

MEMORANDUM
For Meeting of January 13, 2009

TO: Mayor and Councilmembers
THROUGH: Steve Worthington
FROM: Russ Blount
SUBJECT: **Resolution 1267** – Authorize contract with Berger/ABAM for Interchange Justification Report and NEPA documentation for I-5/Port of Tacoma Road Interchange

REPORT IN BRIEF: Authorize the next step in the multi-phase improvements to this interchange.

BACKGROUND: Improvements to this interchange have been deemed “opportunistic” with respect to City of Fife goals. The City Council has established potential future phases of the interchange improvements to be priorities 4, 7, 8, and 9 in its 2009-2014 Transportation Improvement Program adopted in July 2008.

ATTACHMENTS: Draft resolution with proposed scope and fee; funding letters.

DISCUSSION: The Federal Highway Administration (FHWA) will not approve further modifications to the interchange without completion of an Interchange Justification Report (IJR) and National Environmental Policy Act (NEPA) approval. Through Washington State’s Freight Mobility Strategic Investment Board and the Transportation Improvement Board, Fife has over \$8 million in programmed funds for future phases, which will be released only after FHWA approval of the IJR and NEPA documentation. See “Whereas” clauses for further discussion.

FISCAL IMPACT: Funding is available in the form of a \$342,190 federal earmark sponsored by Congressman Adam Smith for 2006, a \$902,520 earmark sponsored by Senator Patty Murray for 2008, and \$351,096 in funds remaining from a \$2,000,000 pledge from the Port of Tacoma, totaling \$1,595,806 in available funding. The \$1,562,150 proposed fee includes a \$100,000 “management reserve” to be spent only with City of Fife authorization for minor changes to the project scope.

ALTERNATIVE COURSES OF ACTION:

1. Approve Resolution 1267, authorizing execution of a contract for engineering services.
2. Amend scope or resolution, and then approve the amended scope or resolution.
3. Defer action pending resolution of questions or assembly of additional information.
4. Decline to approve the contract, likely foregoing further grants for improvements to this interchange.

RECOMMENDATIONS: Approve Resolution 1267, authorizing execution of a contract for engineering services with Berger/ABAM Engineering, Inc. for a fee not to exceed \$1,562,150.

SUGGESTED MOTION: Motion to approve Resolution 1267.



Russ Blount
Public Works Director

Approved for Agenda



Steve Worthington
City Manager

RESOLUTION NO. 1267

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FIFE, PIERCE COUNTY, WASHINGTON AUTHORIZING A CONTRACT WITH BERGER/ABAM ENGINEERS, INC. FOR THE PREPARATION OF AN INTERCHANGE JUSTIFICATION REPORT AND NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATION FOR THE INTERCHANGE OF INTERSTATE ROUTE 5 AND PORT OF TACOMA ROAD

WHEREAS, improvements to the interchange of Port of Tacoma Road and Interstate 5, and associated improvements to 34th Avenue East and 12th Street East are included in the City of Fife's Comprehensive Plan and its current 6-year Transportation Improvement Program; and

WHEREAS, a total of eight separate phases of improvements are tentatively proposed for the interchange and vicinity, with three phases completed and five remaining; and

WHEREAS, completion of the remaining five phases of improvements will require a total of over \$32 million in funding from a variety of agencies, including the City of Fife, Port of Tacoma, Federal Highway Administration, Washington State Department of Transportation, Freight Mobility Strategic Investment Board, and Transportation Improvement Board; and

WHEREAS, the expenditure of further federal and state construction funds, and the construction of any further improvements within the state's limited access right of way cannot proceed without preparation of an Interchange Justification Report (IJR), including "blank slate" of alternatives for interchange improvement, and the approval of said IJR and associated National Environmental Policy Act (NEPA) documentation; and

WHEREAS, funding is available in the form of a \$342,190 federal earmark sponsored by Congressman Adam Smith for 2006, a \$902,520 earmark sponsored by Senator Patty Murray for 2008, and \$351,096 in funds remaining from a \$2,000,000 pledge from the Port of Tacoma, totaling \$1,595,806 in available funding; now, therefore

BE IT RESOLVED that the City Council hereby authorizes the City Manager to execute a contract with Berger/ABAM Engineers, Inc., with scope and fee substantially the form as attached and using City of Fife standard contract terms, for a total fee not to exceed \$1,562,150, for the preparation of an IJR and NEPA documentation for the interchange of Interstate 5 with Port of Tacoma Road.

ADOPTED by the City Council at an open public meeting held on the 13th day of January, 2009.

Barry D. Johnson, Mayor

Attest:

Steve Marcotte, City Clerk

RESOLUTION NO. 1267

Page 1 of 1

**Exhibit A
Scope of Services**

**City of Fife
Port of Tacoma Road Interchange with I-5 Project
Environmental Documentation and
Interchange Justification Report**

**Submitted to
City of Fife
Fife, Washington**

November 2008

**Submitted by
BERGER/ABAM Engineers Inc.
33301 Ninth Avenue S., Suite 300
Federal Way, WA 98003-2300**

**EXHIBIT A
SCOPE OF SERVICES**

**Port of Tacoma Road Interchange with I-5 Project
Supplement No. X – Environmental Documentation and
Interchange Justification Report**

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ABBREVIATIONS

The following abbreviations are referred to throughout this scope of work.

APE	Area of Potential Effects
BA	Biological Assessment
DCE	Documented Categorical Exclusion
DNR	Washington State Department of Natural Resources
DOE	Washington State Department of Ecology
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
EnSA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GSP	General Special Provisions
HOV	High-Occupancy Vehicle
IJR	Intersection Justification Report
LEP	Limited English Proficiency
NEPA	National Environmental Protection Act
NMFS	National Marine Fisheries Service
PIP	Public Interaction Plan
PSRC	Puget Sound Regional Council
PS&E	Plans, Specifications, and Estimates
QA/QC	Quality Assurance/Quality Control
ROW	Right-of-Way
SEPA	State Environmental Protection Act
SOW	Scope of Work

SR	State Route
TESC	Temporary Erosion and Sedimentation Control
TNM	Traffic Noise Model
TSM	Transportation System Management
UCO	Urban Corridors Office
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Department of Fish and Wildlife Services
WDFW	Washington State Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation

**EXHIBIT A
SCOPE OF SERVICES
PORT OF TACOMA ROAD INTERCHANGE WITH I-5
SUPPLEMENT NO. X – ENVIRONMENTAL DOCUMENTATION & IJR**

INTRODUCTION

The City of Fife (CITY) has completed a design study of one build alternative for the reconfiguration of the Port of Tacoma Road Interchange with I-5 project (PROJECT) in Pierce County, Washington. Under this scope of work (SOW), the CONSULTANT shall study this build alternative along with a maximum of five others and conduct activities leading to the selection of a proposed configuration for the interchange. Environmental effects of the proposed configuration will be evaluated in the preparation of a Documented Categorical Exclusion (DCE). In addition, the CONSULTANT shall conduct activities leading to the development of an interchange justification report (IJR). Work on the IJR shall be done in parallel and be part of the criteria for selection of the proposed action.

