

**CITY OF TUMWATER
SERVICE PROVIDER AGREEMENT
FOR
TUMWATER BOULEVARD NORTHBOUND I-5 ON/OFF RAMP
INTERSECTION**

THIS AGREEMENT is made and entered into in duplicate this 30 day of July, 2024, by and between the CITY OF TUMWATER, a Washington municipal corporation, hereinafter referred to as the “CITY”, and HDR ENGINEERING, INC., a Nebraska corporation, hereinafter referred to as the “SERVICE PROVIDER”.

WITNESSETH:

WHEREAS, the CITY desires to have certain services and/or tasks performed as set forth below requiring specialized skills and other supportive capabilities; and

WHEREAS, sufficient CITY resources are not available to provide such services; and

WHEREAS, the SERVICE PROVIDER represents that the SERVICE PROVIDER is qualified and possesses sufficient skills and the necessary capabilities, including technical expertise, where required, to perform the services and/or tasks set forth in this Agreement.

NOW, THEREFORE, in consideration of the terms, conditions, covenants, and performance contained herein, the parties hereto agree as follows:

1. SCOPE OF SERVICES.

The SERVICE PROVIDER shall perform engineering services, including the furnishing of all materials and equipment necessary for full performance thereof, as are identified and designated as SERVICE PROVIDER responsibilities throughout this Agreement and as detailed in Exhibit “A” Scope of Services attached hereto and incorporated herein (the “Project”). The standard of care for all services performed by the SERVICE PROVIDER shall be the care and skill ordinarily used by members of SERVICE PROVIDER’s profession.

2. TERM.

The Project shall begin no earlier than July 29, 2024 (date), and shall be completed no later than December 31, 2026 (date). This Agreement may be extended for additional periods of time upon mutual written agreement of the parties.

3. TERMINATION.

Prior to the expiration of the Term, this Agreement may be terminated immediately, with or without cause, by the CITY.

4. COMPENSATION AND METHOD OF PAYMENT.

A. Payments for services provided hereunder shall be made following the performance of such services, unless otherwise permitted by law and approved in writing by the CITY.

B. No payment shall be made for any service rendered by the SERVICE PROVIDER except for services identified and set forth in this Agreement.

C. The CITY shall pay the SERVICE PROVIDER for work performed under this Agreement a total sum not to exceed **Eight Hundred Sixteen Thousand Four Hundred Fifty Three and 00/100 dollars (\$816,453.00)** as detailed in Exhibit "C" "Compensation Spreadsheet."

D. Upon execution of this Agreement, the SERVICE PROVIDER must submit IRS Form W-9 Request for Taxpayer Identification Number (TIN) and Certification unless a current Form W-9 is already on file with the CITY.

E. The SERVICE PROVIDER shall submit an invoice to the CITY each month for services rendered during the previous month. The CITY shall initiate authorization for payment after receipt of said invoice and shall make payment to the SERVICE PROVIDER within approximately thirty (30) days thereafter.

F. When subcontracting services or purchasing goods from third parties, as identified and approved in this Agreement, the SERVICE PROVIDER must submit written documentation establishing that the goods and/or services have been provided and the third party has been paid in order to receive payment for such goods and/or services.

G. Invoices may be submitted immediately following performance of services, but in no event shall an invoice be submitted more than twenty (20) business days following the end of the contract term or the end of the calendar year, whichever is earlier.

5. INDEPENDENT CONTRACTOR RELATIONSHIP.

A. The parties intend that an independent contractor relationship will be created by this Agreement. Subject to paragraphs herein, the implementation of services pursuant to this Agreement will lie solely within the discretion of the SERVICE PROVIDER. No agent, employee, servant or representative of the SERVICE PROVIDER shall be deemed to be an employee, agent, servant or representative of the CITY for any purpose, and the employees of the SERVICE PROVIDER are not entitled to any of the benefits the CITY provides for its employees. The SERVICE PROVIDER will be solely and entirely responsible for its acts and for the acts of its agents, employees, servants, subcontractors or representatives during the performance of this Agreement.

B. In the performance of the services herein contemplated the SERVICE PROVIDER is an independent contractor with the authority to control and direct the performance of the details of the work; however, the results of the work contemplated herein must meet the approval of the CITY and shall be subject to the CITY'S general rights of inspection and review to secure the satisfactory completion thereof.

C. As an independent contractor, the SERVICE PROVIDER shall be responsible for the reporting and payment of all applicable local, state, and federal taxes.

D. It is recognized that the SERVICE PROVIDER may or will be performing services during the Term for other parties; provided, however, that such performance of other services shall not conflict with or interfere with the SERVICE PROVIDER'S ability to perform the services. The SERVICE PROVIDER agrees to resolve any such conflicts of interest in favor of the CITY.

6. SERVICE PROVIDER EMPLOYEES/AGENTS.

The CITY may at its sole discretion require the SERVICE PROVIDER to remove an employee, agent or servant from employment on this Project. The SERVICE PROVIDER may however employ that individual on other non-CITY related projects.

7. HOLD HARMLESS INDEMNIFICATION.

A. SERVICE PROVIDER Indemnification. The SERVICE PROVIDER agrees to indemnify, defend and hold the CITY, its elected officials, officers, employees, agents, and volunteers harmless from any and all claims, demands, losses, actions and liabilities (including costs and all attorney fees) to or by any and all persons or entities, including, without limitation, their respective

agents, licensees, or representatives, arising from, resulting from, or connected with this Agreement to the extent caused by the negligent acts, errors or omissions of the SERVICE PROVIDER, its partners, shareholders, agents, employees, or by the SERVICE PROVIDER'S breach of this Agreement. The SERVICE PROVIDER expressly waives any immunity that may be granted to it under the Washington State Industrial Insurance Act, Title 51 RCW. The SERVICE PROVIDER'S indemnification shall not be limited in any way by any limitation on the amount of damages, compensation or benefits payable to or by any third party under workers' compensation acts, disability benefit acts or any other benefit acts or programs. This waiver has been mutually negotiated by the parties.

B. CITY Indemnification. The CITY agrees to indemnify, defend and hold the SERVICE PROVIDER, its officers, directors, shareholders, partners, employees, and agents harmless from any and all claims, demands, losses, actions and liabilities (including costs and attorney fees) to or by any and all persons or entities, including without limitation, their respective agents, licensees, or representatives, arising from, resulting from or connected with this Agreement to the extent solely caused by the negligent acts, errors, or omissions of the CITY, its employees or agents. No liability shall attach to the CITY by reason of entering into this Agreement except as expressly provided herein.

C. Survival. The provisions of this Section shall survive the expiration or termination of this Agreement with respect to any event occurring prior to such expiration or termination.

8. INSURANCE.

A. The SERVICE PROVIDER shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the SERVICE PROVIDER, their agents, representatives, employees or subcontractors.

B. The SERVICE PROVIDER shall provide a Certificate of Insurance evidencing:

1. Automobile Liability insurance with limits no less than \$1,000,000 combined single limit per accident for bodily injury and property damage.

2. Commercial General Liability insurance written on an occurrence basis with limits no less than \$2,000,000 combined single limit per occurrence and \$2,000,000 aggregate for personal injury, bodily injury and property damage. Coverage shall include but not be limited to: blanket contractual;

products/completed operations; broad form property damage; explosion, collapse and underground (XCU) if applicable; and employer's liability.

3. Professional Liability insurance written on a claims made basis with limits of no less than \$2,000,000 per claim, and \$2,000,000 policy aggregate limit.

C. The CITY shall be named as an additional insured on the Automobile and General Liability insurance policies, as respect to work performed by or on behalf of the SERVICE PROVIDER and a copy of the endorsement naming the CITY as additional insured shall be attached to the Certificate of Insurance. The CITY reserves the right to request certified copies of any required policies.

D. The SERVICE PROVIDER'S insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respects to the limits of the insurer's liability.

E. Any payment of deductible or self-insured retention shall be the sole responsibility of the SERVICE PROVIDER.

F. The SERVICE PROVIDER'S insurance shall be primary insurance as respect to the CITY and the CITY shall be given written notice of any cancellation, suspension or material change in coverage within two (2) business days of SERVICE PROVIDER'S receipt of such notice.

9. TREATMENT OF ASSETS.

Title to all property furnished by the CITY shall remain in the name of the CITY and the CITY shall become the owner of the work product and other documents, if any, prepared by the SERVICE PROVIDER pursuant to this Agreement. Any modification or reuse of such work product and/or other documents for purposes other than those intended by this Agreement shall be at the CITY's sole risk and without liability to SERVICE PROVIDER. The work product is intended to be forward compatible with future phases of work planned for the Tumwater Boulevard interchange as noted in Exhibit "A" Scope of Services. The intended use of the work product and this agreement extends to use as part of these future plans.

10. COMPLIANCE WITH LAWS.

A. The SERVICE PROVIDER, in the performance of this Agreement, shall comply with all applicable federal, state or local laws and ordinances, including being licensed to do business in the City of Tumwater by obtaining a Tumwater business license and any additional regulations for licensing, certification and operation of facilities, programs and accreditation, and licensing of

individuals, and any other standards or criteria as described in this Agreement to assure quality of services.

B. The SERVICE PROVIDER specifically agrees to pay any applicable CITY business and occupation (B&O) taxes which may be due on account of this Agreement.

11. NONDISCRIMINATION.

A. The CITY is an equal opportunity employer.

B. Nondiscrimination in Employment. In the performance of this Agreement, the SERVICE PROVIDER will not discriminate against any employee or applicant for employment on the grounds of race, creed, religion, color, national origin, citizenship or immigration status, families with children status, sex, marital status, honorably discharged veteran or military status, the presence of any sensory, mental, or physical disability or the use of a trained dog guide or service animal by a person with a disability, sexual orientation, genetic information, age or other basis prohibited by state or federal law; provided that the prohibition against discrimination in employment because of disability shall not apply if the particular disability prevents the proper performance of the particular worker involved. Such action shall include, but not be limited to: employment, upgrading, demotion or transfers, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and programs for training including apprenticeships. “

C. Nondiscrimination in Services. The SERVICE PROVIDER will not discriminate against any recipient of any services or benefits provided for in this Agreement on the grounds of race, creed, religion, color, national origin, citizenship or immigration status, families with children status, sex, marital status, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability or the use of a trained dog guide or service animal by a person with a disability, sexual orientation, genetic information, age or other basis prohibited by state or federal law. “Race” is inclusive of traits historically associated or perceived to be associated with race including, but not limited to, hair texture and protective hairstyles. For purposes of this subsection, "protective hairstyles" includes, but is not limited to, such hairstyles as afros, braids, locks, and twists. It is not an unfair practice when a distinction or differential treatment on the basis of citizenship or immigration status is authorized by federal or state law, regulation, rule or government contract.

D. If any assignment and/or subcontract have been authorized by the CITY, said assignment or subcontract shall include appropriate safeguards against discrimination. The SERVICE PROVIDER shall take such action as may be

required to ensure full compliance with the provisions in the immediately preceding paragraphs herein.

E. Nondiscrimination in Benefits. **The provisions of this subsection are only applicable to contracts with an estimated value of \$50,000 or more.** Pursuant to Tumwater Municipal Code (TMC) Chapter 3.46, the SERVICE PROVIDER shall provide employee benefits or an equivalent sum to the domestic partners of their employees involved in the SERVICE PROVIDER'S operations applicable to this Agreement if such benefits are provided to employees' spouses as more particularly set forth in Chapter 3.46 of the TMC, a copy of which is attached hereto as Exhibit "B".

F. Nondiscrimination in Contractors / Subcontractors. The City of Tumwater, in accordance with RCW 49.60.530 requires all covered contractors or subcontractors to actively pursue a diverse and inclusive workforce. Contractors and subcontractors are prohibited from all forms of discrimination listed in RCW 49.60.530.

12. ASSIGNMENT/SUBCONTRACTING.

A. The SERVICE PROVIDER shall not assign its performance under this Agreement or any portion of this Agreement without the written consent of the CITY, and it is further agreed that said consent must be sought in writing by the SERVICE PROVIDER not less than thirty (30) days prior to the date of any proposed assignment. The CITY reserves the right to reject without cause any such assignment.

B. Any work or services assigned hereunder shall be subject to each provision of this Agreement and proper bidding procedures where applicable as set forth in local, state and/or federal statutes, ordinances and guidelines.

C. Any technical service subcontract not listed in this Agreement, must have express advance approval by the CITY.

13. NON-APPROPRIATION OF FUNDS.

If sufficient funds are not appropriated or allocated for payment under this Agreement for any future fiscal period, the CITY will not be obligated to make payments for services or amounts incurred after the end of the current fiscal period, and this Agreement will terminate upon the completion of all remaining services for which funds are allocated. No penalty or expense shall accrue to the CITY in the event this provision applies.

14. CHANGES.

Either party may request changes to the Scope of Services and performance to be provided hereunder, however, no change or addition to this Agreement shall be valid or binding upon either party unless such change or addition be in writing and signed by both parties. Such amendments shall be attached to and made part of this Agreement.

15. MAINTENANCE AND INSPECTION OF RECORDS.

A. The SERVICE PROVIDER at such times and in such forms as the CITY may require, shall furnish to the CITY such statements, records, reports, data, and information as the CITY may request pertaining to matters covered by this Agreement.

B. The SERVICE PROVIDER shall maintain books, records and documents, which sufficiently and properly reflect all direct and indirect costs related to the performance of this Agreement and shall maintain such accounting procedures and practices as may be necessary to assure proper accounting of all funds paid pursuant to this Agreement. These records shall be subject at all reasonable times to inspection, review, or audit, by the CITY, its authorized representative, the State Auditor, or other governmental officials authorized by law to monitor this Agreement.

C. To ensure the CITY'S compliance with the Public Records Act, RCW 42.56, the SERVICE PROVIDER shall retain all books, records, documents and other material relevant to this agreement, for six (6) years after its expiration. The SERVICE PROVIDER agrees that the CITY or its designee shall have full access and right to examine any of said materials at all reasonable times during said period.

16. POLITICAL ACTIVITY PROHIBITED.

None of the funds, materials, property or services provided directly or indirectly under the Agreement shall be used for any partisan political activity, or to further the election or defeat of any candidate for public office.

17. PROHIBITED INTEREST.

No member, officer, or employee of the CITY shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

18. NOTICE.

Notice provided for in this Agreement shall be sent by certified mail to the addresses designated for the parties on the signature page of this Agreement.

19. ATTORNEYS FEES AND COSTS.

If any legal proceeding is brought for the enforcement of this Agreement, or because of a dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, the prevailing party shall be entitled to recover from the other party, in addition to any other relief to which such party may be entitled, reasonable attorney's fees and other costs incurred in that action or proceeding.

20. JURISDICTION AND VENUE.

A. This Agreement has been and shall be construed as having been made and delivered within the State of Washington. It is agreed by each party hereto that this Agreement shall be governed by laws of the State of Washington, both as to interpretation and performance.

B. Any action of law, suit in equity, or judicial proceeding for the enforcement of this Agreement or any provisions thereof shall be instituted and maintained in the superior court of Thurston County, Washington.

21. SEVERABILITY.

A. If, for any reason, any part, term or provision of this Agreement is held by a court of the United States to be illegal, void or unenforceable, the validity of the remaining provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular provision held to be invalid.

B. If it should appear that any provision hereof is in conflict with any statutory provision of the State of Washington, said provision which may conflict therewith shall be deemed inoperative and null and void insofar as it may be in conflict therewith, and shall be deemed modified to conform to such statutory provisions.

