local Agency Supplements		8												
	Review of Grants Letters, Provide Exhibits and Attend Meetings		8		2										
	Preparing Staging Cost Estimate and Exhibit		2	4	4						2				
	QA/QC		20	16											
2.0	<b>TOPOGRAPHIC SURVEY</b>	0	2	0	12	8	10	1	0	10	1	0	0	33	\$1,325
	Field Work		2			4	10	1							
	Office Mapping				12	4									
3.0	<b>GEOTECHNICAL - LANDAU</b>														
4.0	<b>DRAINAGE DESIGN FOR SOUTH END OF PROJECT</b>	0	0	20	40	0	0	0	0	0	0	0	0	60	\$2,100
	Engineering and Plan Preparation			20	40										
		0	60	76	58	8	10	5	4	10	5	4	221		\$9,793

Overhead Percentage:  $173.40\% \times$  Direct Salary Cost (DSC) = \$16,981  
 Fixed Fee Percentage:  $32.00\% \times$  Direct Salary Cost (DSC) = \$3,134

Labor Total: \$29,908

**EXPENSES:**

ITEM	QUANTITY	UNIT COST	EXPENSES COST
Mileage	200	\$0.550	\$110
Plots and Reproductions	10	\$3.00	\$30
<b>Expenses Total:</b>			<b>\$140</b>

**SUBCONSULTANTS:**

SUBCONSULTANT	MARK UP	UNIT FEE	QUANTITY	EXPENSES COST
Landau	1.0	\$29,950	10	\$29,950
<b>Subconsultants Total:</b>				<b>\$29,950</b>

**TOTAL PROJECT FEE: \$59,998**