The environmental document shall be a combined NEPA/SEPA DCE with an assumed year of opening of 2020 and a design year of 2040. It shall meet the requirements of the National Environmental Policy Act (NEPA) with respect to possible actions by the Federal Highway Administration (FHWA) and possible 404 Permit actions by the U.S. Army Corps of Engineers (USACE). The DCE shall also meet the requirements of the State Environmental Policy Act (SEPA) with respect to possible actions by the Washington State Department of Transportation (WSDOT). When similar activities are called for under both NEPA and SEPA, such as circulation times or length of comment periods, the longer of the two time periods shall govern.

The CITY reserves the right to add any or all of the following work to this agreement: right-of-way (ROW) plans, hydraulic report(s), additional environmental documentation, plans, specifications, estimates, construction services, and additional services of an undetermined nature. At its option, the CITY may elect to do any or all of the additional work noted under separate agreements.

PHYSICAL PROJECT LIMITS

The immediate project area is approximately located along I-5 from the 54th Avenue East interchange to the Puyallup River overcrossing. The roads, intersections, and interchange improvements, if implemented, would reduce congestion, improve freight mobility, and improve safety at the interchange. The project limits for the for the physical roadway improvements are anticipated to be as follows:

On I-5- From the 54th Avenue East interchange with I-5 to the Ferguson Street/PuyallupRiver Overcrossing. I-5 Milepost Boundaries: 135.5 – 137.0.

On Port of Tacoma Road - From I-5 undercrossing to 12th Street East.

On 34th Avenue East - From Pacific Highway East to 12th Street East.

On 12th Street East - From 34th Avenue East to Port of Tacoma Road.

The project limits for the traffic analysis and modeling will include the physical roadway limits as stated above with the following addition:

I-5: The simulation modeling (VISSIM) and traffic analysis will extend from the I-705 (NB on-ramp and SB off-ramp) interchange to the SR 18 interchange (NB off-ramp and SB on-ramp). The additional limits for the traffic analysis are required to capture the influence areas on I-5 that may benefit or be impacted by improvements at the Port of Tacoma interchange.

SCOPE OF SERVICES

This SOW details work elements needed to support the CITY in the selection of a preferred configuration, as well as NEPA and IJR documentation of the PROJECT. The SOW shall consist of the following major work elements.

- Work Element 1 – Project Management
- Work Element 2 – Public Involvement
- Work Element 3 – Consensus Building
- Work Element 4 – Base Mapping
- Work Element 5 – Configuration Selection
- Work Element 6 – Environmental Review and Documentation
- Work Element 7 – Travel Demand Forecasting
- Work Element 8 – Interchange Justification Report
- Work Element 9 – Preliminary Engineering

General Assumptions

- All communications with resource agencies and the CITY will be coordinated through CITY's public works director and/or his designee.
- All aspects of coordination of the work completed by the CONSULTANT that is required with outside agencies, groups, or individuals shall receive advance approval by the CITY's Public Works Department. The DCE and IJR shall conform to WSDOT's standards and shall be developed in accordance with the latest editions, amendments, and revisions of the publications listed in this document, including all updates. The CONSULTANT shall make changes or amendments in the detail of work, as described within this SOW, as requested by the CITY, or as authorized as extra work.
- Work detailed in this SOW shall be completed in accordance with the schedule below and per the project schedule developed under Task 1.6
 - Phase 1 – NEPA/IJR

Consultant Notice to Proceed

December 2008

- This SOW assumes that the CONSULTANT shall perform all design tasks necessary to complete the alternatives screening process and to support the selection of a preferred configuration. Traffic modeling and traffic operations analysis shall be limited to the following.
- Traffic volumes generated from the 2040 PM peak travel demand forecasting and preliminary operational analysis data for year 2040 PM peak will be used in the alternatives screening process.
- The CONSULTANT shall operate similar to and shall fully support the CITY's Public Works Department. When alternatives are being considered or decisions are being made, the CITY, along with WSDOT and/or FHWA, will make final decisions.
- For any field investigations, acquiring the permission of private landowners whose property would be visited will be the responsibility of the CITY. Permission must be obtained prior to fieldwork on privately owned land. Right-of-entry permits may take up to 60 days to acquire.
- The CONSULTANT shall use the following computer software in the performance of the engineering and design work for this contract. All files shall be provided in an IBM compatible format.
 - Engineering software: InRoads (version 08.08.00.46, or latest)
 - CAD software: Bentley MicroStation (version 8.05.02.70, or latest)
 - Drainage software: Stormshed and MGS Flood w/Continuous Rainfall Model
 - Scheduling software: Microsoft Project or Primavera P6
 - Microsoft Office, Word, Excel (latest version)
 - English units for plans, engineering, and environmental documents
- It may be necessary for the CITY and WSDOT to acquire ROW for this project.

Work Performed by the CITY

Throughout the duration of the project, the CITY will perform services, furnish information, and answer questions on CITY standard procedures for plan preparation.

The following services will be performed by the CITY.

- The CITY will acquire any rights-of-entry required to perform this task work.
- The CITY will assist the CONSULTANT, if required, in obtaining information from and/or coordination with other agencies.

WORK ELEMENT 1: PROJECT MANAGEMENT

Task 1.1 – Project Management and Quality Assurance/Quality Control (QA/QC) Plan

The CONSULTANT shall prepare a project management and QA/QC plan that describes participants, methods, and formats to be used in administering this project. The plan will also outline the minimum review requirements for all work products and the appropriate QA documentation. Work associated with implementing this plan shall occur under the work element “Implement QC Program.” The project management and QA/QC plan shall include all major work element of the project, from mobilization through the final DCE and FHWA’s approval of the IJR.

Deliverable(s)

- Draft project management and QA/QC plan (electronic copy)
- Final project management and QA/QC plan (electronic and four hard copies)

Task 1.2 – Implement QC Program

The CONSULTANT shall implement the PROJECT’s QC plan as developed and approved in Task 1.1.

Task 1.3 – Monthly Progress Reports and Billings

The CONSULTANT shall prepare monthly progress reports, in a form approved by the CITY, that outlines in written and graphical forms the various phases of the work, and the order of performance, in sufficient detail so that the progress of the work can be easily evaluated. These reports shall.