22. ENTIRE AGREEMENT.

The parties agree that this Agreement is the complete expression of the terms hereto and any oral representations or understandings not incorporated herein are excluded. Further, any modification of this Agreement shall be in writing and signed by both parties. Failure to comply with any of the provisions stated herein shall constitute material breach of contract and cause for termination. Both parties recognize time is of the essence in the performance of the provisions of this Agreement. It is also agreed by the parties that the forgiveness of the nonperformance of any provision of this Agreement does not constitute a waiver of

the provisions of this Agreement. This Agreement may be executed in any number of counterparts, which counterparts shall collectively constitute the entire Agreement.

Signatures on Following Page

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first hereinabove written.

CITY:

CITY OF TUMWATER
555 Israel Road SW
Tumwater, WA 98501

Signed by:

Debbie Sullivan

Debbie Sullivan
Mayor

SERVICE PROVIDER:

HDR Engineering, INC.
905 Plum Street SE, Ste. 200
Olympia, WA 98501
Tax ID #: 601-021-437
Phone No: 360-570-4400

Signature (Notarized – see below)

Printed Name: PAUL FERRIER

Title: VICE PRESIDENT

ATTEST:

DocuSigned by:

Melody Valiant

Melody Valiant, City Clerk

APPROVED AS TO FORM:

DocuSigned by:

Karen Kirkpatrick

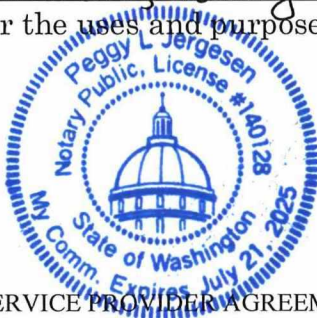
Karen Kirkpatrick, City Attorney

Notary Required for Service Provider Only

STATE OF WASHINGTON

COUNTY OF ~~THURSTON~~ KING

I certify that I know or have satisfactory evidence that Paul Ferrier (name) is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the Vice President (title) of HDR Engineering (company) to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.



Dated: July 30, 2024

Peggy L. Jergesen
Notary Public in and for the State of Washington,

My appointment expires: 07/21/2025

Exhibit A

Scope of Services

Tumwater Boulevard NB I-5 On/Off Ramp Intersection

Introduction

The City of Tumwater (CITY) has selected HDR Engineering, Inc. to provide support to the city in the design and development of construction documents for the Tumwater Boulevard NB I-5 On/Off Ramp Intersection improvements project.

During the term of this AGREEMENT, HDR Engineering, Inc. (CONSULTANT) shall perform professional services for the City of Tumwater in association with the work. This document shall be used to plan, conduct, and complete the work.



Project Overview

This project includes reconstruction of the I-5 NB on/off ramp intersection to address capacity and safety issues at the intersection. The preferred alternative for the intersection improvements was determined in previous work and a roundabout was selected. This project will include coordination with WSDOT for review and approval of the project.

The roundabout will be designed to be forward compatible with other work planned for the Tumwater Boulevard corridor including widening of the existing bridge and reconstruction of the SB on/off ramp intersection.

The CONSULTANT's work is expected to start in July 2024 and continue through October 2025. The CONSULTANT will perform the Work as defined in the tasks in this document.

Table of Contents

DESIGN CRITERIA	5
TASK 1: PROJECT MANAGEMENT.....	6
Task 1.1 – Project Management/Administration.....	6
Task 1.2 – Project Reporting/Invoicing	6
Task 1.3 – Project Team Meetings	6
Task 1.4 – Quality Assurance/Quality Control Review	6
TASK 2: DATA COLLECTION AND REVIEW	8
Task 2.1 Review of Existing Data	8
TASK 3: TOPOGRAPHIC SURVEY and RIGHT-OF-WAY MAPPING	9
Task 3.1 – Right-of-Way Base Map	9
Task 3.2 – Topographic Survey Base Map	9
Task 3.3 – Right-of-Way Plans and Legal Descriptions	11
TASK 4: GEOTECHNICAL INVESTIGATION AND REPORTING	12
Task 4.1 – Site Reconnaissance, Utility Locates	12
Task 4.2 – Geotechnical Field Explorations and Laboratory Testing.....	12
Task 4.3 – Groundwater Monitoring.....	12
Task 4.4 – Geotechnical Engineering Analysis and Reporting.....	13
Task 4.5 – Pavement Analysis and Reporting	13
TASK 5: WSDOT COORDINATION.....	14
Task 5.1 – WSDOT General Use Permit	14
Task 5.2 – WSDOT Coordination Meetings	14
Task 5.3 – Meeting Agendas and Notes	15
Task 5.4 – Intersection Control Evaluation (ICE)	15
Task 5.5 – Channelization Plan for Approval	16
Task 5.6 – Access Revision Report (ARR)	16
Task 5.7 – WSDOT Project Utility Map	17
Task 5.8 – 90% PS&E Checklist and Submittal	17
Task 5.9 – Project Documentation Submittals	17
Task 5.10 – WSDOT Comment Response Forms	17
Task 5.11 – Quality Assurance/Quality Control Review	17
TASK 6: PUBLIC OUTREACH SUPPORT	19
Task 6.1 – Public Outreach Exhibits	19
Task 6.2 – Public/Stakeholder Outreach Support	19
Task 6.3 – Quality Assurance/Quality Control Review	19
TASK 7: TRAFFIC ANALYSIS	20
Task 7.1 – Traffic Data Collection and Evaluation	20
Task 7.2 – Existing Conditions Evaluation	20

Task 7.3 – Traffic Volume Projections	20
Task 7.4 – Traffic Analysis.....	20
Task 7.5 – Alternatives Evaluation.....	20
Task 7.6 – Sensitivity Analysis	21
Task 7.7 – Safety Analysis	21
Task 7.8 – Quality Assurance/Quality Control Review	21
TASK 8: BRIDGE WIDENING ANALYSIS.....	22
Task 8.1 – Review of Existing Bridge Data	22
Task 8.2 – Bridge Widening Analysis	22
Task 8.3 – Bridge Widening Technical Memorandum.....	22
Task 8.4 – Quality Assurance/Quality Control Review	22
TASK 9 – PERMITTING AND ENVIRONMENTAL STUDIES.....	23
Task 9.1 – Environmental Conditions Assessment	23
Task 9.2 – Permit Support	23
Task 9.3 – NEPA Documentation	24
Task 9.4 – Environmental Justice Documentation required by FHWA and WSDOT	24
Task 9.5 – Hazardous Materials Documentation required by FHWA and WSDOT	25
Task 9.6 – Quality Assurance/Quality Control Review	25
TASK 10: CULTURAL RESOURCES	27
Task 10.1 – Proposed Area of Potential Effects and Background Review	27
Task 10.2 – Field Study	27
Task 10.3 – Cultural Resources Technical Report.....	27
Task 10.4 – Inadvertent Discovery Plan	28
Task 10.5 – QA/QC	28
TASK 11: REAL ESTATE SERVICES SUPPORT	29
Task 11.1 – Preliminary Right-of-way Services.....	29
Task 11.2 – Valuation Process (Appraisals and Appraisal Reviews)	29
Task 11.3 – Acquisition and Negotiation Support	31
Task 11.4 – Right-of-Way Plans	33
Task 11.5 – Quality Assurance/Quality Control Review	33
TASK 12: UTILITY COORDINATION.....	34
Task 12.1 – Utility Review and Conflict Assessment.....	34
Task 12.2 – Conflict Resolution	34
Task 12.3 – Design and Construction Coordination	34
Task 12.4 – QA/QC Review.....	34
TASK 13: PRELIMINARY DESIGN	36
Task 13.1 – Roadway/Roundabout Design.....	36
Task 13.2 – Stormwater Design (WSDOT)	36
Task 13.3 – Illumination Design.....	37

Task 13.4 – Landscaping Design.....	37
Task 13.5 – Retaining Wall Design.....	38
Task 13.6 – Quality Assurance/Quality Control Review	38
TASK 14: FINAL DESIGN	39
Task 14.1 – Roadway/Roundabout Design.....	39
Task 14.2 – Stormwater Design (WSDOT)	39
Task 14.3 – Illumination Design.....	39
Task 14.4 – Landscaping Design.....	39
Task 14.5 – Retaining Wall Design.....	40
Task 14.6 – QA/QC Review.....	40
TASK 15: 30% PLANS AND ESTIMATE.....	41
Task 15.1 – 30% Opinion of Probable Construction Costs (OPCC)	41
Task 15.2 – Quality Assurance/Quality Control Review	41
TASK 16: 60% PLANS, SPECIFICATIONS AND ESTIMATE	42
Task 16.1 – 30% Comment Response Resolution.....	42
Task 16.2 – 60% Plans.....	42
Task 16.3 – 60% Specifications.....	43
Task 16.4 – 60% Opinion of Probable Construction Costs (OPCC)	44
Task 16.5 – Quality Assurance/Quality Control Review	44
TASK 17: 90% PLANS, SPECIFICATIONS AND ESTIMATE	45
Task 17.1 – 60% Comment Response Resolution.....	45
Task 17.2 – 90% Plans.....	45
Task 17.3 – 90% Specifications.....	45
Task 17.4 – 90% Opinion of Probable Construction Costs (OPCC)	45
Task 17.5 – QA/QC Review.....	46
TASK 18: FINAL PLANS, SPECIFICATIONS AND ESTIMATE	47
Task 18.1 – 90% Comment Response Resolution.....	47
Task 18.2 – Final Plans	47
Task 18.3 – Final Specifications	47
Task 18.4 – Final Opinion of Probable Construction Costs (OPCC)	47
Task 18.5 – QA/QC Review.....	48
MANAGEMENT RESERVE FUND.....	49

DESIGN CRITERIA

The CITY will designate the basic premises and criteria for plan development. The plans shall be developed in accordance with the latest edition and amendments of the following publications as of the date of the signing of this AGREEMENT of the following documents.

Measurements will be in English units.

Drafting Standard: APWA/City of Tumwater

Datums:

Horizontal: Washington State Plane Coordinate System
Vertical: NGVD 29

City of Tumwater Publications:

- The Tumwater Development Guide and Standard Details (Interim 2021) or the latest version as of the project kickoff.
- Drainage Design and Erosion Control Manual for Tumwater (July 2022)
- Latest Tumwater Standard Details

WSDOT Publications:

- Standard Specifications for Road, Bridge and Municipal Construction, English edition (2024) or most current
- Standard Plans for Road, Bridge and Municipal Construction, English edition
- WSDOT Design Manual (current edition)
- WSDOT Bridge Design Manual (current edition)
- Highway Runoff Manual (current edition)

American Association of State Highway and Transportation Officials (AASHTO) Publications:

- A Policy on Geometric Design of Highways and Streets, (2018 Edition – “Green Book”)
- LRFD Bridge Design Specifications, 9th Edition, 2020

U.S. Department of Transportation (USDOT) Publications:

- Manual of Uniform Traffic Control Devices for Streets and Highways
- Highway Capacity Manual, Special Report 209
- Public Right of Way Accessibility Guidelines (PROWAG)
- NCHRP Report 672 (FHWA Roundabout Guidance)

Additional project specific criteria will be established in initial meetings with the CITY.

TASK 1: PROJECT MANAGEMENT

The CONSULTANT's project manager shall be responsible for developing and administering the project management plan for the project, including creation and updates of the project schedule, implementation of the quality control process, project reporting, project documentation, and overall performance of the project. Activities will include the following:

Task 1.1 – Project Management/Administration

The CONSULTANT shall administer the project and coordinate with CITY to facilitate efficient progress and timely completion. Elements of work for this task include:

- Project Setup
- Manage project activities, Quality Management Plan, Health and Safety Plan
- Manage project budget and schedule.
- Manage sub-consultant agreements.
- Perform management and business reviews.
- Project Closeout
- Create and maintain a formal outstanding task list for items the City staff needs to address. List shall be comprehensive, updated, and provided to the CITY at each project meeting.
- At project completion, prior to bid, all project documents shall be submitted to the CITY in digital format and arranged in a folder structure representing the project Task List.

Task 1.2 – Project Reporting/Invoicing

The CONSULTANT shall prepare monthly invoices, earned value and progress reports to document the work performed and anticipated work for the next month. Elements of work for this task include:

- Prepare monthly earned value chart tracking project progress.
- Prepare/submit monthly progress report and invoice to CITY project manager.

Task 1.3 – Project Team Meetings

The CONSULTANT project manager, in addition to attending specific meetings as described in other tasks, shall attend the following meetings:

- Bi-weekly CITY project management meetings to discuss progress, action items, schedule, budget, and upcoming issues. CONSULTANT shall prepare agenda and meeting minutes including summary of action items, strategies, and decisions made.
- Monthly CONSULTANT team meetings to coordinate team's progress and effort. CONSULTANT shall prepare agenda, summarize decisions made, and assign action items.
- The CONSULTANT Project Manager shall be responsible for maintaining regular contact with the CITY and designated project management team staff through informal office visits, telephone conversations, emails and open access to project information by the CITY in accordance with the provisions stated in this scope of work.

Task 1.4 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 1 - Assumptions:

- CONSULTANT / CITY project management meetings shall be conducted via video conference call or in person, be attended by two CONSULTANT team members, and be one hour or less in duration.
- The Project Budget and Earned value will be tracked at the Task level.
- Work will occur over fourteen (14) consecutive months between July 2024 & October 2025.
- All meetings with the CITY shall be attended by two (2) CONSULTANT team members.
- Project design team meetings are assumed to be one hour or less in duration. One CONSULTANT team member will have an additional hour for meeting preparation and minutes.
- Project management team meetings will be scheduled bi-weekly for the duration of the project and will be an average of one hour in duration. Two CONSULTANT team members will attend the meetings. One CONSULTANT team member will have an additional hour for meeting preparation and minutes.
- The CONSULTANT will provide all meeting participants with the phone number and participant code number, or a link to the video conference session when using virtual meeting software for each meeting(s).
- CONSULTANT internal team will meet one time per month for a period of fourteen (14) months between July 2024 & October 2025. Internal team meetings will be one (1) hour in duration and will include the PM and design discipline leads.
- The initial project design team meeting will be an internal kickoff meeting that the discipline leads, and their support staff will attend. This meeting is anticipated to be 1.5 hours in duration.

Task 1 - Deliverables:

- Project Schedule (included with biweekly progress report, via pdf)
- Meeting Minutes (Assumes 28 project management team meetings and 14 project design team meetings, via pdf).
- Monthly Progress Reports/Invoices (Assumes 14 Reports/Invoices, via pdf).
- Earned Value Chart (Assumes 14 total, via pdf)

TASK 2: DATA COLLECTION AND REVIEW

The purpose of this task is to collect and review all available documents related to the project and identify areas where further research and mapping are needed and summarize what additional information is needed for project development.

Task 2.1 Review of Existing Data

CONSULTANT will review documents provided by the CITY including:

- All completed and in-progress CITY utilities and street maps, plans and studies regarding the project area (including Geographic Information Systems (GIS) data).
- Existing right-of-way and easement information available at the CITY.
- Agreements, franchises, licenses and other pertinent information concerning utility providers, businesses and properties adjacent to the project area.
- Agreements, licenses, easements and directives from regulatory and resource agencies applicable to the project.

Task 2 Assumption(s):

- The CITY will assist CONSULTANT in obtaining information from regulatory and resource agencies, utility providers and other CITY departments.
- Utility locations obtained from CITY records and 811 locates will be used and relied upon for the design. However, if conflicting information is identified the CONSULTANT shall inform the CITY.

Task 2 Deliverable(s):

- No deliverables are anticipated for Task 2.

Task 2 City Deliverable(s):

- As-Builts for City owned utilities
- Relevant corridor studies
- Agreements, franchises, licenses, and other pertinent information concerning utility providers, businesses, and properties adjacent to the project area
- Agreements, licenses, easements, and directives from regulatory and resource agencies applicable to the project.