- Highlight project milestones
- Target potential problem areas needing special attention or coordination prior to delays occurring and provide a proposal for addressing problem areas
- Outline activities planned for the next period
- Compare actual work progress with contractual obligations
- Show the current and cumulative financial status of the DCE project
- Show work complete (%) vs. budget expended (%) for major tasks

Progress reports shall include current scheduling reports, indicating all progress to date and resources expended. Progress shall be monitored and reported in diagram and quantitative forms to present a clear, concise, and understandable picture of the project status. This update shall also include any changes in schedule, sequence, or resource loading. If any schedule delays have occurred, a plan for bringing the work back on schedule, and back on budget, shall be included.

Invoices shall be prepared by the CONSULTANT in a form and detail as approved by the CITY, and submitted on a monthly basis. These shall be supported by detailed record keeping closely tracking the project budget and expenditures.

Deliverable(s)

- Monthly progress reports, incorporating project schedule revisions as appropriate (electronic copy)
- Monthly invoices (original and two copies each month)

Task 1.4 – Biweekly Progress Meetings

The CONSULTANT and a representative from the CITY’s Public Works Department shall meet on a biweekly basis to review the progress of the project. Meetings shall be conducted on an informal basis and held at the CONSULTANT’s office, or a location chosen by the CONSULTANT. It is assumed that there shall be 26 biweekly progress meetings. Progress meetings shall include in attendance two staff (on average) from the CONSULTANT at each meeting, in addition to representatives from subconsultant team members when appropriate.

Deliverable(s)

- Twenty-six meeting agendas
- Twenty-six meeting notes

Task 1.5 – Coordinate/Contract with Subconsultants

The CONSULTANT shall coordinate with subconsultants regarding contracting procedures, shall prepare and execute contracts with individual subconsultants, and shall address contract-related issues with the subconsultants as they arise during the project.

Task 1.6 – Project Schedule

The CONSULTANT shall prepare a project schedule that includes completion of all items identified in this SOW.

Task 1.7 – Ongoing Project Management

The CONSULTANT’s project manager shall conduct the project tracking, document control, and coordination efforts necessary for project execution. These efforts shall include the continuous tracking of schedules, budgets, and products; coordination with subconsultants relating to work in progress; and coordination with WSDOT.

WORK ELEMENT 2: PUBLIC INVOLVEMENT

Task 2.1 – Public Involvement Plan (PIP)

The CONSULTANT will develop a public involvement plan (PIP) that includes the following major elements.

- Project purpose and goals
- PIP purpose, public involvement goals (i.e., education on the project and environmental process), and public involvement schedule
- Target audiences (i.e., general public, businesses, citizen groups, public agencies, Tribes, key stakeholders, and public officials)

- Outline the focus of the stakeholder, community, and public open house meetings
- Communication vehicles (i.e., project updates for insertion in *Fife Flyer*, web site updates , and level notices), including approaches to solicit input of those traditionally underserved by transportation (environmental justice and Title VI populations)
- Media management (assume CITY will respond to all media inquiries and serve as the public information officer for this project)
- The legal requirements and constraints
- The procedures for considering and responding to public comments

To complete the PIP, the CONSULTANT will

- Conduct stakeholder research to identify key issues and potential project stakeholders
- Create an aerial map of the project area with property ownership and businesses labeled on the map
- Gather demographic data from the 2000 Census to identify the general locations of minority and low-income populations within the study area. The 2000 Census data and local school districts data shall also be reviewed to determine if populations in the study area will require special accommodations in compliance with the Limited English Proficiency (LEP) Act to include citizens who may traditionally be left out of the PIP. This data is collected in the EJ section. The CONSULTANT shall modify this PIP as appropriate for the specific customers identified for these project improvements, and shall use this PIP as Appendix A of the draft study plan.

Deliverable(s)

- Minority and low-income population maps
- Property and business ownership aerial map
- Draft PIP (electronic copy)
- Final PIP (electronic copy)

Task 2.2 – Progress Reports for *Fife Flyer*

The *Fife Flyer* will be the primary vessel for public communication and information dissemination for the PROJECT. The CONSULTANT will prepare a maximum of six project update pieces that will be published in the *Fife Flyer*. Project updates will also include open house meeting announcement.

Deliverable(s)

- Maximum of six project progress updates (electronic only)

Task 2.3 – Open House

The CONSULTANT will provide services to plan, prepare for, and facilitate a public open house. The focus of the open house will be to inform local residents, area businesses, property owners, and the community at large of the project features and schedule, and gather input on the design alternatives. The CITY will identify and secure a venue (location) for the open house.

The CONSULTANT will develop a public meeting plan that identifies process, format, necessary displays, staffing for the meeting, advertising, and preparation schedule. The CONSULTANT will prepare all open house materials, including exhibits and/or other presentation materials, a project fact sheet (see Task 2.5 below), comment cards/questionnaires, sign-in sheets, and meeting signage. The fact sheet shall contain information explaining the project background, purpose and need of the project, the public involvement process, major issues, project area, project schedule, and project contact information. Exhibits will be developed that identify the project area, proposed alternatives, areas of impact, alternative evaluation criteria, and the project schedules. The comment form shall solicit comments from the meeting attendees. The CONSULTANT shall tabulate and summarize the written comments received. The CONSULTANT shall print the handouts for the open house meeting.

Assumptions

- City staff will be responsible for placement of meeting advertising in the *Fife Flyer*

Meeting(s)

- One open house planning meeting with CITY staff
- One open house meeting

Deliverable(s)

- Preparation of a public meeting plan
- Set-up, staffing, and facilitation of public open house meeting
- Meeting notes (electronic copies)
- Meeting materials: sign-in sheets and comment forms (electronic copy plus hard copies for the meeting)
- One summary of written comments received from open house
- Maximum of six 2- by 3-foot exhibits/boards

Task 2.4 – Community Meetings

Requests from community groups for presentations shall be acknowledged as received by the CITY. The CITY may also opt to host individual interviews with affected businesses in the vicinity of the project. The interviews will promote a better understanding of community issues. The CONSULTANT shall plan and budget to attend up to three of these meetings in an advisory capacity.

Deliverable(s)

- Meeting notes each meeting – three maximum (electronic copies)
- Miscellaneous meeting materials, handouts, and exhibits

Task 2.5 - Fact Sheet

Project fact sheets disseminate project information to a wide audience, including business and property owners, as well as the general public. It can be used throughout the life of the project. This fact sheet is anticipated to include the project history, precise project description, map of project area, process graphic with public/stakeholder involvement opportunities, and project contact information.

It could be used as a handout at community, stakeholder, and the public open house meetings. It could also be used to inform the media, be distributed via mail if requested, and made available on the CITY's web site. The CONSULTANT will design, draft copy for, and layout one project fact sheet for this project.

- Deliverable(s)**
- Design, layout, and draft copy for one full color 11- by 17-inch project fact sheet provided to the CITY for review and editing (one draft and one final)
 - The CONSULTANT will print up to 100 copies of the fact sheet for use during the project

WORK ELEMENT 3: CONSENSUS BUILDING

Task 3.1 - Chartering Meeting

The CONSULTANT shall plan and host a 2-hour team chartering session to confirm roles and responsibilities of the Technical Advisory Committee (TAC), as well as endorse an overall decision process, project goals and objectives, and project hindrances and opportunities. The CONSULTANT shall facilitate chartering and prepare a team chartering technical memorandum outlining the overall project goals and objectives, roles and responsibilities, and decision process. The CITY will facilitate gaining consensus on the memorandum from TAC members.

Deliverable(s)

- Endorsed team chartering technical memorandum

Task 3.2 - Technical Advisory Committee (TAC) Support

The CONSULTANT will work with the CITY to identify potential Technical Advisory Committee (TAC) members. The CITY will recruit and appoint the members of the TAC. The CONSULTANT shall serve the TAC in an advisory capacity and as a meeting facilitator and organizer, and shall not be included as a member of the team. The TAC's participation in the PROJECT will loosely follow some of the guidelines in Section 220.04 (3) of WSDOT's Design Manual. The CONSULTANT shall provide support to the CITY at a maximum of 12 TAC meetings. The CONSULTANT will coordinate with the CITY to establish the place, date, and time of the meetings. The CITY will reserve the meeting location. The CONSULTANT will, in collaboration with the CITY, prepare a draft and final TAC charter and operational protocols, meeting agenda, distribute meeting notices to the members of the TAC, facilitate TAC meetings, and prepare and distribute meeting summaries to TAC members.

Assumption(s)

- The CITY will determine the makeup and number of individuals on the PROJECT TAC. The CITY will prepare and process selection/appointment letters to the TAC members.

Meeting(s)

- Maximum of 12 2-hour meetings

Deliverable(s)

- Draft and final TAC charter and operational protocols
- Meeting agendas, notification, facilitation, and summaries for 12 meetings (one electronic copy)

Task 3.3 – TAC Recommendation on the Proposed Configuration

The TAC will make a recommendation for a proposed action to be documented and further analyzed in the DCE and IJR. The CONSULTANT shall prepare and submit the draft TAC recommendation letter to the TAC to concur with or modify. This recommendation shall contain

- A description of the alternative to be considered in the DCE and IJR, and why it was chosen
- Identification of impacts and possible mitigation
- A discussion of controversial areas and coordination proposed to resolve them
- Identification of any changes in the proposal as originally defined, and why changes were made

Deliverable(s)

- Draft TAC recommendation letter (one electronic copy and 10 hard copies)
- Final TAC recommendation letter (one electronic copy and 10 hard copies)

WORK ELEMENT 4: BASE MAPPING

Task 4.1 – Survey and Base Map

The CONSULTANT will prepare a refined topographic base map of the project area described in the PROJECT limits section of this contract utilizing LIDAR, GIS data, and existing base mapping information provided by the CITY. This information will be combined with laser scanning data to serve as the base model for the selection of the preferred configuration. Laser scanning data will consist of a 360-degree laser scan of the existing site, surrounding landscaping, and improvements. This information will be collected using a high-definition laser scanner with survey grade accuracy. Data collected from this survey will be georeferenced to real world coordinates. This information can be used for future engineering base maps. Topographic base map from laser scanning during this phase of the project will include

- Existing southbound I-5 Port of Tacoma Road offramp
- Existing southbound I-5 Port of Tacoma Road onramp
- Northeast quadrant of interchange to Pacific Highway East
- Northwest quadrant of interchange to Pacific Highway East

Assumption(s)

- The CITY will provide base mapping information of recently completed Pacific Highway East widening project.
- The CITY will obtain base mapping information of recently completed I-5 southbound onramp from WSDOT.
- The CITY will obtain rights-of-entry required to conduct field survey.

Deliverable(s)

- Copies of field notes
- Survey control worksheet - paper copy
- Coordinate point data listing – paper copy and ASCII file
- Engineering base map and digital terrain model – MicroStation and InRoads

WORK ELEMENT 5: CONFIGURATION SELECTION

Task 5.1 – Develop Screening Process for Alternatives and Matrix

The CONSULTANT shall develop a two-level screening process to rate alternatives and identify the configuration that will best address the project goals of the PROJECT. The first level of screening (Level 1) will serve to identify and eliminate fatally flawed alternatives. All fatally flawed alternatives will be excluded from further analysis or consideration. The CONSULTANT will document reasons for fatal flaw rating. The second level of screening (Level 2) will be a more detailed analysis that will include all identified environmental disciplines, traffic analysis using the City's Synchro model and regional travel demand model, and a cost benefit analysis as described in Task 5.3.

The CONSULTANT shall develop screening criteria and a screening/decision matrix as a numerical and/or rating system to document the quantitative comparison of alternatives being screened. Screening criteria shall include the ability for the alternative to obtain IJR approval by FHWA, as well as compatibility with the PROJECT's purpose and need statement. The screening matrix may contain criteria such as transportation, cost, impacts, and environmental factors. The CITY and the TAC will use the matrix for comparing and selecting alternatives.

Deliverable(s)

- Draft screening criteria (electronic copy)
- Final screening criteria (electronic copy)
- Screening/decision matrix (10 hard copies)

Task 5.2 – Alternatives Evaluated

The CONSULTANT shall evaluate build alternatives, limited construction alternatives, and the no-action/build alternative.

Task 5.2.1 – Identification of Alternatives and Brainstorming Session

The CONSULTANT shall develop alternatives to meet the established project for the PROJECT. As part of this work, the CONSULTANT will host a brainstorming session with TAC members

and/or other CITY personnel to identify potential build alternatives. The CONSULTANT will develop a maximum of five new alternatives, along with the starting point alternative obtained from the design study conducted in May 2003. Thus, a maximum of six build alternatives will be analyzed in the alternatives screening effort. Each build alternative shall meet the criteria shown in Title 23-CFR, Part 771, Section 111(f)(1), (2), and (3).

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope
- Have independent utility or independent significance (i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made)
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The CONSULTANT shall prepare maps and plans or sketches showing the existing, and each of the proposed build alignment alternatives, typical roadway sections and project limits, to aid the TAC in their evaluation and screening efforts. The CONSULTANT will summarize the configuration and attributes of each of the build alternatives in a technical memorandum.