TASK 3: TOPOGRAPHIC SURVEY and RIGHT-OF-WAY MAPPING

CONSULTANT will retain Sitts & Hill (S&H) to provide topographic surveying and right of way base mapping services for project. City will provide as-built records for City's owned utilities if available. It is the CONSULTANT's responsibility to obtain existing utility records from private utilities and coordination locate marking services prior to field survey.

Task 3.1 – Right-of-Way Base Map

S&H will complete the appropriate field and office work to establish the right-of-way base map for the project. A Record of Survey drawing will be prepared and recorded with the County Auditor's office for any revision to right-of-way, as required by law. All existing searched for and found monuments based on record of surveys and recorded plats shall be documented on the right-of-way base map.

S&H will use available WSDOT right-of-way maps and monumentation to develop the right-of-way base map. WSDOT right-of-way mapping will utilize the WSDOT project coordinate system which is different from the Washington State Plane Coordinate System which will be used for all other design components of the project.

Task 3.2 – Topographic Survey Base Map

S&H will complete a topographic survey for the project as shown in Figure 1. The topographic survey shall be conducted within the limits shown.

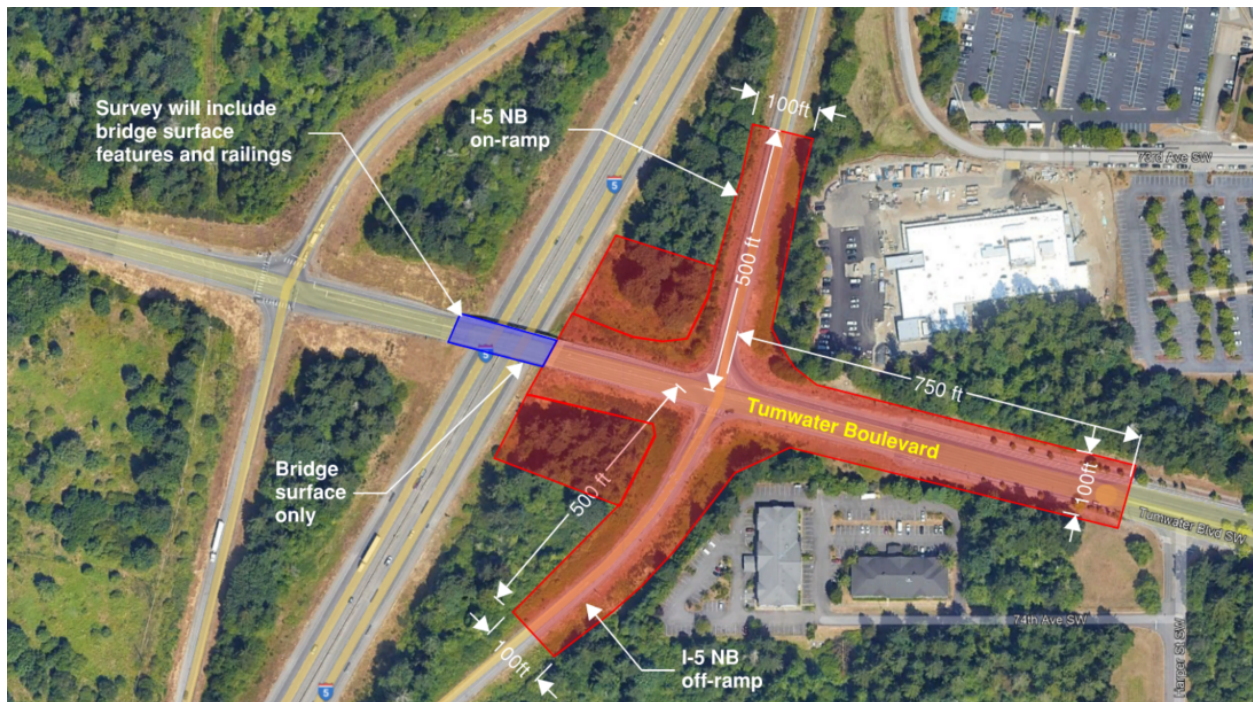


Figure 1 – Survey Limits

Topographic survey features to be mapped:

- Roadways, driveways, sidewalks, and other surface features with material or surface types.
- Centerlines, channelization, and angles of intersection of the side streets with main roadway centerline.
- One-foot contours with tops, toes and breaks.
- Buildings and other structures within the survey limits with finished floor elevations.
- Other visible improvements such as curbs, mailboxes, light poles, etc.
- Trees (2" caliper and larger), shrubs, special landscaping, and irrigation features.
- Location of other landscaping materials like grass lawns, rock structures, sculptures, etc.
- Type, locations and elevations of sprinkler heads, sprinkler control boxes, and other sprinkler devices that may become design and ROW negotiation considerations.
- Fences and retaining walls.
- Toe and top of slopes within drainage features.
- Locate and confirm all existing utilities and appurtenances with types, sizes, and materials, as possible for all public and private owned utilities.
- All other features not explicitly stated as required for design in accordance with standard survey practices.

Water Mains and Appurtenances:

- Size and material type of water main from city records, locate service markings and observations by S&H.
- Size and type of manhole, meter and fire hydrant from city records, locate service markings and observations by S&H.
- Size and type of valve from city records, locate service markings and observations by S&H, with operating nut elevation by S&H.

Stormwater Features:

- Storm Drains and Open Channels:
- Size and material type of storm drains with flow direction from city records, locate service markings and observations by S&H.
- Size and type of appurtenances including inlet, catch basin, junction box etc. from city records and observations by S&H.
- Rim elevation and flowline elevations of all lines entering and exiting drainage structure.
- Open channels and culverts with material and elevations if visible.
- Width and height of all box culverts as well as the entry and exit elevations.
- Elevations, widths and locations of any headwalls, retaining walls, aprons or other objects within the limits of the survey.

Sanitary Sewer and Appurtenances:

- Size and material type of sewer line with flow direction from city records, locate service markings and observations by S&H.
- Size and type of manhole (brick, concrete, fiberglass, drop manhole, etc.).
- Rim elevation and flowline elevations of all lines entering and exiting manhole.
- Manhole access device, cleanout and other appurtenances.

Gas Mains:

- Size and type of appurtenances including meter, manhole, valve etc. from locate service markings, utility company records and observations by S&H.

Underground Telephone:

- Size and type appurtenances (manhole, telephone pole, guy wire, vault, etc.) from locate service marking, utility company records and observations by S&H.

Electric:

- Location, size and type appurtenances (manhole, vault, power pole, guy wire, overhead lines, etc.) from locate service marking, utility company records and observations by S&H.

Underground Fiber Optic:

- Location, size and type appurtenances (manhole, vault etc.) from locate service marking, utility company records and observations by S&H.

Field Sketch and Notes:

- Field sketches and notes depicting any special field information shall be furnished, if available.

Task 3.3 – Right-of-Way Plans and Legal Descriptions

S&H will review right-of-way plans developed by the CONSULTANT. Up to three (3) rounds of comments are included.

S&H will develop up to four right-of-way exhibits (legal description and sketch) for the property acquisitions and temporary construction easements required for the project.

S&H will perform right-of-way staking for appraisal and negotiation and set temporary hubs on the proposed right-of-way at the intersection of the sidelines of existing parcels.

Task 3 - Assumptions:

- Survey control will be established by S&H. Benchmarks (BM's), or Control Points (CP's) shall be established at each end of the project with intermediate locations spaced about every 500 feet and at a sufficient distance outline the limits of construction so as not to be disturbed by construction activities. A minimum of two BM's or CP's are to be provided on each project with the northing, easting, elevation, and description.
- The contract specifications will require the contractor to prepare and submit DNR permits for destroyed or relocated monuments.
- CITY will provide right of entry permits for the survey efforts.
- S&H will obtain Title Reports for use in developing the right-of-way base map.
- Horizontal datum will be the Washington State Plane Coordinate System
- Vertical datum will be NGVD 29

Task 3 - Deliverables:

- Up to four (4) Title Reports
- Right-of-Way base map in AutoCAD format
- Topographic survey map in AutoCAD format with 3d surface of the project areas

Task 3 – CITY Deliverables:

- Retrieve rights-of-entry for surveyors
- Provide as-builts for CITY owned utilities

TASK 4: GEOTECHNICAL INVESTIGATION AND REPORTING

CONSULTANT will retain Sage Geotechnical (SAGE) to provide geotechnical engineering services in support of Project. SAGE's efforts will include soil sampling and testing to determine information required for the stormwater design, pavement design, and foundation design.

CONSULTANT Services

HDR will review and provide comment on the Draft Technical Memorandum.

SAGE Services

The following services will be provided by SAGE.

Task 4.1 – Site Reconnaissance, Utility Locates

This subtask includes the following efforts:

- Develop field exploration plan and traffic control plans required for a WSDOT access permit application.
- Gather and review available published geotechnical and geologic subsurface information.
- Visit the site to observe existing conditions and excavator access for field explorations.
- Notify the Utility Notification Center for public utility clearance. Subcontract a private utility-locating service to locate utilities outside of public easements.
- Submit a field exploration and traffic control plan for review by the CITY and WSDOT.
- Prepare a health and safety plan and QA/QC plan for review by CONSULTANT.
- Prepare subcontractor agreements for excavating, private utility-locating, and traffic control services. Coordinate fieldwork schedule with subcontractors.

Task 4.2 – Geotechnical Field Explorations and Laboratory Testing

Fieldwork

Advance as many as 3 borings to depths of 35-40 ft below ground surface or practical refusal (rock, groundwater table, etc.). The borings will be located off the roadway shoulder/outside the edge of pavement. SAGE will submit a sketch showing the proposed exploration locations for review prior to breaking ground.

Laboratory Testing

Geotechnical laboratory testing will be completed to help determine pertinent engineering soil properties. Laboratory testing will include up to twenty (20) index tests (combined grain-size distribution analyses) and up to twenty (20) moisture content determinations.

Two CBR tests will be performed on soil samples from the RAB site. One soil sample will be taken from under the existing roadway, and the other will be in the area of planned widening.

Task 4.3 – Groundwater Monitoring

This task includes efforts for groundwater monitoring. The need for these services depends on results of initial evaluation of groundwater levels. If it is determined that groundwater monitoring is required, CONSULTANT will coordinate with CITY project manager to obtain notice-to-proceed for this work.

Install monitoring wells to determine seasonally high ground water elevation for the purpose of mounding water analysis and verify the pond bottom location maintains appropriate separation.

Task 4.4 – Geotechnical Engineering Analysis and Reporting

This task includes efforts to analyze data obtained from the geologic review, field explorations, and laboratory testing to assess the geotechnical feasibility of stormwater infiltration and to evaluate the structural properties of the existing soils for use in streetlight foundation and retaining wall design.

Prepare a Geotechnical Report that includes:

- A site map showing the approximate locations of the explorations.
- Descriptive logs of the explorations and a summary of the subsurface soil and groundwater conditions observed in the explorations and mapped geology.
- An evaluation of tests performed on right-of-way acquisition areas planned for the RAB project site.
- Design infiltration rates will be determined using the grain size method.
- Recommendation for retaining wall types and design parameters.

Task 4.5 – Pavement Analysis and Reporting

Pavement Analysis and Design - This task includes efforts to develop a pavement design for the project. The pavement design will follow WSDOT's pavement design guidance. Traffic loading will be based on projected traffic volumes and truck percentages identified in the project traffic data.

Pavement Design Report - This task includes efforts to analyze the existing subgrade soil conditions and develop a pavement design for the project that meets WSDOT's pavement design requirements.

Task 4 - Assumptions:

- Traffic control plans will be submitted to the WSDOT and CITY for review and approval prior to any work being performed.
- Traffic control plans, traffic control devices, and traffic control services will be provided by SAGE and are assumed to consist of roadway shoulder and two days of flaggers.
- SAGE will apply for a right-of-way permit for all work done in CITY right-of-way through the CITY standard permit process. SAGE will inform the CITY when the right-of-way permit application has been submitted. All permit fees will be waived.
- Test pits and/or borings can be completed on weekdays during daylight hours.
- The Draft Geotechnical Report will be submitted with the 60% design submittal for CITY review.
- The Final Geotechnical Report will be submitted with the 90% design submittal for CITY review.

Task 4 - Deliverables:

- Draft Geotechnical Report will be delivered electronically in pdf format.
- Final Geotechnical Report will be delivered electronically in pdf format.
- Letter summarizing collected groundwater information delivered electronically in pdf format within 3 weeks of conclusion of groundwater monitoring.

Task 4 – CITY Deliverables:

Review right-of-way permit and waive permit fee

TASK 5: WSDOT COORDINATION

The purpose of this task is to develop, assemble, submit and respond to necessary WSDOT department approvals and concurrences required for the permitting for the Tumwater Boulevard /NB On/Off Ramp RAB. This coordination and approvals are to be forward compatible with future phases of the improvements including a RAB at the termini of the SB ramps and Tumwater Boulevard (Phase 2) and widening of the Tumwater Boulevard Bridge over I-5 (Phase 3).

Task 5.1 – WSDOT General Use Permit

CONSULTANT will coordinate with WSDOT to complete a general use permit application that will allow the surveyor, geotechnical engineer, and other project team members to visit the site and access WSDOT's R/W.

The application will include a field exploration plan and traffic control plans identifying points of access to WSDOT's R/W.

Task 5.2 – WSDOT Coordination Meetings

The CONSULTANT will need multiple meetings with WSDOT throughout the project for design guidance and approvals. The CITY will be invited to ALL meetings between the CONSULTANT and WSDOT as an optional attendee. The following coordination meetings with WSDOT are anticipated:

Bridge Analysis Meetings

There will be two (2) one-hour meetings with WSDOT bridge and structures staff to discuss the potential options for widening the existing bridge. Meetings will be attended by up to two (2) CONSULTANT staff.

A kickoff meeting will include discussion of project constraints that need to be considered in the bridge widening analysis and forward compatible roundabout design. Direction provided in the kickoff meeting will be documented for the bridge widening technical memorandum.

A second meeting will be scheduled after the bridge widening analysis has been completed and the technical memorandum has been reviewed by WSDOT. This meeting is intended to discuss WSDOT's review comments and resolve any outstanding comments prior to finalizing the bridge widening technical memorandum. Traffic coordination meeting topics will include the following:

Traffic Coordination Meetings

There will be two (2) meetings with WSDOT to discuss traffic related items as shown below. The first meeting will include confirmation of the design parameters and approach. The second meeting will include an update on analysis results prior to official submittal of the traffic related deliverables. Each meeting will be one hour in duration and attended by up to two (2) CONSULTANT team members.

Operational Analysis – Discuss the level of documentation required in the ICE. Meeting will include establishing operational parameters and design years for the analysis, confirmation of the assumptions for the sensitivity analysis, and the approach to the forward compatibility of the roundabout.

Illumination Design – Discuss the design of the illumination system(s) that will be in WSDOT and CITY R/W. Discuss the capacity of existing systems and confirm the limits and power sources for each proposed system.

Traffic Control – Discuss the traffic control plan for construction of the roundabout. Meetings are intended to discuss the traffic control plan and approach to maintenance of traffic and receive feedback from WSDOT reviewers prior to official submittals.

Preliminary Design Meeting

The preliminary design meeting will be a two-hour meeting that will cover multiple design elements of the project as shown below. Information gathered and direction provided by WSDOT in this meeting will be used in the design development. Preliminary design topics for this meeting will include the following:

Environmental Permitting – Discuss the permitting requirements related to the project work. Confirm the level of documentation required for WSDOT review and approval. Identify critical path items and timelines related to project permitting and work with WSDOT reviewers to establish a preliminary permitting schedule.

Roundabout/Roadway Design – Discuss the results of the sensitivity analysis and approach to the forward comparable design that accommodates future bridge widening. Confirm Channelization Plan for Approval package requirements. Discuss initial geotechnical results and preliminary pavement design.