Assumption(s)

- The CONSULTANT will perform engineering design of build alternatives to a maximum of 5 percent level.

Meeting(s)

- One brainstorming session meeting

Deliverable(s)

- Technical memorandum describing build alternatives with graphics (electronic copy)

Task 5.2.2 - Limited Construction Alternatives

The CONSULTANT will analyze a maximum of 20 limited construction alternatives as discussed in this section. These alternatives evaluate whether other improvements or strategies could meet the purpose and need of the proposed project. The analysis conducted on these alternatives will be a high level planning analysis and will not include detailed level-of-service and quantification of traffic operations. Limited construction alternatives will include: transportation system management (TSM), increased use of carpools, staggered work hours, expanded mass transit, and improving the existing facility as described below. The transportation demand management (TDM) and TSM TEEM model developed by WSDOT will be used to assist with the analysis of TDM and TSM alternatives.

Transportation System Management Alternative: The FHWA Technical Advisory T 6640.8A, Page 15, shall provide the guidance for this alternative. The CONSULTANT shall confirm with text that this alternative does or does not meet the purpose and need of this project as a stand-alone alternative. This limited construction alternative is usually relevant only for major projects proposed in urbanized areas over 200,000 populations. The TSM alternative includes

those activities that maximize the efficiency of the present system. Possible subject areas to include in this alternative are options such as fringe parking, ridesharing, high occupancy vehicle (HOV) lanes on existing roadways, and traffic signal timing optimization.

Increased Use of Carpools Alternative: The CONSULTANT shall confirm with text how this alternative may or may not meet the purpose and need of the PROJECT. Factors to consider would be the origin/destinations of trips (the number of trips of a recreational nature [tourist] into and out of the region, cargo to and from the east, etc.), if there exists or are planned park and pool lots in the corridor, and if there is a ride matching service available in Pierce and King counties.

Staggered Work Hours or The Four-Day Work Week Alternative: Although not within the jurisdiction of the FHWA or WSDOT, the CONSULTANT shall discuss how this alternative may or may not contribute to meeting the purpose and need for the project.

Expanded Mass Transit Alternative: The FHWA Technical Advisory T 6640.8A, Page 15, shall provide the guidance for this alternative. This alternative includes those reasonable and feasible transit options (bus systems, rail, etc.) even though they may not be within the existing FHWA funding authority.

Improving the Existing Facility Alternative: This alternative would typically involve nonmajor construction, such as localized widening for additional truck climbing/slow vehicle passing lanes, safety improvements, and upgrading the existing highway through resurfacing and channelization projects.

Local Street Alternatives: This alternative would typically involve improvements, and upgrading the surrounding network of local road. Project included in the City's Capital Improvement Program would be considered under this alternative. This alternative would evaluate whether local street improvements (ex., Frank Albert Road Extension) that could potentially eliminate the need for the proposed interchange improvements.

Task 5.2.3 – No-Action Alternative

The CONSULTANT shall use existing maps, as-built drawings, and/or survey data to establish the features and configuration of the No-Action Alternative.

Task 5.3 – Cost Benefit Analysis

The CONSULTANT shall perform a cost benefit analysis for all alternatives remaining after the Level 1 (fatal flaw) screening. Based on known industry standards, this analysis will assign a dollar amount the benefits between alternatives. The cost benefit analysis will also include square footage, negotiations, and relocation costs for proposed new ROW.

Task 5.4 – Alternatives Screening

The CONSULTANT shall conduct the two level screening of alternatives per the identified criteria developed in Task 5.1 above. The CONSULTANT shall prepare a technical memorandum on fatal flaw screening following the completion of the Level 1 screening process.

Following the completion of the Level 2 screening, the CONSULTANT shall prepare a position paper as a recommendation for review by the TAC to document the process and results of screening. The alternatives shall fall into the two categories of "Alternatives Considered and Rejected" and "Proposed Action." A concise discussion of how and why the Proposed Action was selected for detailed study and why other alternatives were eliminated from a detailed study shall be included in the alternatives analysis. The alternatives analysis will be used as a basis for discussion of alternatives in the IJR.

Deliverable(s)

- Technical memorandum on Level 1 (fatal flaw) screening (one electronic and 10 hard copies)
- Technical memorandum on Level 2 screening (one electronic copy and 10 hard copies)
- Position Paper for TAC review

WORK ELEMENT 6: ENVIRONMENTAL REVIEW AND DOCUMENTATION

Task 6.1 – Project Purpose and Need

The purpose (what the CITY proposes) and need (why the CITY proposes the project) establishes why the CITY is proposing an action, which may potentially cause environmental impacts (both positive and negative). It provides the basis for selecting reasonable and practicable alternatives for consideration, analyzing those alternatives, and is an important factor in ultimately selecting the Proposed Action. The CONSULTANT shall work with the CITY in developing the purpose and need for the TAC's concurrence. In the document, the purpose and need shall be separated into two sections (purpose, need) to make the distinction and emphasis clear.

Deliverable(s)

- Draft purpose and need letter and attachments (one electronic copy)
- Final purpose and need letter and attachments (one electronic copy)

Task 6.2 – Environmental Site Assessment (ESA)

The CONSULTANT will conduct a ESA reconnaissance to evaluate the presence, or likely presence, of potential hazardous substances within the physical limits of the project that would have an effect on the overcrossing project. Sites with potential for environmental issues/impacts include those that indicate current or past uses as service stations, battery shops, dry cleaners, chemical storage, or manufacturing facilities; sites with fuel or chemical storage tanks or drums present; or those with strong pungent or noxious odors. The CONSULTANT will prepare a report to describe the work completed and make recommendations for follow-on site-specific assessments that will be in accordance with ASTM 1527-00 as a Phase 1 ESA. The scope of services for this study will include

- A review of the results of a federal, state, and local environmental database search provided by an outside environmental data service for listings of known or suspected environmental problems at the sites or nearby properties within the search distances specified by ASTM. For this work, the CONSULTANT will assume four database searches with an expanded radius.

- A review of historical aerial photographs, fire insurance maps, city directories, chain-of-title reports, and tax assessor records, as available and appropriate, to identify past development history on the parcels relative to the possible use, generation, storage, release, or disposal of hazardous substances. The CONSULTANT will attempt to identify uses of the sites from the present to the time that records show no apparent development of the site, or to 1940, whichever is earlier.
- Conduct of a visual reconnaissance of the parcels and adjacent properties to identify visible evidence of potential sources of contamination. The CONSULTANT will assume the need to perform visits to four properties.
- A letter report that will summarize the results of this study. The letter report will briefly discuss the project activities and include a table ranking the parcels (low, moderate, high) by their potential for contamination from either on-site or off-site sources. A draft letter report will be provided for review and comment. Upon receiving comments, the letter will be modified as appropriate and made final.

Assumption(s)

- The CONSULTANT assumes that the CITY will provide the chain-of-title reports without cost.
- Not included at this time is an environmental compliance audit or an evaluation for the presence of lead-based paint, polychlorinated biphenyls in light ballasts, radon, mold, lead in drinking water, asbestos-containing building materials, or urea-formaldehyde in onsite structures. Soil, surface-water, or groundwater sampling and chemical analysis are not included as part of the CONSULTANT services.
- The CITY will arrange site access with property owners to allow the CONSULTANT to complete a visual reconnaissance site visit. If site access will not be allowed, the CONSULTANT will complete the site reconnaissance from the closest public ROW.
- This scope of services does not constitute a Phase 1 ESA in accordance with ASTM 1527-00. If required, additional ESA studies and recommendations will be performed under a supplemental agreement.

Task 6.3 – Cultural and History Resources Study

The purpose of a cultural and historical resources report is to provide the necessary documentation to comply with Section 106 of the National Historic Preservation Act. The CONSULTANT will conduct a historic resource inventory and prepare a technical report in accordance with applicable Washington State Office of Archaeology and Historic Preservation and U.S. Secretary of Interior standards. The inventory and report will cover study areas defined by the CITY and are based on their preliminary delineation of a proposed Area of Potential Effects (APE). As additional project details are defined, the CITY may make adjustments to finalize the proposed APE. The inventory and report will be used in partial fulfillment of Section 106, SEPA, and other regulatory requirements. This material will be

assembled into a draft cultural resources report. The CONSULTANT will provide four copies of the draft document to the CITY for review, will finalize the report based on one round of CITY reviews, and will submit four copies of the final cultural resources report.

Task 6.4 – Wetlands and Critical Areas Study

The purpose of this report is to identify jurisdictional wetland within the project corridor and critical areas, as well as provide mitigation if necessary. The CONSULTANT will develop, implement, and complete field surveys to identify and delineate wetlands in the project area using the appropriate methods described in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987), Wetlands Research, Technical Report Y-87-1, January 1987. The CONSULTANT will delineate wetlands within 200 feet of the project area.

The CONSULTANT will prepare a comprehensive report that includes detailed wetland maps, documentation of survey methods, results, potential impacts from project actions, and recommendations for wetland protection and mitigation. The report also will contain appropriate forms for wetland identification, delineation, and function assessment required by USACE. The information in this report is intended for use in compliance with Section 404 of the Clean Water Act. The final report and associated documents will be in a format acceptable to USACE.

Delineated wetland boundaries will be identified on the ground with flagging. The delineated wetland boundaries will be mapped with accuracy acceptable to USACE.

If a mitigation plan is necessary, the CONSULTANT will coordinate with USACE to develop a mitigation plan that results in no-net loss of wetland function and value and meets Section 404 permitting requirements. Four copies of the draft report will be provided to the CITY for review and comment. Four copies of the final report that incorporated the CITY's requested revisions requested will be provided.

Task 6.5 – Air Quality Analysis

The purpose of the air quality report is to identify any significant impacts and necessary mitigation measures, and to determine conformity with pertinent air quality rules. The air quality modeling assessment will meet the requirements of federal and state conformity regulations and the procedures in EPA's Guidelines for Modeling Carbon Monoxide from Roadway Intersections (1992), and will provide a project-level conformity determination for the project.

- After review of the proposed project alternatives and the results of the traffic analysis, the CONSULTANT will select intersections for project-level air quality modeling. The CONSULTANT will visit the project area to assess the presence of potentially sensitive receivers and to measure the physical parameters of the selected intersections.
- Traffic Impact Evaluation: The CONSULTANT will conduct an air quality impact analysis using approved regulatory models and modeling techniques. This analysis will include use of the latest MOBILE series emission factor prediction model and Version 2 of the

CAL3QHC dispersion model. In this process, the CONSULTANT will coordinate as necessary with the appropriate regulatory agencies. The modeling will calculate carbon monoxide (CO) concentrations near each intersection for the following scenarios: (1) existing conditions; (2) opening and design year no action; and (3) opening and design of the build alternative.

- **Mitigation Analysis:** In the event the impact analysis modeling indicates the project would cause significant air quality impacts, it will be necessary to quantitatively consider mitigation measures for each of the intersections where impacts are expected. For purposes of estimating a budget, the CONSULTANT will assume modeling mitigation measures are necessary at all four affected intersections for the worst-case of the build alternatives, and will allow one day for the iterative process of CAL3QHC and Synchro modeling.
- **Air Quality Technical Study:** The CONSULTANT will prepare a draft technical air quality report to document the methods and the results of the impact and mitigation analyses, and to provide a conformity statement for the project. The CITY will review the draft report and prepare consolidated comments. The CONSULTANT will incorporate the CITY's comments into a final technical report

The CONSULTANT will assemble this material into a draft air conformity analysis report and provide four copies of the draft document to the CITY for review. The CONSULTANT will finalize the report based on one round of CITY reviews and submit four copies of the final air conformity analysis report.

Task 6.6 – Noise Analysis

The purpose of the traffic noise report is to evaluate traffic noise levels at potentially sensitive receptors near the project and to identify potential mitigation measures. The traffic noise report will be developed in accordance with WSDOT's Environmental Procedures Manual.

1. **Sound Level Measurements:** After review of the proposed project alternatives, the CONSULTANT will visit the project area to identify potentially sensitive noise receivers and to take measurements of existing sound levels. The CONSULTANT will measure existing noise levels during the peak hours, and use these measurements in calibrating the noise model. Measurements will be undertaken in accordance with WSDOT and FHWA guidelines and will be made with a Type 1 sound level meter. During these measurements, sources of existing noise, topographical features, traffic speeds, vehicle numbers, and mix will be noted.
2. **Construction Noise Impact Evaluation:** The noise analysis will evaluate potential short-term impacts of noise from construction activities. Construction noise on nearby sensitive receptors will be evaluated based on estimates published by the U.S. Environmental Protection Agency of maximum noise levels of typical construction equipment in conjunction with simple distance attenuation. Computer modeling of construction noise levels will not be performed.