Stormwater Design – Discuss the proposed stormwater systems located in WSDOT R/W and the agreements between the CITY and WSDOT for the operation and maintenance of those stormwater facilities. Review initial Threshold Discharge Areas (TDA) determination and gain consensus on the stormwater design approach.

Utilities and Pavement Design Meetings

There will be up to two (2) meetings with WSDOT utilities and pavement design staff to discuss the geotechnical results and proposed pavement design, proposed utility improvements, and discuss updates on the utility coordination efforts. The second meeting will be used to discuss WSDOT's review comments on the draft utility plan submitted as part of the 60% design.

Right of Way and Access Meetings

There will be up to three (3) meetings with WSDOT survey and access staff to discuss the access revision and right of way impacts and revisions to WSDOT's limited access. Meetings will include over-the-shoulder reviews of R/W plans and updates on the access revision process. These meetings will be attended by up to three (3) CONSULTANT staff team members.

PS&E Review Meeting

This meeting is a one-hour meeting to discuss WSDOT's comments on the 90% PS&E design package and confirm CONSULTANT's initial comment responses. Meeting will include discussion and resolution of outstanding comments.

Task 5.3 – Meeting Agendas and Notes

CONSULTANT will develop meeting agendas for each WSDOT coordination meeting identified above and document the meeting discussion and decisions in meeting notes.

Task 5.4 – Intersection Control Evaluation (ICE)

CONSULTANT will compile the following submittals (draft and final) required for WSDOT's design approval. This task includes efforts to compile the required documents for the submittals including development of a transmittal letter and filing of the submitted documents and related correspondence.

The ICE process is scaled based on the size and complexity of the project. The scope for this project assumes all five (5) steps in the ICE process will be required to fully evaluate all alternatives at the ramp terminal per Chapter 1300.05(2) of the WSDOT Design Manual. The

ICE will evaluate up to three (3) alternatives and will be supported by the operational and safety analysis results from work in the traffic analysis task.

The report will include a summary of existing conditions, discussion of the proposed improvements, and documentation of the traffic projections and operational results.

Draft ICE - A draft ICE will be submitted to WSDOT for review. The draft ICE will be developed based on the information documented in the WSDOT traffic scoping meeting.

Final ICE – The ICE will be finalized to address WSDOT comments received on the draft submittal.

Task 5.5 – Channelization Plan for Approval

CONSULTANT will compile the following submittals (draft and final) required for WSDOT's design approval. This task includes efforts to compile the required documents for the submittals including development of a transmittal letter and filing of the submitted documents and related correspondence.

The Channelization Plan for Approval documents will not be developed until the ICE has been approved. Channelization Plans will be developed to meet WSDOT's Olympic Region standards and preferences. Channelization plans will be required for the Ultimate and Interim roundabout configurations to document the safety performance checks for future conditions when the roundabout requires additional lanes.

The roundabout geometry documentation is being developed under the preliminary design task but will be included in the Channelization Plan for Approval submittal package.

Draft and Final Channelization Plan for Approval Checklist – A draft checklist will be completed and included in the draft and final Channelization Plan for Approval submittals. The final checklist will address comments received on the draft submittal.

Draft and Final Summary of Design – A draft Summary of Design document will be completed and included in the Channelization Plan for Approval submittal. The final Summary of Design document will address comments received on the draft submittal.

Draft and Final Channelization Plans for Approval (ultimate) - Draft Channelization Plans for Approval will be developed to document the geometry of the proposed ultimate roundabout configuration. The final channelization plans will address WSDOT comments received on the draft submittal. These plans will not require WSDOT's signatures.

Draft and Final Channelization Plans for Approval (interim) - Draft Channelization Plans for Approval will be developed to document the geometry of the proposed interim roundabout configuration. The final channelization plans will address WSDOT comments received on the draft submittal. These plans will require WSDOT's signature for preliminary design approval.

Task 5.6 – Access Revision Report (ARR)

CONSULTANT will compile the following submittals (draft and final) required for WSDOT's design approval. This task includes efforts to compile the required documents for the submittals including development of a transmittal letter and filing of the submitted documents and related correspondence.

The ARR will be developed in coordination with WSDOT access and R/W staff. The ARR will meet WSDOT's design manual guidance and will address the following:

- Reasonable Alternatives
- Operational Analysis
- Safety Performance Analysis

- Conceptual Signing Plan

Information from the traffic analysis will be used to support the ARR documentation. The ARR will be developed to be consistent with NEPA permitting documentation.

Draft ARR – A draft ARR will be submitted to WSDOT for review. The draft ARR will be developed based on the information documented in the WSDOT coordination meetings.

Final ARR – The ARR will be finalized to address WSDOT comments received on the draft submittal.

Task 5.7 – WSDOT Project Utility Map

CONSULTANT will compile the following submittals (draft and final) required for WSDOT's design approval. This task includes efforts to compile the required documents for the submittals including development of a transmittal letter and filing of the submitted documents and related correspondence.

CONSULTANT will develop a draft and final project utility map that identifies existing utility features within the project area and the proposed utility improvements associated with the project. Proposed private utility relocations will be shown on the project utility map. The utility map will be submitted to WSDOT for review at the 60% design level.

Task 5.8 – 90% PS&E Checklist and Submittal

CONSULTANT will complete WSDOT's PS&E Checklist and include the required project information for WSDOT's review of the 90% PS&E documents. Efforts to compile the 90% PS&E submittal to WSDOT are included in this task.

Task 5.9 – Project Documentation Submittals

The documents listed below are being developed under other tasks but will be submitted to WSDOT for review. The efforts included in this task are for compiling and documenting the delivery of these design submittals to WSDOT.

- Environmental Documentation
- Cultural Resources Documentation
- Traffic Control Plans
- Right of Way Plans

Task 5.10 – WSDOT Comment Response Forms

CONSULTANT will document comment responses that address review comments received from WSDOT on the draft and final submittals identified in this task.

Task 5.11 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 5 - Assumptions:

- Meetings will be conducted virtually.
- Meeting agendas and notes will be provided in PDF format.
- See individual meeting descriptions above for assumptions of meeting duration and CONSULTANT attendance.
- Up to two (2) reviews for each deliverable will require comment responses.

Task 5 - Deliverables:

- Meeting agendas and notes
- Draft and Final ICE
- Draft and Final ARR
- Draft and Final Channelization Plans for Approval Submittal Packages (Ultimate)
- Draft and Final Channelization Plans for Approval Submittal Packages (Interim)
- Draft and Final Project Utility Map
- 90% PS&E Checklist and supporting documentation.
- WSDOT Submittal Transmittal Letters
- WSDOT Comment Response Forms

TASK 6: PUBLIC OUTREACH SUPPORT

The purpose of this activity is to provide public outreach support to the CITY for the project.

Task 6.1 – Public Outreach Exhibits

The CONSULTANT shall develop exhibits depicting the proposed project improvements for the CITY to post to the project website.

Task 6.2 – Public/Stakeholder Outreach Support

The CONSULTANT shall support the CITY's coordination efforts with project stakeholders and the community. Efforts may include reviewing/responding to stakeholder questions and/or attending meetings to discuss the project details with stakeholder. The budget assumes up to 40 hours of public/stakeholder outreach support will be required.

Task 6.3 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 6 - Assumptions:

- CITY will update the project website with exhibits provided by CONSULTANT in PDF or PNG format.
- It assumed that no oversized exhibit display boards will be required for public outreach efforts and all deliverables will be provided in electronic format.
- Hours for public/stakeholder outreach support effort is estimated to be 40 hours.

Task 6 - Deliverables:

- Public Outreach Exhibits – these exhibits will be developed using the project design CADD files but will be modified to be used for display graphics rather than construction documents (PDF format).

TASK 7: TRAFFIC ANALYSIS

The purpose of this activity is to evaluate existing and proposed traffic conditions.

Documentation of the operational analysis will be prepared under the WSDOT coordination task for the ICE. The work performed in this task will support the ICE, but development of the documentation required for the ICE is included in the WSDOT coordination task efforts.

Task 7.1 – Traffic Data Collection and Evaluation

The CONSULTANT shall collect existing traffic turning movements at the intersection for use in the traffic analysis. Traffic counts will be collected at the NB and SB I-5 ramp intersections with Tumwater Blvd. CONSULTANT will perform a review of the traffic data collected.

Task 7.2 – Existing Conditions Evaluation

The CONSULTANT will review existing traffic data collected for the project for use in the traffic analysis. Existing conditions and deficiencies will be documented.

Task 7.3 – Traffic Volume Projections

The CONSULTANT shall develop traffic volumes for the opening year of the roundabout, and the design year of the roundabout for use in the traffic analysis. Traffic projections will be determined using historical data and local traffic model growth projections. CONSULTANT will coordinate with WSDOT Olympic Region traffic staff for approval of traffic projections.

Traffic volumes will be developed for the AM and PM peak hours for existing conditions, the opening year of the roundabout, and the design year of the roundabout.

Task 7.4 – Traffic Analysis

The CONSULTANT shall perform an operational analysis for the improvements at the intersection to satisfy the requirements of the ICE. The analysis will evaluate existing conditions, a traffic signal, and a roundabout. The roundabout will be evaluated using Sidra software and the signal alternative will be evaluated using Synchro. The traffic analysis will follow WSDOT's protocol for analysis program settings.

The operational analysis will include evaluation of future operations of a multi-lane roundabout at the SB I-5 ramp intersection with Tumwater Blvd to confirm that there are no issues with queuing between the intersections in the future. The SB I-5 ramp terminal will not be evaluated for the interim conditions.

Traffic operations for the NB I-5 ramp terminal will be analyzed for the following scenarios:

- Existing conditions AM/PM peak hours (existing control, roundabout, traffic signal)
- Opening year AM/PM peak hours (existing control, roundabout, traffic signal)
- Design year AM/PM peak hours (existing control, roundabout, traffic signal)

Traffic operations for the SB I-5 ramp terminal will be analyzed for the following scenarios:

- Design year AM/PM peak hours (roundabout only)

Task 7.5 – Alternatives Evaluation

The CONSULTANT will perform a high-level evaluation of a roundabout and a traffic signal for the intersection improvements. The evaluation criterion will include safety, operations, environmental impacts, maintenance, and R/W footprint. Consultant will coordinate with CITY and WSDOT staff to establish the priority of the evaluation criteria.

Documentation of the alternatives analysis process and the results and recommendations are included in the efforts for developing the ICE and the ARR in Task 5.

Task 7.6 – Sensitivity Analysis

The design team will evaluate the results of the operational analysis to determine the appropriate opening year, or interim, configuration for the roundabout.

The sensitivity analysis will evaluate the anticipated year the corridor and intersection traffic will exceed the capacity of a single lane roundabout and document the recommended opening year configuration and design approach for future expansion of the roundabout, if needed.

Traffic volumes and volume projection data will be used to evaluate the interim and ultimate configurations of the roundabout.

Sensitivity Analysis Memo – This task includes development of the section of the ICE that covers the sensitivity analysis. No separate deliverable will be developed for the sensitivity analysis.

Task 7.7 – Safety Analysis

The design team will obtain and summarize collision history within the study area from WSDOT. The analysis will evaluate fatal/serious and bike/ped crashes, crash severity, human factors, and incorporate other Target Zero or Safety System goals consistent with City and WSDOT Safety Analysis Guide. The time period will be the most recent 5 years. The analysis will consider potential countermeasures as part of the development of alternatives.

Task 7.8 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 7 - Assumptions:

- Traffic growth projections will be determined before analysis is performed.
- Submittals to WSDOT are included in a different task.
- The preferred intersection alternative is a roundabout and will be documented in the ICE.
- Analysis of impacts to mainline I-5 operations will not be required.
- The preferred alternative for the improvements at the SB I-5 ramp intersection with Tumwater Blvd will be a roundabout.
- The sensitivity and safety analysis process and results will be documented in the ICE.

Safety analysis will be conducted at a high-level, excluding the use of Highway Safety Manual methodology, crash predictive modeling, or predictive safety performance function (SPF). Mitigation recommendations may incorporate crash modification factors (CMF) for performance measures to assist in alternatives analysis.

Task 7 - Deliverables:

- No deliverables are anticipated.

TASK 8: BRIDGE WIDENING ANALYSIS

This work will include evaluation of the WSDOT owned bridge (Bridge No. 5/311.5). This effort will also investigate forward compatibility with a potential future widening of this structure in future phases.

Task 8.1 – Review of Existing Bridge Data

The CONSULTANT will review existing bridge as-builts and other available documentation for the existing bridge prior to the initial meeting with WSDOT bridge and structures staff.

Task 8.2 – Bridge Widening Analysis

After the initial meeting with WSDOT bridge and structures staff, the CONSULTANT will evaluate potential alternatives for the bridge widening using the information gathered in the initial coordination meeting. The analysis will identify fatal flaws and identify a preferred alternative to be used in the roundabout forward compatibility design.

Task 8.3 – Bridge Widening Technical Memorandum

CONSULTANT will develop a technical memorandum that documents the bridge widening analysis including discussions from the two meetings planned with WSDOT to discuss the bridge widening options. The memorandum will also identify the preferred bridge widening alternative concept based on the results of the coordination efforts with WSDOT.

Task 8.4 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 8 Assumptions:

- No alterations shall be made to the bridge's existing channelization. Future project phases will address channelization of the bridge.
- Meetings with CITY and WSDOT are covered under a different task.
- HDR will prepare a Technical Memorandum regarding the future process changes to Bridge No. 5/311.5

Task 8 Deliverables:

- Draft Bridge Widening Technical Memorandum (PDF)
- Final Bridge Widening Technical Memorandum (PDF)

TASK 9 – PERMITTING AND ENVIRONMENTAL STUDIES

The purpose of this task is to conduct baseline environmental studies to support permit applications that will be required for the project. Services in this task will be largely performed by HDR, with support from the CITY.

Task 9.1 – Environmental Conditions Assessment

Site Visit

Conduct reconnaissance-level site visit to the project area to identify approximate areas of the surrounding environment that may be affected by project activities. The purpose of the field work shall be to verify existing environmental conditions information through visual observations and inform the Environmental Conditions Assessment, the SEPA and NEPA compliance document, and permit applications.

Mazama Pocket Gopher (MPG) Surveys

A team of 2 HDR biologists that includes at least one trained by USFWS will conduct MPG protocol surveys to detect occupancy and assess existing conditions of potentially suitable MPG habitat throughout the parcel. Surveys will be conducted per the April 20, 2018, USFWS letter: “Guidance for Assessing Potential Take of Mazama Pocket Gophers in Thurston and Pierce Counties”. HDR biologists will follow the timing requirements for the survey protocol and conduct up to 3 surveys at least 30 days apart at sites where there are preferred soils for MPG. Surveys need to be conducted between June 1 and October 31 to meet USFWS protocol requirements. Results of these surveys will be provided to the CITY.

Environmental Conditions Assessment Technical Memorandum

Prepare Environmental Conditions Assessment Technical Memorandum (TM) that briefly describes existing environmental conditions, including regulatory conditions that may influence siting, construction, or operation of the proposed project.

Task 9.2 – Permit Support

Consultant will prepare environmental documentation, permit applications, and design documentation necessary for the CITY to obtain all environmental and construction permits.

Permitting Support Kickoff Meeting

CONSULTANT will conduct a project permitting kickoff meeting with CITY staff to discuss and confirm permitting protocols including agency coordination, application development, submittal, and responding to comments.

Permitting Matrix, Permit Tracking Table, and Permit Schedule

Permit Matrix - Prepare a Permit Matrix that:

- Identifies anticipated permits/triggers required for the construction and operations of the new facilities.
- Confirms the appropriate level of SEPA documentation.
- Identifies the schedule for the anticipated permit submittal and approval processes, and
- Identifies the requirements (i.e., drawings, calculations, or memos) for each permit submittal.

Permit Tracking Table – develop and maintain a permit tracking table in Excel that provides the submittal date, permit tracking number, issued date, effective date, and expiration date.

Permitting Schedule - Provide input to the project schedule relating to permitting activities.

SEPA Compliance

- Meet with the CITY to discuss SEPA compliance process, lead agency, and potential threshold determination.
- Prepare draft SEPA Environmental Checklist and threshold determination.
- Prepare final SEPA Environmental Checklist addressing CITY of Tumwater comments.

Permit Application Preparation and Response to Comments

- Prepare draft permit applications and supporting information (transmittal letters, permit application forms, submittal checklists, and project narratives) in a format that is acceptable to the permitting agencies.
- Finalize applications for submittal.
- Submit applications on behalf of the CITY per the agency's processes.
- Develop responses to comments from agencies processing the applications.
- Submit responses to comments per the agency's process.
- Provide permit acquisition support and maintain periodic contact with the reviewers after application submittal, coordinate responses to agency comments from the design team, and work to make sure any conditions of approval are incorporated into the design set.

Task 9.3 – NEPA Documentation

This task includes efforts to prepare the preliminary NEPA Environmental Classification Summary form (ECS) as well as prepare supporting documentation in accordance with Chapter 24 of the LAG Manual and other appropriate WSDOT and/or FHWA guidance documents. The ECS is the assumed NEPA document for a Documented Categorical Exclusion (DCE) for the project.

- The CONSULTANT will hold a kickoff meeting with WSDOT to verify assumed NEPA process for FHWA approval.
- THE CONSULTANT shall coordinate with the WSDOT Highways and Local Programs Area Engineer during document preparation and review cycle. THE CONSULTANT will also coordinate with WSDOT to address comments on the ECS and any of the environmental documentation prepared above.
- The CONSULTANT will incorporate their cultural resources findings into the ECS and coordinate responses to comments.

Task 9.4 – Environmental Justice Documentation required by FHWA and WSDOT

The CONSULTANT will document presence of minority and/or low-income populations within 0.5 miles of the project corridor to support the NEPA ECS.

- Pull 2020 Census reports using the EPA Environmental Justice (EJ) finder.
- Supplement the national data with information collected from the City of Tumwater or Thurston County available demographic databases.
- Complete the Social and Community Impacts Decision Matrix from the Local Programs ECS Guidebook.
- Initiate preparation of a brief memorandum to summarize the demographic and income information.

Task 9.5 – Hazardous Materials Documentation required by FHWA and WSDOT

CONSULTANT will prepare Hazardous Materials (HazMat) Analysis Report per WSDOT H&LP standards to identify and evaluate known or potentially contaminated sites that may adversely affect the environment, create significant construction impacts, and/or incur cleanup liability to the CITY. This information will be used to allow the CITY and the CONSULTANT, together with WSDOT, to make informed decisions regarding the selection of alternative, or mitigation measures and/or the necessity of initiating early coordination with relevant regulatory agencies as part of NEPA ECS documentation.

Task 9.6 – Quality Assurance/Quality Control Review

CONSULTANT shall perform senior level review of all task deliverables and document the reviews according to the project QA/QC plan.

Task 9 Assumptions:

- The Environmental Conditions Assessment site visit is attended by the Consultant Biologists. The site visit assumes 8 hours for two staff and includes travel time to and from the site, and preparation/follow up.
- Formal wetland and waterbody delineations are not assumed for this task.
- Mazama pocket gopher are assumed to be absent. If Mazama pocket gophers are detected, services for Endangered Species Act compliance will be provided in an amendment.
- The Permit Tracking Table is the primary tool to track permitting activities and is updated monthly.
- The project schedule is updated monthly to reflect permitting activities/status.
- The regulatory agencies that this project will interface with for permits are:
 - City of Tumwater – Right-of-way Access/Utility Permit, site development grading
 - WSDOT – General Permit, Access Connection Permit
 - FHWA – Access Change Request
- SEPA compliance is achieved with a SEPA Environmental Checklist; an Environmental Impact Statement is not required.
- SEPA checklist will be based on 30-percent design.
- CITY, as lead agency (WAC 197-11-926), issues the SEPA threshold determination.
- CITY is responsible for distribution of the final SEPA Environmental Checklist/threshold determination and will pay for legal notices and arrange for publication in local newspapers.
- Permits needed for this project include:
 - City of Tumwater
 - Right-of-way Access/Utility Permit
 - Site Development Grading
 - WSDOT
 - R/W Access Permit
 - General Permit
 - Access Connection Permit
 - FHWA
 - Access Revision Request
- NEPA will evaluate one iteration of design at 30% milestone.
- WSDOT will lead the effort and coordinate directly with FHWA in application of the Access Revision Request.

- Air and Noise evaluations will not be required for a complete ECS submittal.
- The ECS is the assumed NEPA document for a Documented Categorical Exclusion (DCE) for the project.
- It is assumed for this task that the EJ Memo documentation will be for a CE-level project and that there will be no impacts on EJ populations.
- CONSULTANT will obtain and review the results of a federal, state, and local environmental database search provided by an outside environmental data service for listing of information on confirmed and suspected contaminated sites or nearby structures specified by Section 8.2, Standard Environmental Record Sources of ASTM International (ASTM) E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The evaluation will focus on sites that are located within ¼ mile of the alignment, or as required by ASTM.
- Based on the results of the regulatory database search, CONSULTANT will make a request to review site files maintained by the Washington State Department of Ecology's Northwest Regional Office (Ecology NWRO). Site files made available by Ecology will be reviewed for information about current site environmental conditions.
- CONSULTANT will review available historical data sources for the project area and vicinity, including aerial photographs, topographic maps, fire insurance maps, city directories, and other readily available development data.
- The information gathered from the regulatory database, Ecology records review, and historical documentation, will be summarized in a Hazardous Materials Technical Memorandum. The report will include a description of methods, findings, and conclusions, as well as the following:
 - Lists of sites with potential for presence of contaminated and hazardous material/waste sites identified in the regulatory database search.
 - Maps of potentially contaminated hazardous material/waste sites identified in the regulatory database search, overlaid with the project footprint.
- Windshield survey will be conducted by one CONSULTANT staff concurrent with environmental assessment.
- It is assumed that the project will require a low-level hazardous materials analysis per WSDOT H&LP standards. Preparation of a full-scale HazMat Analysis Report is outside the scope of this AGREEMENT.

Task 9 Deliverables:

- Draft and Final Environmental Conditions Assessment TM (PDF format)
- MPG survey field data sheets and map notes (PDF format)
- Draft and Final City of Tumwater development permits
- Draft and Final WSDOT General Permit Application
- Draft and Final ECS (PDF Format)
- Draft and Final EJ Memo (PDF Format)
- Draft and Final Hazardous Materials Technical Memorandum

TASK 10: CULTURAL RESOURCES

CONSULTANT will prepare a cultural resources technical report per Department of Archaeology and Historic Preservation (DAHP) guidelines and in compliance with Section 106 of the National Historic Preservation Act (NHPA). The report will identify cultural resources and historic properties within the Project's area of potential effects (APE) that may be adversely affected by the Project. This information will be used to allow the CITY and the CONSULTANT, together with WSDOT, to make informed decisions regarding the selection of alternative, or mitigation measures and/or the necessity of initiating early coordination with relevant regulatory agencies as part of NEPA ECS documentation.

Based upon preliminary review of the Washington Information System for Architectural & Archaeological Records Data (WISAARD), a cultural resources survey was performed at the project vicinity in 2009, yielding negative results. However, based on the DAHP's predictive model, the project vicinity has a moderate risk for containing archaeological resources. CONSULTANT's cultural resources assessment will include the following research and permitting efforts:

Task 10.1 – Proposed Area of Potential Effects and Background Review

CONSULTANT shall prepare an exhibit illustrating the proposed APE for use in the desktop review and coordination with WSDOT, DAHP, Indian tribes, and other agencies, as appropriate. The proposed APE shall include the maximum extent of proposed ground disturbance, inclusive of potential direct and indirect effects on resources located on parcels adjacent to the ground disturbing activity.

CONSULTANT shall perform a desktop review of available cultural resources information identified within the proposed APE and within a 1-mile buffer around the APE within WISAARD. The research will include a review of existing cultural resources data and previously completed cultural resource surveys, as well as review of accessor data, online historic maps and aerial images, and tribal information that is publicly available. CONSULTANT will reach out to the Indian tribes who may have an interest in the proposed APE to ask if they have any information or concerns about the proposed APE that they would share. CONSULTANT assumes the Indian tribes will include the Confederated Tribes of the Chehalis Reservation, Cowlitz Indian Tribe, Nisqually Indian Tribe, and Squaxin Island Tribe. This outreach does not constitute formal government to government consultation. The results of the desktop review will be summarized in a technical report (Task 11.3).

Task 10.2 – Field Study

CONSULTANT shall perform archaeological pedestrian survey in the proposed APE and monitoring during the geotechnical investigations to identify potential buried cultural strata and materials. The 2009 survey in the project vicinity indicated that the area is within previously disturbed, existing highway ROW that includes artificial berms, buried utilities, and secondary forest growth. Pedestrian survey will verify the existing conditions of the proposed APE. Monitoring the geotechnical investigations will provide the opportunity to observe sediments below the disturbed ROW that may potentially contain buried cultural resources. The results of the field study will be summarized in a technical report (Task 11.3).

Task 10.3 – Cultural Resources Technical Report

CONSULTANT shall prepare a cultural resources technical report that summarizes the results of the desktop review, pedestrian survey, and monitoring. The report will provide a recommendation of any further cultural resources work for the project. Information regarding tribal outreach and any comments received will also be included. The technical report will comply with Section 106 of the NHPA to support project permitting.

Task 10.4 – Inadvertent Discovery Plan

CONSULTANT shall develop Inadvertent Discovery Plans (IDP) for the project. The IDP will outline the processes to follow in the event of an inadvertent discovery during construction. The IDP will include the contact information for all parties to contact in the event of a discovery and will provide photographic attachments that illustrate various types of cultural resources. The IDP will be attached to the technical report.

Task 10.5 – QA/QC

CONSULTANT shall perform senior level review of all Task 10 deliverables and document the reviews according to the project QA/QC plan.

Task 10 – Assumptions

- CONSULTANT will assist the CITY with agency and tribal coordination.
- No archaeological resource will be identified during the fieldwork and no archaeological site inventory forms will be necessary.
- No historic built environment resources are present that require architectural history survey and no Historic Property Inventory forms will be necessary.
- No archaeological shovel probing is included.
- In the event that further cultural resources work is warranted (i.e., architectural history survey or monitoring during construction), CONSULTANT will submit a scope of work and cost adjustment for those services.
- Project requires compliance with Section 106 of the NHPA and Revised Code of Washington (RCW).

Task 10 – Deliverables:

- Proposed APE Exhibit
- Cultural Resources Technical Report
- Project-specific Inadvertent Discovery Plan

TASK 11: REAL ESTATE SERVICES SUPPORT

This task includes real estate services associated with the right of way impacts resulting from the proposed project improvements. THE CONSULTANT SHALL NOT WORK OR BILL TO THIS TASK WITHOUT EXPRESS PERMISSION FROM THE CITY.

Task 11.1 – Preliminary Right-of-way Services

CONSULTANT will provide preliminary Right of Way (ROW) Services that includes reviewing the ROW plans, drafting ROW Schedule, ordering title reports, reviewing and documenting title reports and encumbrances, reviewing legal descriptions and acquisition exhibits and confirming necessary property rights to be acquired for up to two (2) parcels. These services do not include right of entry.

CONSULTANT will provide support to the CITY in responding to property owner requests for project information. Support will include developing sketches or answering questions about the design and associated (ROW) impacts.

Assumptions:

- CONSULTANT will order title report updates for up to two (2) parcels. This will occur at the beginning of the project.
- Title company will be responsive and deliver title report information in a timely manner.
- The CONSULTANT will provide legal descriptions and exhibits for acquisitions for up to two (2) parcels.

Deliverables:

- Up to one (1) redline review of the ROW plans.
- One (1) ROW schedule and up to one (1) update.
- two (2) title reports and encumbrance reports.
- Up to one (1) redline review of legal descriptions and acquisition exhibits for up to two (2) parcels.

Task 11.2 – Valuation Process (Appraisals and Appraisal Reviews)

The CONSULTANT shall manage appraisal services for real property appraisals and review appraisals for up to two (2) appraisals as assigned by CITY, conforming to CITY standards, including preparation and review for property rights being acquired under the threat of eminent domain and adhering to the WSDOT Local Agency Guidelines (LAG) Manual, Chapters 4 and 5 of the WSDOT ROW Manual, the Uniform Standards of Professional Appraisal Practice (USPAP), the provisions of all Washington State and Federal laws, as applicable, and in accordance with Washington Pattern Jury Instructions guidance. CONSULTANT will subcontract the valuation services and the subcontractors shall meet all requirements set forth in 49 CFR 24.103.

The appraisal services include:

CONSULTANT Responsibilities

- Prepare a valuation schedule for delivery of appraisal reports and appraisal reviews.
- Attend appraisal kickoff meeting with appraiser and CITY to review available information and provide context to the appraiser prior to their site visit.

- Assemble all needed appraisal data and appraisal scope including ROW plan sheets, title reports, approved legal descriptions and exhibits for each assigned parcel for the valuation subcontractor.
- Send out landowner contact letters to the affected parcels in advance of the valuation.
- Manage the delivery of the valuation services that include delivery of up to two (2) appraisal reports for assigned parcels.
- Agent will attend up to two (2) appraisal inspections, where possible.
- Review up to two (2) appraisal reports and provide to the appraisal reviewer, if needed.
- Review up to two (2) appraisal review reports and provide to the CITY, if needed.

CITY Responsibilities:

- Review and approve valuation schedule.
- Attend virtual meeting with CONSULTANT and Appraiser for appraisal kickoff.
- Review and approve landowner appraisal inspection letter.
- Review and authorize just compensation via signature on Determination of Value (DV) for up to two (2) valuation reports.

Assumptions:

- CONSULTANT will manage their staff to develop the most expeditious schedule for delivery of all valuations.
- Appraisal kickoff meeting will be a virtual meeting and last 1 hour in length. City staff will provide information on the impacts of the project and how they would like to address removal, replacement, and compensation for impacts to private property features.
- CITY shall provide all information to CONSULTANT that is required to complete the valuation assignments.
- It is anticipated there will be a total of two (2) parcel valuation reports.
 - All valuation services will be performed by a WSDOT certified independent appraiser to WSDOT LAG manual standards.
 - Appraisals will be before and after short form narrative appraisal reports.
 - Notice to Proceed (NTP) for the appraiser will be the date of receipt of sufficient ROW plans or legal description and exhibits; title reports; and landowner contact information.
 - The estimated delivery schedule for the appraisal reports is within 75 calendar days from the date of NTP for the appraiser.
 - NTP for the review appraiser will be upon delivery of the appraisal report. Estimated delivery time of the appraisal reviews is 45 calendar days from NTP.
 - If there is an increase or change to the assumed number of appraisal reports, appraisal review reports, this will result in additional levels of effort and will require authorization from the CITY.

Deliverables:

- Valuation schedule.
- Landowner contact letters, if needed.
- Meeting notes from the appraisal kickoff.
- Up to two (2) valuation reports and up to two (2) review appraisal reports, if needed.

Task 11.3 – Acquisition and Negotiation Support

CONSULTANT will perform title review, prepare offer packages, present offers, negotiate purchases and prepare administrative settlement memos in accordance with all guidelines and regulations set forth under the Uniform Relocation Act (URA). It is anticipated that there will be up to two (2) acquisition parcels. Upon completion of all ROW activities, shall be uploaded electronically to a SharePoint site with one hard copy provided to the CITY, unless otherwise requested.