3. **Traffic Noise Impact Evaluation:** The CONSULTANT will evaluate traffic noise impacts using the FHWA Traffic Noise Model (TNM) to estimate future traffic noise levels for the worst-case build alternative. The worst-case scenario will be selected from among the build alternatives, and will be chosen based on expected future traffic volumes and the location of the alignment relative to sensitive receivers. The noise modeling will predict PM peak-hour Leq noise levels from traffic at a maximum of 15 receptor locations that could be affected by the proposed project and will consider existing conditions and design year conditions. Modeling to calculate noise contour lines is not included.
4. **Mitigation Analysis:** The CONSULTANT will identify mitigation measures to reduce noise levels during construction. If predicted long-term traffic noise levels from operation of the project would cause noise impacts, mitigation measures will be developed in cooperation with the lead agency and design engineers. Mitigation analysis, if required, will include evaluation of the effectiveness and general size and location of natural and man-made noise barriers using the TNM model.
5. **Noise Level Technical Study:** The CONSULTANT will prepare a draft technical noise report to document the methods and the results of the impact and mitigation analyses. The CITY will review the draft report and prepare consolidated comments. The CONSULTANT will incorporate the CITY's comments into a final technical report

The CONSULTANT will assemble this material into a draft traffic noise report and will provide four copies of the draft document to the CITY for review. The CONSULTANT will finalize the report based on one round of CITY reviews and submit four copies of the final traffic noise analysis report.

Task 6.7 – Biological Assessment

The CONSULTANT will coordinate with the CITY to address potential project impacts to sensitive species, particularly with respect to applicable requirements of the Endangered Species Act (EnSA).

Federal permits will be needed and, therefore, this PROJECT will require ESA Section 7 concurrence from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). The CONSULTANT will confirm which species NMFS and USFWS have federally listed. The CONSULTANT will also provide the priority species and habitat information from (1) the Washington State Department of Fish and Wildlife (WDFW), Priority Habitats and Species Program, (2) the Washington State Department of Natural Resources (WDNR), Washington Natural Heritage Program, and (3) the CITY and/or County GIS. The CONSULTANT will review this information, as well as other appropriate sources of information from existing literature and data resources, in conjunction with any necessary field reconnaissance.

In conjunction with other sensitive areas site reconnaissance activities, the CONSULTANT will verify the presence and availability of potential habitat for species of concern in the project action area.

The CONSULTANT will prepare required documentation for ESA compliance. Documentation for consistency with the ESA will consist of a biological assessment (BA) pursuant to Section 7 of the ESA. For budgeting purposes, it is assumed that a No Effect Letter will be required.

If a BA is required, the report will be prepared consistent with WSDOT LAG Guidelines. The CONSULTANT will assemble this material into a draft BA, provide four copies of the draft document to the CITY for review, finalize the report based on one round of CITY reviews, and submit four copies of the final BA report.

Task 6.8 – Social and Economic Impacts Study

The CONSULTANT shall describe the existing social environment of the project area and the surrounding community, including neighborhood structure, recreational facilities, public services, and growth and development potential. Appropriate local jurisdictions and other service providers shall provide information on recreational facilities and public services.

The CONSULTANT shall use the most recent U.S. Census data, or later population estimates produced by local jurisdictions, if available, and as approved by WSDOT. When using such data, a graphic showing the referenced census tracts shall be provided in the report.

Community Cohesion: The CONSULTANT shall discuss potential changes in neighborhood cohesion and community character as a result of possible splitting of neighborhoods, isolating a portion of a neighborhood, and the appearance of incompatible development with the neighborhood. Mitigation measures to minimize both the short- and long-term effects of the proposal on existing and proposed uses on adjacent properties shall be evaluated.

Recreation: The CONSULTANT shall list recreational facilities within the project study area. Potential impacts to recreational facilities during and after construction, including access to, the usability of, and the integrity of existing and proposed facilities shall be discussed. Resources that qualify as a 4(f) facility shall be identified. Discuss if there are feasible and prudent alternatives to the impacts of the alternative. Coordination with the local jurisdictions shall be documented in the DCE.

Regional and Community Growth: Regional population and growth patterns shall be described using Puget Sound Regional Council (PSRC) population and employment projections for 2010, 2020, and 2030. Population changes anticipated or accommodated as a result of the proposed transportation project shall be analyzed qualitatively.

Services and Utilities: The CONSULTANT shall describe how each public service (schools, police and fire protection, ambulance) will be affected by the construction and operation of the project improvements, including service disruptions, circuitry of access, and changes in service travel times during construction. Discuss changes in service areas, service travel times, and

new or additional services that may be needed as a result of any secondary or cumulative growth after project construction. Include any services provided to the public that may be impacted (such as police and fire protection, ambulance companies, public or private bus service, cemeteries, government offices, doctor and veterinarian offices, schools, religious institutions, community organizations).

The discussion of impacts to existing and proposed utilities shall include major distribution and transmission facilities for natural gas, electrical power, telephone, cable television, water supplies, sanitary sewer, storm sewer, solid waste routes, petroleum transmission facilities, public diking districts, and others that may be identified during this project. Contacts and resulting coordination with each utility shall be documented in the DCE.

Pedestrian and Bicyclist Facilities: The relative amount of use of the existing facility by pedestrians and bicyclists shall be generally described (no pedestrian or bike counts shall be made). The CONSULTANT shall indicate if the Port of Tacoma Road Interchange with I-5 is part of a designated or planned bicycle route or trail or if any designated or planned bicycle route or trail crosses the project area. Measures to mitigate the impacts, including identification of possible replacement land for acquired property; landscaping, aesthetic treatments, and other techniques shall be discussed. Care shall be taken to differentiate between trails designated as recreation facilities versus as transportation facilities.

Relocation: This section shall comply with the Uniform Relocation Assistance and Real Property Policies Act of 1970, as amended (42USC4601 et seq) and implemented by FHWA under 49CFR24, and contain a discussion on "Availability of Suitable Replacement Housing and Business Space." The acquisition of property, including land, structures, and landscaping, shall be identified based upon ROW plans and title reports. Any displacement of residences and businesses, loss of parking, or change in access shall be identified and evaluated. Mitigation measures specific to properties shall be analyzed, including the provision of relocation assistance.

Economics: The CONSULTANT shall use current applicable information and data to describe the existing economic conditions in the project area (number and type of business, employment, property values, and tax base.)

The CONSULTANT shall obtain information and summarize trends in population, employment, development, and level of economic activity within the study area. References shall be presented as appropriate. Major employers in the vicinity of the PROJECT shall be identified. Information about Pierce County and City of Fife tax revenues shall be obtained and summarized.

Impacts of the project shall be described, including construction-period economic impacts; temporary and long-term changes in traffic and associated shopping patterns; loss of businesses and jobs as a result of ROW acquisition; construction and long-term employment; and business growth.