CONSULTANT will also coordinate with the CITY to identify exhibits and base maps needed for use in the CITY's right-of-way negotiation efforts.

Real Estate Technician Support

CONSULTANT shall provide Real Estate Technicians to provide the following Real Estate Services in support of the project:

1. Perform title document reviews and develop draft memorandums with recommended actions/changes for CITY review.
2. Review and prepare draft right of way document packages in accordance with state and federal rules and regulations.
3. Assist with property closings, requesting payments for property owner, final file transmittal and input of real estate information into CITY's filing and computer systems.

Acquisition

The CONSULTANT shall perform the following services:

- Draft and complete up to two (2) encumbrance clearance documents per parcel as directed by the CITY for up to two (2) parcels.
- Prepare all offer package documents required for up to two (2) acquisition parcels. Including: Offer Letters, Deeds, Easements, IRS Form W-9s, Real Property Vouchers, and Real Estate Excise Tax Affidavits.,
- Act as the agent of the CITY in all negotiations and in accordance with the URA.
- Provide one (1) paper copy of appraisal report to each property owner and tenant(s), if tenant(s) owns real property.
- Acquire easements and fee acquisitions, as approved by the CITY.
- Provide CITY with a recommendation for an Administrative Settlement for settlements above the authorized just compensation, for approval by the CITY for up to two (2) parcels as assigned by CITY.
- Maintain current negotiator diaries for up to two (2) acquisition parcels as assigned by CITY.
- If negotiations should reach an impasse, prepare recommendation for CITY to move forward with condemnation and provide Condemnation Transmittal form and parcel file, as directed by the CITY, for up to two (2) parcels.
- Transmit executed documents to CITY for payment processing for up to two (2) parcels.
- CONSULTANT shall prepare all files that are deliverables within this scope for ROW certification for pre-review by CITY for up to two (2) acquisition parcels as assigned by CITY.
- Deliverables prepared by CONSULTANT shall be provided to the CITY in a digital format for electronic storage/archive, except for those items that contain original signatures that shall be transmitted in paper format per the records retention schedule for the CITY.

CITY Responsibilities:

- Provide all acquisition offer package documents and forms to the CONSULTANT.
- Review and approve initial acquisition offer package with all real estate documents and forms consistent with CITY acquisition practices.
- Provide written approval for all administrative settlement memorandums agreed to by the CITY.
- Make prompt payment for all approved acquisitions submitted by the CONSULTANT to the CITY for recording.
- Review and accept all transmitted files.

Assumptions:

- The CONSULTANT shall make the initial offer to purchase in person if possible, or by certified mail.
- The CONSULTANT shall make a maximum of two (2) good-faith attempts at negotiations for each parcel assigned, with those attempts being defined as an in-person visit with landowner, a detailed phone conversation, or a substantive correspondence or email exchange.
- CONSULTANT's acquisition duties shall be deemed complete if any of the following occur:
 - A negotiated settlement approved by the CITY is reached and the necessary closing documents are executed;
 - A Possession and Use Agreement secured and the acquisition file is transmitted to CITY;
 - An impasse in negotiations is reached or;
 - The offer to purchase is rescinded.
- If an impasse is reached during negotiations, the entire parcel file shall be submitted to the CITY for further action, including determination to eliminate acquisition of property.
- When the CITY receives acceptable documents from CONSULTANT, they will be signed by the CITY and returned to the CONSULTANT for processing, recording and closing by CONSULTANT staff.
- If negotiations cannot be concluded within sixty (60) days of the offer date on any given parcel the CONSULTANT will notify the CITY. Continuation of negotiations may require an increased level of effort and the effort to complete those parcels will be re-negotiated.
- Relocation advisory services are not included in this scope of work.
- Condemnation services are not included in this scope of work.

Deliverables:

- Up to two (2) completed acquisition files including Negotiator Diaries.
- Up to two (2) completed Administrative Settlement Memorandums.
- Up to two (2) encumbrance clearance documents per parcel.

Task 11.4 – Right-of-Way Plans

Right of Way Plans

CONSULTANT will develop right-of-way plans identifying right-of-way acquisitions and temporary or permanent easements. CONSULTANT will develop the right-of-way plans per WSDOT standards.

CONSULTANT will work with WSDOT access and survey staff to identify available monumentation and limits for the impacted ROW plan.

CONSULTANT will coordinate with WSDOT to develop “red and greens” to document revisions to WSDOT’s ROW plans for the Tumwater Blvd/I-5 interchange.

Right of Way Legal Exhibits

CONSULTANT will develop legal exhibits in AutoCAD using the ROW basemap developed by S&H. Exhibits will be developed for all easements (temporary and permanent) and permanent acquisitions on all impacted parcels.

Task 11.5 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a senior level review of all deliverables associated with this task prior to being submitted to the CITY. The reviews will follow the QA/QC plan established for this project.

TASK 12: UTILITY COORDINATION

CONSULTANT will coordinate with CITY staff to develop a utility contact list for use in the utility coordination efforts for the relocation of existing utilities associated with the roadway reconstruction. The CONSULTANT will correspond with representatives of the water, sewer, gas, telephone, cable, and power to coordinate the planning and design of utility relocation efforts. The CONSULTANT will provide coordination with the CITY, public and private utility owners concerning the relocation of the existing utilities.

Task 12.1 – Utility Review and Conflict Assessment

Preliminary Utility Coordination - CONSULTANT will review existing utilities and potential conflict locations throughout the project area. The CONSULTANT will coordinate with the CITY and utility agencies to help develop utility relocation plans as necessary to implement the proposed improvements.

Preliminary Utility Base Map – A preliminary base map showing all existing utilities within the project limits will be provided to each utility company representative for their review of the base map's accuracy. The CONSULTANT will work with various utility owners to develop utility relocation strategies.

Private Utility Potholing – CONSULTANT will provide utility owners the proposed improvements and identify potential utility conflict after approval of the 30% design and project footprint and request utility owners to pothole those locations. CONSULTANT shall possess all public and private pothole and will incorporate pothole data into the 90% design.

Task 12.2 – Conflict Resolution

Conflict Assessment Log – After the proposed underground utilities and illumination system have been designed to a 60% level, the CONSULTANT will evaluate utility conflicts to confirm there are no alternatives that avoid the conflict and document the conflict assessments data in a log.

Conflict Assessment Map – CONSULTANT will develop a conflict assessment map containing information associated with each conflict identified with the 60% design. The conflict assessment map will be provided to each utility company representative for use in utility coordination efforts.

Utility Relocation Coordination – Meetings will be conducted at the 30%, 60%, 90%, and Final design milestones with private utility companies to coordinate the CITY and private utility designs. CONSULTANT will coordinate with utility company representative to develop project plans and specifications that meet the requirements of the CITY's franchise agreements with private utility companies. CONSULTANT will incorporate private utility company relocation plans in an appendix of the Project Manual.

Task 12.3 – Design and Construction Coordination

Design Coordination - CONSULTANT will coordinate with utility company representatives to keep them informed of project updates and confirm project delivery schedules.

Utility Coordination Specifications – CONSULTANT will coordinate with utility company representative to develop construction specifications that define contract requirements related to coordination of private utility improvements.

Task 12.4 – QA/QC Review

CONSULTANT shall perform a senior level review of all deliverables associated with this task prior to being submitted to the CITY. The reviews will follow the QA/QC plan established for this project.

Task 12 - Assumptions:

- The CITY will provide a list of contact names for each utility located within the project limits.
- It is assumed that no undergrounding of overhead utilities will be required.

Task 12 - Deliverables:

- Preliminary Utility Base Map (PDF format)
- Conflict Assessment Map (PDF format)
- Conflict Assessment Log (Excel & PDF format)
- Project Utility Map (PDF)

TASK 13: PRELIMINARY DESIGN

Task 13.1 – Roadway/Roundabout Design

Ultimate Roundabout Configuration - CONSULTANT shall develop the ultimate roundabout configuration to match into the CITY's planned corridor roadway section. The design vehicle for the ultimate configuration roundabout shall be a WB-67. The roundabout shall be designed such that the geometry allows for a WB-50 vehicle to maneuver through the roundabout without tracking onto the truck apron.

Interim Roundabout Configuration - CONSULTANT shall develop the interim roundabout configuration based on recommendations and outcomes of the sensitivity analysis. The interim roundabout configuration, if needed, will be designed to widen to the outside or the inside in the future, as recommended by the sensitivity analysis. The design vehicle for the interim roundabout configuration shall be a WB-67. The roundabout shall be designed such that the geometry allows for a WB-50 vehicle to maneuver through the roundabout without tracking onto the truck apron.

Performance Checks - CONSULTANT shall develop exhibits for the interim and ultimate configurations showing the following roundabout design elements:

- Speed Curve Exhibits (identifying speeds for R1 through R5 curves)
- Sight Distance Exhibits (identifying stopping and intersection sight distance)
- Truck Turning Movement Exhibits for intersection and driveway access movements.

Roundabout performance check calculations and accompanying figures for the interim and ultimate configurations will be prepared to document design speeds, vehicle turning templates, and sight triangles at the intersection. The roundabout performance checks will be submitted in PDF and AutoCAD format.

Horizontal alignments – alignments for Tumwater Blvd and the on/off ramp approaches will extend approximately 500 feet down each approach. Alignments will be developed for roadway centerlines, truck apron curb lines, and the curb line quadrant alignments for each roundabout. Project survey control points will be tied to the project horizontal alignments.

Vertical alignments – Existing and finished grade profiles will be developed for the centerline, truck apron, and curb line quadrant alignments.

Preliminary Grading - Establishing the curb line quadrant profiles will include development of an auxiliary 3D model that assumes a normal crown throughout the roundabout and does not represent final grading. Centerline superelevation calculations and cross slope grade transitions will be necessary to determine vertical elevations for each quadrant profile. Final curb line quadrant profiles will be developed using profiles cut from the auxiliary 3D model.

Task 13.2 – Stormwater Design (WSDOT)

Stormwater Design - The CONSULTANT will conduct a preliminary drainage analysis of the project improvements to determine the appropriate stormwater treatment and flow control facilities for the project. Stormwater shall be designed per the WSDOT Highway Runoff Manual M 31-16 (HRM).

Draft Stormwater Report - The CONSULTANT will utilize the requirements set forth in the April 2019 WSDOT Highway Runoff Manual M 31-16 (HRM). All eleven (11) minimum requirements will be addressed as part of this task.

- CONSULTANT shall evaluate Threshold Discharge Areas (TDAs) for the ultimate configuration for full buildout.

- CONSULTANT shall use the ultimate configuration for stormwater calculations and facility sizing.
- CONSULTANT shall prepare a DRAFT Drainage Report following the outline provided in Volume I of the DDECM. The DRAFT Report will be approximately 20-30 pages in length. The DRAFT Report will include graphics which document analysis and assumptions.
- CONSULTANT shall evaluate ALL eleven (11) minimum requirements of the DDECM.
- The CONSULTANT shall use the Western Washington Hydraulic Model (WWHM) for preliminary sizing of both the water quality and flow control facilities.
- No conveyance analysis is required for the DRAFT Drainage Report.
- An Engineer's Opinion of Probable Construction Cost (OPCC) is not required for this task.
- No Stormwater Pollution Prevention Plan (SWPPP) is required as part of this task.

Task 13.3 – Illumination Design

This task includes efforts for developing the illumination design, CONSULTANT will coordinate with CITY project manager to obtain notice-to-proceed for the work listed below.

Illumination Design File Setup – CONSULTANT will develop a base map for use in the AGI32 street lighting file and import the design line work into the file. Existing street lighting will be built into the AGI32 lighting file. CONSULTANT will verify lamp depreciation values for the AGI32 design parameters.

Calculation areas will be developed based on the limits of the CITY and WSDOT illumination systems that is identified in the preliminary design coordination meeting with WSDOT.

Line Loss Calculations and Wiring – CONSULTANT will evaluate line loss calculations and identify illumination system circuit wiring for the CITY and WSDOT illumination systems.

Preliminary Illumination Layout – A preliminary illumination layout will be developed as part of the preliminary roadway/roundabout geometric review/evaluation.

Lighting Design Memo – Preliminary analysis as well as design assumptions and intent will be document in a brief memo for approval.

Task 13.4 – Landscaping Design

Roadway Landscaping – CONSULTANT will coordinate with CITY staff to identify preferred plants and trees for the roadway landscaping areas. CONSULTANT will develop a planting layout for the roadside landscaping based on feedback received from CITY staff.

Central Island Landscaping – CONSULTANT will coordinate with CITY staff to identify the CITY's expectations for the central island landscaping design. CONSULTANT will develop up to three (3) concept sketches for the central island landscaping design for CITY review and comment. CONSULTANT will advance the concept that the CITY selects for the project.

Irrigation System Design – The irrigation design will consist of developing high-level schematic construction documents identifying the landscaping areas that require irrigation. The design performance specification that will control the design/build effort for the installation of the irrigation system.

Task 13.5 – Retaining Wall Design

CONSULTANT will develop preliminary alignments and profiles for the proposed retaining walls included in the design. Retaining wall designs will be in accordance with the geotechnical recommendations and will not exceed four (4) feet in height.

Retaining wall details will be developed for the 60% design submittal and will be based on geotechnical and retaining wall manufacturers recommendations.

Task 13.6 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 13 - Assumptions:

- The CITY will provide existing Drainage Report prepared for adjacent parcels or intersections as available.
- The CITY will compile review comments on design submittals and resolve conflicting comments prior to providing the comments to the CONSULTANT.
- Illumination design will be developed prior to utility potholing being completed.
- 100% infiltration is assumed within WSDOT right of way.
- Compost Amended Filter Strips (CAVFS) will provide enhanced treatment for ramp widening.
- A new infiltration facility will be required within WSDOT right of way for stormwater water quality and flow control for the western side of Interstate 5.
- WSDOT stormwater improvements will be designed per the Highway Runoff Manual (HRM).
- Hydraulic analysis will be performed utilizing MGSFlood for a continuous model simulation per the latest version of the Highway Runoff Manual M 31-16.
- Enhanced treatment will be required for work performed in WSDOT right of way.
- Retaining walls will not exceed four (4) feet in height and standard pre-designed retaining wall systems will be used.

Task 13 - Deliverables:

- DRAFT Roundabout Performance Check Calculations and Figures (pdf & AutoCAD).
- DRAFT Type A Hydraulic Report for WSDOT review and comment, delivered electronically in pdf format.
- AGI32 lighting analysis results

TASK 14: FINAL DESIGN

Task 14.1 – Roadway/Roundabout Design

This task includes efforts required to advance the design from 60% to final design addressing comments received from the CITY and WSDOT on all submittals after 60% design. It is assumed that the horizontal and vertical alignments are set after the 60% design.

Ultimate Roundabout Configuration - CONSULTANT will update the ultimate roundabout exhibit to address comments received from WSDOT on the draft submitted with the Channelization Plan for Approval package.

Interim Roundabout Configuration - CONSULTANT will update the interim roundabout exhibit to address comments received from WSDOT on the draft submitted with the Channelization Plan for Approval package.

Performance Checks - CONSULTANT will update the roundabout performance checks for the ultimate and interim configurations to address comments received from WSDOT on the draft submitted with the Channelization Plan for Approval package.

Final Grading – CONSULTANT will update the quadrant profiles and corridor model for the proposed interim configuration to address comments received from WSDOT on the draft submitted with the Channelization Plan for Approval package and the 60% and 90% review comments received.

Task 14.2 – Stormwater Design (WSDOT)

Stormwater Design - The CONSULTANT will update the drainage design to address comments received from WSDOT on the 60% stormwater design.

Final Stormwater Report - The CONSULTANT will update the stormwater report to address comments received from the CITY and WSDOT related to the stormwater system. The Final Stormwater Report will be submitted with the 90% design submittal.

Task 14.3 – Illumination Design

This task includes efforts to address comments received from the CITY and WSDOT on the preliminary design documentation for the illumination systems for this project.

Illumination Design File – CONSULTANT will update the design file to address comment received on the preliminary design.

Line Loss Calculations and Wiring – CONSULTANT will update line loss calculations and wiring determinations to reflect the final design.

Lighting Design Memo – CONSULTANT will incorporate comments and finalize the design memo.

Task 14.4 – Landscaping Design

Roadway Landscaping – CONSULTANT will update the roadway landscaping design to address comments received on the preliminary design submittal.

Central Island Landscaping – CONSULTANT will update the central island landscaping design to address comments received on the preliminary design submittal.

Irrigation System Design – CONSULTANT will finalize the irrigation system layout to address comments received from WSDOT and the CITY on preliminary design submittals.

Task 14.5 – Retaining Wall Design

This task includes efforts to address comments received from the CITY and WSDOT on the preliminary retaining wall design. The retaining wall alignments and profiles will be adjusted based on the final grading of the roundabout. Retaining wall details will be updated for the 90% design submittal.

Task 14.6 – QA/QC Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 14 - Assumptions:

- No artwork is planned for the central island of the roundabout.
- The CITY will provide existing Drainage Report prepared for adjacent parcels or intersections as available.
- The CITY will compile review comments on design submittals and resolve conflicting comments prior to providing the comments to the CONSULTANT.
- Illumination design will be developed prior to utility potholing being completed.
- 100% infiltration is assumed within WSDOT right of way.
- Compost Amended Filter Strips (CAVFS) will provide enhanced treatment for ramp widening required in WSDOT right of way.
- A new infiltration facility will be required within WSDOT right of way for stormwater water quality and flow control for the eastern side of Interstate 5.
- Hydraulic analysis will be performed utilizing MGSFlood for a continuous model simulation per the latest version of the Highway Runoff Manual M 31-16.
- Enhanced treatment will be required for work performed in WSDOT right of way.

Task 14 - Deliverables:

- FINAL Roundabout Performance Check Calculations and Figures (pdf & AutoCAD).
- FINAL Type A Hydraulic Report for WSDOT review and comment, delivered electronically in pdf format.
- Updated AGI32 lighting analysis results

TASK 15: 30% PLANS AND ESTIMATE

The 30% design documentation effort will consist of roll plots of the plan and profile views of the project, a design summary memorandum, and a preliminary opinion of probable construction costs.

Task 15.1 – 30% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop a preliminary opinion of probably construction costs based on the 30% design. Quantities will be documented and tracked for QC review.

Task 15.2 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of the Task 16. The reviews will follow the QA/QC plan established for this project.

Task 15 - Assumptions:

- The Channelization Plan for Approval submitted to WSDOT will be considered the 30% design documentation.
- Efforts in this task are limited to development of the 30% opinion of probable construction costs.

Task 15 - Deliverables:

- 30% OPCC, pdf format, pdf via email.
- 30% AutoCAD files.

TASK 16: 60% PLANS, SPECIFICATIONS AND ESTIMATE

The 60% design submittal will consist of construction plans developed based on the 30% design review meeting, a draft of the project special provisions, and a 60% opinion of probable construction costs.

Task 16.1 – 30% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 30% comment resolution process. The 60% design will reflect the signed Channelization Plan for Approval.

Task 16.2 – 60% Plans

Construction plans will be developed for the 60% submittal. Plans will be developed in CAD at 20 scale on 22" x 34" borders (40 scale on 11" x 17") unless otherwise noted. The following plans will be included with the 60% design submittal:

Cover Sheet – (1 sheet)

The cover will include a vicinity map, sheet index, and other project information to meet CITY standards.

Legend and Notes – (1 sheet)

This sheet will include general project notes and a general legend to identify existing and proposed features.

Alignment Plans – (1 sheet)

The alignment plans will identify WSDOT R/W and centerline, WSDOT limited access, and the project construction centerline alignments including critical station information and station equations. Alignment plans will be consistent with the approved R/W plans that will be coordinated with WSDOT. This sheet will be developed at a scale that allows for all project alignments to be displayed on one sheet.

Erosion Control Plans – (4 sheets)

Erosion control plan sheets will identify all temporary erosion control measures for construction of the improvements. The erosion control plans will be consistent with the hydraulics design approved by WSDOT. Erosion plans will include standard details for BMPs being implemented for the project.

Demolition Plans – (4 sheets)

Demolition plan sheets will identify the limits of the project impacts including asphalt removal, clearing and grubbing, concrete removal, removal of miscellaneous items in conflict with the project improvements, trees or areas to be protected by the contractor, and proposed cut and fill lines for the proposed improvements.

Utility Plans – (4 sheets)

Utility plan sheets will identify the locations of utility adjustments to be performed by the CITY's contractor and utility relocations being performed by private utility company contractors. No water or sewer utility improvements are anticipated for the project.

Typical Roadway Sections – (1 sheet)

Roadway typical sections will identify the typical roadway section for the Tumwater Blvd approaches, the I-5 on and off ramp approaches, and a roundabout cross section showing the construction of the circulating lane, truck apron and central island.

Roadway Plan and Profiles – (4 sheets)

Roadway plan views will identify existing conditions and proposed improvements including paving and sidewalk limits, retaining wall locations, curb and curb ramp locations, construction centerline alignment stationing, and other roadway paving improvements. Stormwater and illumination improvements will be displayed for reference and verification of conflicts.

Roundabout Quadrant Profiles – (4 sheets)

Roundabout Quadrant Profiles will be developed for the curb alignments in each quadrant of the roundabout. The plans will cover the area of the approaches that are not at a 2% normal crown. The quadrant profiles will be used for the stormwater conveyance plan sheets.

Roadway Details – (2 sheets)

Roadway detail sheets will be developed for the 60% design submittal. Details will include sidewalk ramps, the truck apron, and splitter islands.

Retaining Wall Plan and Profiles and Details – (4 sheets)

Retaining wall plan views will identify retaining wall alignments and limits. The profile views will identify wall heights and foundation depths. Retaining wall details will be developed based on geotechnical and retaining wall manufacturers recommendations.

Stormwater Treatment/Flow Facilities – (8 sheets)

Stormwater treatment facility details will be developed for the 60% design submittal. Plans will identify the type, size, and location of all proposed stormwater treatment facilities.

Stormwater Conveyance Plans, Profiles, and Details – (6 sheets)

Stormwater plans will be developed for the 60% submittal. Plans will include plan and profile information for the stormwater conveyance main in Tumwater Boulevard and alignment and profiles.

Channelization and Signing Plans – (12 sheets)

Channelization and signing plans will be developed based on the signed Channelization Plan for Approval. Channelization and signing plans will not be shown on the same plans. WSDOT standard plans and details will be used where applicable. CITY standards will be implemented consistent with the signed Channelization Plan for Approval. Plans will identify proposed lane widths, and channelization types and limits. A sign schedule will be developed that documents the specifications of existing and proposed signs identified in the plans.

Illumination Plans – (6 sheets)

Illumination plans will include station and offsets of all proposed streetlights and identify the location of proposed power sources. The 60% illumination plans will include luminaire and wiring schedules and standard details for streetlight construction. Plans will identify the WSDOT and CITY systems proposed with the project.

Landscaping Plans – (6 sheets)

Landscaping plans and planting details will be developed for the 60% design submittal. Landscaping plans will identify type, size, and location of proposed plants and trees along the roadways and within the central island. The landscaping plans will include details for the central island landscaping features.

Traffic Control Plans – (8 sheets)

Construction staging and traffic control plans will be developed for the 60% submittal for each stage of work based on the 60% design. The plans will identify construction activities planned for each stage of work and the proposed traffic control measures. Plans will be consistent with the direction provided by WSDOT's traffic group in the WSDOT design coordination meetings.

Task 16.3 – 60% Specifications

CONSULTANT will develop the 60% project specifications using WSDOT/APWA/CITY General Special Provisions and project special provisions. Comments received on the 30% submittal will be addressed with this submittal.

CITY will provide CONSULTANT with CITY GSPs and Project Specials. The CITY GSPs and Specials will be provided in WORD compatible file format. CITY provided GSPs and specials will be used in place of WSDOT GSPs and APWA GSPs where applicable.

Task 16.4 – 60% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the 60% design. Comments received on the 30% submittal will be addressed in the 60% OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 16.5 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this project.

Task 16 - Assumptions:

- Plans will be submitted in PDF format.
- The number of sheets identified is an estimate based on the scope of work and project limits identified. The actual sheet count will include what is necessary to produce a readable, biddable, and constructible plan set.
- Plans will follow APWA and CITY drafting standards.
- OPCC will be provided in CITY preferred format (ordered by WSDOT spec no.)

Task 16 - Deliverables:

- 60% Plans
- 60% Specifications
- 60% OPCC

Task 16 – CITY Deliverables:

- CITY standard GSPs and project special provisions in WORD format (.ODT)
- CITY standard details

TASK 17: 90% PLANS, SPECIFICATIONS AND ESTIMATE

The 90% design submittal will consist of construction plans that have been updated to address comments received on the 60% PS&E submittal. The 90% PS&E documents will be submitted to the CITY and WSDOT for review.

Task 17.1 – 60% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 60% comment resolution process. The 90% design will reflect the signed Channelization Plan for Approval and will address any changes resulting from the 60% PS&E submittal review.

Task 17.2 – 90% Plans

Construction plans will be updated for the 90% submittal to address comments received on the 60% design submittal. The number of sheets for the 90% submittal is anticipated to be the same as the 60% submittal and is noted below.

- Cover Sheet – (1 sheet)
- Legend and Notes – (1 sheet)
- Alignment Plans – (1 sheet)
- Erosion Control Plans – (4 sheets)
- Demolition Plans – (4 sheets)
- Utility Plans – (4 sheets)
- Typical Roadway Sections – (2 sheet)
- Roadway Plan and Profiles – (4 sheets)
- Roundabout Quadrant Profiles – (4 sheets)
- Roadway Details – (2 sheets)
- Retaining Wall Plan and Profiles and Details – (4 sheets)
- Stormwater Treatment/Flow Facilities – (8 sheets)
- Stormwater Conveyance Plans, Profiles, and Details – (6 sheets)
- Channelization and Signing Plans – (6 sheets)
- Illumination Plans – (6 sheets)
- Landscaping Plans – (6 sheets)
- Traffic Control & Construction Staging Plans – (8 sheets)

Task 17.3 – 90% Specifications

CONSULTANT will develop the 90% project specifications that address comments received on the 60% PS&E submittal.

Task 17.4 – 90% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the 90% design. Comments received on the 60% submittal will be addressed in the 90% OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 17.5 – QA/QC Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this project.

Task 17 - Assumptions:

- Plans will be submitted in PDF format.
- The number of sheets identified is an estimate based on the scope of work and project limits identified. The actual sheet count will include what is necessary to produce a readable, biddable, and constructible plan set. Plan sheets required in addition to the estimated plan sheets do not constitute additional work and compensation unless these additional sheets were the result of scope creep, an amendment, or other instruction by the CITY.
- Plans will follow APWA and CITY drafting standards.
- OPCC will be provided in CITY preferred format (ordered by WSDOT spec no.)

Task 17 - Deliverables:

- 90% WSDOT PS&E Review Checklist
- 90% Plans
- 90% Specifications
- 90% OPCC

TASK 18: FINAL PLANS, SPECIFICATIONS AND ESTIMATE

The final design submittal will consist of construction documents that have been updated to address comments received from the CITY and WSDOT on the 90% PS&E submittal.

Task 18.1 – 90% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 90% comment resolution process. The final design will reflect the signed Channelization Plan for Approval and address comments received on the 90% PS&E submittal.

Task 18.2 – Final Plans

Construction plans will be updated for the final submittal to address comments received on the 90% design submittal. The number of sheets for the final submittal is anticipated to be the same as the 90% submittal and is noted below.

- Cover Sheet – (1 sheet)
- Legend and Notes – (1 sheet)
- Alignment Plans – (1 sheet)
- Erosion Control Plans – (4 sheets)
- Demolition Plans – (4 sheets)
- Utility Plans – (4 sheets)
- Typical Roadway Sections – (1 sheet)
- Roadway Plan and Profiles – (4 sheets)
- Roundabout Quadrant Profiles – (4 sheets)
- Roadway Details – (2 sheets)
- Retaining Wall Plan and Profiles and Details – (4 sheets)
- Stormwater Treatment/Flow Facilities – (8 sheets)
- Stormwater Conveyance Plans, Profiles, and Details – (6 sheets)
- Channelization and Signing Plans – (6 sheets)
- Illumination Plans – (6 sheets)
- Landscaping Plans – (6 sheets)
- Traffic Control & Construction Staging Plans – (8 sheets)

Task 18.3 – Final Specifications

CONSULTANT will develop the final project specifications that address comments received on the 90% PS&E submittal.

Task 18.4 – Final Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the final design. Comments received on the 90% submittal will be addressed in the final OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 18.5 – QA/QC Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this project.

Task 18 - Assumptions:

- Plans will be submitted in PDF format.
- The number of sheets identified is an estimate based on the scope of work and project limits identified. The actual sheet count will include what is necessary to produce a readable, biddable, and constructible plan set. Plan sheets required in addition to the estimated plan sheets do not constitute additional work and compensation unless these additional sheets were the result of scope creep, an amendment, or other instruction by the CITY.
- Plans will follow APWA and CITY drafting standards.
- OPCC will be provided in CITY preferred format (ordered by WSDOT spec no.)

Task 18 - Deliverables:

- Final Plans
- Final Specifications
- Final OPCC including bid item backup information detailing how the quantity and price was determined. All lump sum items shall have breakdowns showing the cost for each incidental item in the lump sum.

MANAGEMENT RESERVE FUND

The management reserve fund (MRF) is intended to be used for unanticipated work that comes up during the life of the project. The MRF budget has been established based on CITY input and direction.

CONSULTANT will coordinate with the CITY on development of MRF requests for justified work efforts.

MRF requests will be submitted and approved by the CITY prior to any work being performed.

MRF requests will include a cover letter documenting the MRF budget (overall, current request, remaining) along with a scope and budget for the current MRF request.

If a TASK or SUBTASK as specified in this scope of work is no longer required for completion of the project, the associated fee shall be placed in the MRF. For example, if WSDOT does not require an ARR, the associated fee shall be placed in the MRF.

Chapter 3.46

CITY CONTRACTS – NONDISCRIMINATION IN BENEFITS

Sections:

- 3.46.010 Definitions.
- 3.46.020 Nondiscrimination in benefits.
- 3.46.030 Limitations.
- 3.46.040 Powers and duties of the city administrator.
- 3.46.050 Appeals.
- 3.46.060 Effective date.

3.46.010 Definitions.

For the purpose of this chapter:

- A. “Contract” means a contract for public works, consulting, or supplies, material, equipment or services estimated to cost \$50,000 or more;
- B. “Contract awarding authority” means the city officer, department, commission, employee, or board authorized to enter into or to administer contracts on behalf of the city;
- C. “Domestic partner” means any person who is registered with his/her employer as a domestic partner or, in the absence of such employer-provided registry, is registered as a domestic partner with a governmental body pursuant to state or local law authorizing such registration. Any internal employer registry of domestic partnership must comply with criteria for domestic partnerships specified by rule by the city administrator;
- D. “Employee benefits” means the provision of bereavement leave; disability, life, and other types of insurance; family medical leave; health benefits; membership or membership discounts; moving expenses; pension and retirement benefits; vacation; travel benefits; and any other benefits given to employees; provided, that it does not include benefits to the extent that the application of the requirements of this chapter to such benefits may be preempted by federal or state law.

(Ord. O2000-028, Added, 02/06/2001)

3.46.020 Nondiscrimination in benefits.

A. No contractor on a city contract shall discriminate in the provision of employee benefits between an employee with a domestic partner and an employee with a spouse. The contractor shall not be deemed to discriminate in the provision of employee benefits if, despite taking reasonable measures to do so, the contractor is unable to extend a particular employee benefit to domestic partners, so long as the contractor provides the employee with a cash equivalent.

B. Other Options for Compliance Allowed. Provided that a contractor does not discriminate in the provision of benefits between employees with spouses and employees with domestic partners, a contractor may:

Exhibit B

1. Elect to provide benefits to individuals in addition to employees' spouses and employees' domestic partners;

2. Allow each employee to designate a legally domiciled member of the employee's household as being eligible for spousal equivalent benefits; or

3. Provide benefits neither to employees' spouses nor to employees' domestic partners.

C. Requirements Inapplicable Under Certain Conditions. The city administrator may waive the requirements of this chapter where:

1. Award of a contract or amendment is necessary to respond to an emergency;

2. The contractor is a sole source;

3. No compliant contractors are capable of providing goods or services that respond to the city's requirements;

4. The contractor is a public entity;

5. The requirements are inconsistent with a grant, subvention or agreement with a public agency;

6. The city is purchasing through a cooperative or joint purchasing agreement.

D. Requests for waivers of the terms of this chapter are to be made to the city administrator by the contract awarding authority. Decisions by the city administrator to issue or deny waivers are final unless appealed pursuant to TMC 3.46.050.

E. The city administrator shall reject an entity's bid or proposal, or terminate a contract, if the city administrator determines that the entity was set up, or is being used, for the purpose of evading the intent of this chapter.

F. No contract awarding authority shall execute a contract with a contractor unless such contractor has agreed that the contractor will not discriminate in the provision of employee benefits as provided for in this chapter.

G. All contracts awarded by the city shall contain provisions prohibiting discrimination in the provision of employee benefits, including provisions containing appropriate remedies for the breach thereof as prescribed by this chapter, except as exempted by this chapter or rule.

(Ord. O2000-028, Added, 02/06/2001)

3.46.030 Limitations.

The requirements of this chapter only shall apply to those portions of a contractor's operations that occur:

- A. Within the city;

- B. On real property outside of the city if the property is owned by the city or if the city has a right to occupy the property, and if the contractor's presence at that location is connected to a contract with the city; and

- C. Elsewhere in the United States where work related to a city contract is being performed. The requirements of this chapter shall not apply to subcontracts or subcontractors of any contract or contractor.

(Ord. O2000-028, Added, 02/06/2001)

3.46.040 Powers and duties of the city administrator.

The city administrator shall have the power to:

- A. Adopt rules and regulations in accordance with this chapter establishing standards and procedures for effectively carrying out this chapter;
- B. Determine and impose appropriate sanctions and/or liquidated damages for violation of this chapter by contractors including, but not limited to:
 - 1. Disqualification of the contractor from bidding on or being awarded a city contract for a period of up to five years; and
 - 2. Contractual remedies, including, but not limited to, liquidated damages and termination of the contract;
- C. Examine contractor's benefit programs covered by this chapter;
- D. Impose other appropriate contractual and civil remedies and sanctions for violations of this chapter;
- E. Allow for remedial action after a finding of noncompliance, as specified by rule;
- F. Perform such other duties as may be required by ordinance or which are necessary to implement the purposes of this chapter.

(Ord. O2000-028, Added, 02/06/2001)

3.46.050 Appeals.

Any aggrieved party may appeal a decision of the city administrator to the mayor by the submittal of a written request to the city attorney within ten working days of the decision to be appealed. The mayor's decision will be in writing with findings identified upon which the decision was made. Subsequent appeal will be to the Thurston County superior court.

(Ord. O2000-028, Added, 02/06/2001)

3.46.060 Effective date.

The provisions of this chapter shall apply to any contract awarded on or after January 2, 2002.

(Ord. O2000-028, Added, 02/06/2001)

EXHIBIT C

COMPENSATION SPREADSHEET

EXHIBIT C

Actuals Not To Exceed Table (ANTE)

City of Tumwater - Tumwater Blvd/I-5 NB Ramps Improvements HDR Engineering, Inc. 929 108th Ave NE, Suite 1300 Bellevue, WA 98004				
Job Classifications	Direct Labor Rate NTE*	Overhead NTE* 158.39%	Fixed Fee NTE 31.00%	All Inclusive Hourly Billing Rate NTE
Administrative Assistant 3	\$47.38	\$75.05	\$14.69	\$137.11
Administrative Assistant 5	\$77.70	\$123.07	\$24.09	\$224.86
Architect 1	\$49.79	\$78.86	\$15.43	\$144.09
Architect 2	\$53.57	\$84.85	\$16.61	\$155.03
Architect Supervisor	\$112.70	\$178.51	\$34.94	\$326.14
Bridge Engineer 1	\$56.64	\$89.71	\$17.56	\$163.91
Bridge Engineer 3	\$83.10	\$131.62	\$25.76	\$240.48
Bridge Engineer 7	\$130.27	\$206.33	\$40.38	\$376.99
Budget Analyst 1	\$119.64	\$189.50	\$37.09	\$346.23
Budget Analyst 3	\$192.15	\$304.35	\$59.57	\$556.06
Civil Engineer 3	\$91.63	\$145.13	\$28.41	\$265.17
Civil Engineer 4	\$105.16	\$166.56	\$32.60	\$304.32
Communications Consultant 3	\$80.96	\$128.23	\$25.10	\$234.29
Communications Consultant 5	\$98.53	\$156.06	\$30.54	\$285.14
Construction Project Coordinator 2	\$72.44	\$114.74	\$22.46	\$209.63
Construction Project Coordinator 3	\$81.68	\$129.37	\$25.32	\$236.37
Construction Project Coordinator 4	\$118.35	\$187.45	\$36.69	\$342.49
Contracts Specialist 3	\$59.07	\$93.56	\$18.31	\$170.94
Drafting Technician 3	\$78.31	\$124.04	\$24.28	\$226.62
Engineering Technician 3	\$65.38	\$103.56	\$20.27	\$189.20
Engineering Technician Supervisor	\$79.75	\$126.32	\$24.72	\$230.79
Environmental Engineer 2	\$45.64	\$72.29	\$14.15	\$132.08
Environmental Engineer 4	\$105.78	\$167.54	\$32.79	\$306.12
Environmental Planner 2	\$51.19	\$81.08	\$15.87	\$148.14
Environmental Planner 5	\$100.74	\$159.56	\$31.23	\$291.53
Environmental Specialist 3	\$45.15	\$71.51	\$14.00	\$130.66
Environmental Specialist 5	\$82.50	\$130.67	\$25.58	\$238.75
Fiscal Analyst 3	\$50.21	\$79.53	\$15.57	\$145.30
Fiscal Analyst 5	\$81.89	\$129.71	\$25.39	\$236.98
Human Resource Consultant 3	\$37.02	\$58.64	\$11.48	\$107.13
Human Resource Consultant 4	\$68.03	\$107.75	\$21.09	\$196.87
IT Specialist 3	\$86.15	\$136.45	\$26.71	\$249.31
Property and Acquisition Specialist 4	\$87.74	\$138.97	\$27.20	\$253.91
Transportation Engineer 2	\$61.65	\$97.65	\$19.11	\$178.41
Transportation Engineer 3	\$101.80	\$161.24	\$31.56	\$294.60
Transportation Engineer 5	\$199.30	\$315.67	\$61.78	\$576.75
Transportation Engineer Intern	\$30.02	\$47.55	\$9.31	\$86.87
Transportation Planning Specialist 1	\$58.30	\$92.34	\$18.07	\$168.71
Transportation Planning Specialist 3	\$96.72	\$153.19	\$29.98	\$279.90
Transportation Planning Specialist 5	\$118.63	\$187.90	\$36.78	\$343.30
Transportation Technician 1	\$68.92	\$109.16	\$21.37	\$199.45
Transportation Technician 3	\$84.96	\$134.57	\$26.34	\$245.87
Value Engineering Specialist	\$124.99	\$197.97	\$38.75	\$361.71

City of Tumwater: Tumwater Blvd RAB

EXHIBIT C

EXPENSES

City of Tumwater: Tumwater Blvd RAB

		Field Supplies	Mileage/mile (2023)	Field Supplies	Meals/day			Total ODC
		Field Equipment	Travel	Field Equipment	Travel			
OTHER DIRECT COSTS		Each	Each	Each	Each			
Unit Cost		\$50.000	\$0.670	\$50.000	\$74.000			
9	PERMITTING AND ENVIRONMENTAL STUDIES							
	Quantity	0	560	6	6			
	Task Total	\$0.00	\$375.20	\$300.00	\$444.00		\$1,119.20	
10	CULTURAL RESOURCES							
	Quantity	3	30	0	0			
	Task Total	\$150.00	\$20.10	\$0.00	\$0.00		\$170.10	
Total ODC		\$ 150.00	\$ 395.30	\$ 300.00	\$ 444.00		\$ 1,289.30	

EXHIBIT C

SUBCONSULTANTS

City of Tumwater: Tumwater Blvd RAB

		Sitts & Hill	SAGE	Rich Duncan		Total Subconsultants	Sub Markup	Total Subconsultants + Markup
SUBCONSULTANTS								
						0.00%		
3	TOPOGRAPHIC SURVEY AND RIGHT-OF-WAY MAPPING							
	Task Total	\$61,931.00	\$0.00	\$0.00		\$61,931.00	\$0.00	\$61,931.00
4	GEOTECHNICAL INVESTIGATION AND REPORTING							
	Task Total	\$0.00	\$54,791.95	\$0.00		\$54,791.95	\$0.00	\$54,791.95
11	REAL ESTATE SERVICES SUPPORT							
	Task Total	\$0.00	\$0.00	\$7,000.00		\$7,000.00	\$0.00	\$7,000.00
Total Subconsultants		\$ 61,931.00	\$ 54,791.95	\$ 7,000.00		\$ 123,722.95	\$ -	\$ 123,722.95

FEE ESTIMATE
City of Tumwater: Tumwater Blvd RAB

EXHIBIT C



Task #	Task Description	Total Labor	Total Escalation	Total Expenses	Total Subconsultants	Total For Proposal
1	PROJECT MANAGEMENT	\$54,108	\$1,353	\$0	\$0	\$55,461
2	DATA COLLECTION AND REVIEW	\$3,834	\$96	\$0	\$0	\$3,930
3	TOPOGRAPHIC SURVEY AND RIGHT-OF-WAY MAPPING	\$801	\$20	\$0	\$61,931	\$62,752
4	GEOTECHNICAL INVESTIGATION AND REPORTING	\$2,191	\$55	\$0	\$54,792	\$57,038
5	WSDOT COORDINATION	\$53,768	\$1,344	\$0	\$0	\$55,112
6	PUBLIC OUTREACH SUPPORT	\$10,646	\$266	\$0	\$0	\$10,912
7	TRAFFIC ANALYSIS	\$29,516	\$738	\$0	\$0	\$30,254
8	BRIDGE WIDENING ANALYSIS	\$19,349	\$484	\$0	\$0	\$19,833
9	PERMITTING AND ENVIRONMENTAL STUDIES	\$56,815	\$1,420	\$1,119	\$0	\$59,354
10	CULTURAL RESOURCES	\$15,140	\$378	\$170	\$0	\$15,688
11	REAL ESTATE SERVICES SUPPORT	\$41,243	\$1,031	\$0	\$7,000	\$49,274
12	UTILITY COORDINATION	\$11,101	\$278	\$0	\$0	\$11,379
13	PRELIMINARY DESIGN	\$56,302	\$1,408	\$0	\$0	\$57,710
14	FINAL DESIGN	\$40,299	\$1,007	\$0	\$0	\$41,306
15	30% PLANS AND ESTIMATE	\$6,358	\$159	\$0	\$0	\$6,517
16	60% PLANS, SPECIFICATIONS, AND ESTIMATE	\$99,797	\$2,495	\$0	\$0	\$102,292
17	90% PLANS, SPECIFICATIONS, AND ESTIMATE	\$47,946	\$1,199	\$0	\$0	\$49,145
18	FINAL PLANS, SPECIFICATIONS, AND ESTIMATE	\$27,801	\$695	\$0	\$0	\$28,496
		\$577,015	\$14,426	\$1,289	\$123,723	\$716,453
Management Reserve Fund						\$ 100,000.00
						\$ 816,453.00

PREPARED FOR:

DESCRIPTION

TOTAL
COSTS

\$61,931

EXHIBIT C

Sage Geotechnical Budget Breakdown
Tumwater Boulevard NB I-5 On/Off Ramp Intersection
Tumwater, Washington

	Principal Geotechnical Engineer	Senior Geotechnical Engineer	Senior Project Controller	Totals	Direct Labor	Indirect Costs (Overhead @ 110%)	Profit 31% (DL)	Total Labor Costs
Task 4.0 Geotechnical Analysis								
Task 4.1 Site Reconnaissance, Utility Locates								
Field Exploration Management		10		10	\$480.80	\$528.88	\$149.05	\$1,158.73
Drilling Preparation (locates, traffic control plans, etc.)		10		10	\$480.80	\$528.88	\$149.05	\$1,158.73
Prepare Plans and Subagreements		10	5	15	\$685.15	\$753.67	\$212.40	\$1,651.21
Task 4.2 Geotechnical Field Explorations and Laboratory Testing								
Field Explorations	5	20		25	\$1,202.00	\$1322.20	\$372.62	\$2,896.82
Reporting	5	20		25	\$1,202.00	\$1322.20	\$372.62	\$2,896.82
Project Management, Meetings, Administrative Support		20	10	30	\$1,370.30	\$1507.33	\$424.79	\$3,302.42
Task 4.3 Groundwater Monitoring								
Groundwater Monitoring	5	40		45	\$2,163.60	\$2379.96	\$670.72	\$5,214.28
Task 4.4 Geotechnical Engineering Analysis and Reporting								
Geotechnical Reporting	10	30	5	45	\$2,127.55	\$2340.31	\$659.54	\$5,127.40
Task 4.5 Pavement Analysis and Reporting								
Pavement Analysis and Design	5	20		25	\$1,202.00	\$1322.20	\$372.62	\$2,896.82
Reporting		10		10	\$480.80	\$528.88	\$149.05	\$1,158.73
Total	30	190	20	240	\$11,395.00	\$12,534.50	\$3,532.45	\$27,461.95
Average Rate by Position								
	\$48.08	\$48.08	\$40.87					
Direct Labor Cost	\$1442.40	\$9,135.20	\$817.40	\$11,395.00				
Indirect Costs (Overhead @ 110%)	\$1586.64	\$10,048.72	\$899.14	\$12,534.50				
Profit 31% (DL)	\$447.14	\$2,831.91	\$253.39	\$3,532.45				
Total - Labor Cost	\$3,476.18	\$22,015.83	\$1,969.93	\$27,461.95				
DIRECT COSTS								
Vehicle Use (mileage)				\$250.00				
Misc. Field Supplies				\$200.00				
Laboratory Testing				\$3,800.00				
Dataloggers (3 dataloggers & 1 barologger for 5 months)				\$3,200.00				
Total - Direct Costs				\$7,450.00				
SUBCONTRACTED SERVICES *								
Drilling Subcontractor - 3 borings + 3 wells				\$15,300.00				
Traffic Control (2 days)				\$2,400.00				
Laboratory Testing - 2 CBRs				\$1,680.00				
Private Utility Locating				\$500.00				
Total - Subcontracted Services				\$19,880.00				
Total				\$54,791.95				

* Includes 12 percent markup on subcontracted services.