Loss of property tax revenues associated with ROW -way acquisition and displacements shall be estimated using information from the Pierce County and Fife's Office of the Assessor. The potential for lost sales tax revenue from displacements shall be discussed qualitatively. The potential for businesses to be affected by the project during project construction or operation shall be analyzed and documented. The potential for employment increases resulting from project construction shall be discussed qualitatively. Potential mitigation measures shall be identified.

Measures to mitigate economic activity or employment impacts shall be identified (mitigation measures are not typically identified for property value or tax revenue impacts).

Task 6.9 – Environmental Justice

The purpose of this study is to document compliance with the Environmental Justice Executive Order. An analysis of the Title VI Population Groups within the project area will be provided. Popular breakdown will conform to U.S. Department of Transportation definitions for "minority" and "low-income." Methods for identification include examination of current census information and discussion with local agencies (for example, planners, social service providers, and school district officials), but will not include door-to-door visits in the project area. This review will also include a comparison of demographic information of the people within the study area to larger population groups to determine if any special populations reside within the project limits that exceed the characteristics of the City of Fife as a whole. Based on this research, the absence or presence of special population groups will be documented. If such groups are present in the project area, potential impacts, including the possibility for disproportionate adverse impacts on these populations would be evaluated consistent with Title VI of the Civil Rights Act of 1964. Mitigation measures for such impacts would be identified.

The CONSULTANT will assemble this material into an environmental justice assessment and provide five copies of the draft document to the CITY for review. The CONSULTANT will finalize the report based on one round of CITY reviews and submit five copies of the final environmental justice assessment report

Task 6.10 – NEPA Documentation and Approval

The CONSULTANT will complete appropriate NEPA documentation based on the studies and analysis provided above. The CONSULTANT will complete NEPA environmental documentation in accordance with Chapter 24 of the Local Agency Guidelines Manual and other appropriate WSDOT and/or FHWA guidance documents. The CONSULTANT will coordinate with WSDOT to address comments on the ECS. The CITY presently anticipates a NEPA DCE.

Deliverable(s)

- Documented Categorical Exclusion

Task 6.11 – SEPA Documentation and Approval

The CONSULTANT will complete appropriate SEPA documentation, including all needed studies, modeling, and analysis in accordance with State Environmental Policy Act (RCW 43.21C) and SEPA Rules (WAC 197-11). The CONSULTANT will coordinate with the Fife's Planning Department to address comments on the SEPA Checklist and provide support for the SEPA process. The CITY presently anticipates a SEPA Mitigated Determination of Non Significance.

Deliverable(s)

- Determination of Non-Significance

WORK ELEMENT 7: TRAVEL DEMAND FORECASTING

Task 7.1 – Travel Forecasting

The CONSULTANT shall prepare Travel Demand Forecasting to a level of detail appropriate to assist in the alternatives screening process and selection of the preferred alternative and the IJR. There are two potential tools that can be utilized in the development of the 2020 and 2040 travel demand forecasts. These tools include (1) the PSRC regional travel demand model, and (2) the City of Fife's VISUM model developed by David Evans for the City of Fife. Local travel demand models typically provide more detail within the local planning area (such as the local street system), but lack the regional details and features contained in the PSRC regional model. For this reason, the PSRC model provides a more accurate estimate of travel on regional facilities such as I-5, but could be less accurate on local streets that connect to the regional system. Currently, David Evans is working on the completion of the future year VISUM forecast models for the CITY. For this project, travel forecasting shall employ the latest version of the PSRC regional travel-forecasting model to obtain baseline-forecasting information for the year of opening (2020) and horizon year (2040) as required by FHWA. However, if the City's VISUM model is completed for the 2020 and 2040 forecast years with the appropriate local and regional land use assumptions, and in sufficient time to be used for this project, the CONSULTANT will compare the forecasts from the VISUM model with the forecasts from the PSRC regional model. If the VISUM forecasts for I-5 and other regional facilities (SR 509, SR 167, SR 18, and I-705) calibrate well with the PSRC forecasts, the CONSULTANT and the CITY will reach a mutual decision on whether to use the VISUM model to develop refined forecasts for the local street system. If the VISUM model is not available in sufficient time, and/or does not calibrate well with the PSRC model, the CONSULTANT will disaggregate the zone structure of the PSRC model around the Port of Tacoma, Portland Avenue, and 54th Avenue interchanges to provide a more accurate refinement of the zone structure and street network around the interchanges in the study area. The elements of the travel demand forecasts that the VISUM model could be utilized for (if available in time) include

- The development of intersection level turning movements on the local street system
- The development of routing and origin-destination (O-D) pairs on the Portland Avenue, Port of Tacoma Road, and 54th Avenue interchanges and ramps

The CONSULTANT shall further refine the travel demand forecast by considering growth-inducing effects in the Port of Tacoma and Puyallup Tribe/SSA Planned Marine Terminal. Under this task, the CONSULTANT shall draft a travel forecasting methods and assumptions technical memorandum that details the traffic forecasting methodology and baseline network assumptions to be employed on the PROJECT. The CITY and TAC will review and approve the travel forecasting methods and assumptions technical memorandum prior to commencement of the travel forecasting effort. Work under this task shall include the following elements.

- Coordinate future land use changes and plans for the Port of Tacoma and Puyallup Tribe/SSA Marine Terminal.
- Develop travel demand forecasting methods memorandum to confirm methods and gain consensus for developing traffic forecasts for the 2040 PM peak hour.
- Revise the PSRC's model to reflect the agreed 2020 and 2040 growth levels. New trip tables will be created.
- Revise the PSRC model to reflect future (2020 and 2040) baseline assumptions.
- Create select link analysis for each of the Port of Tacoma Road/I-5 interchange ramps to determine the trip distribution patterns and markets served by the Port of Tacoma Road/I-5 interchange.
- Develop routing and O-D for vehicle routing on I-5 and the I-5 interchanges in the study area for use in the traffic simulation model (VISSIM).
- Run traffic assignments in the revised model to obtain 2040 (PM peak) traffic volumes for No-Build and up to three Build Alternatives for up to 15 intersections and all freeway segments between the SR 18 and I-705 interchanges. It is assumed that not all the build alternatives will need a revised traffic assignment run in the PSRC travel demand model.
- Confirm mode split for low impact development alternatives.
- Create sensitivity analysis to address PM peak conditions to assess alternatives as necessary. This may include the sensitivity testing of proposed regional facilities (such as the extension of SR 167) to evaluate the potential impacts and/or benefits to the Port of Tacoma Road interchange.
- Prepare travel demand forecasting Documentation in a technical memorandum.

Meeting(s)

- Maximum of six meetings, including meetings with Port of Tacoma staff to confirm truck forecasts associated with future Port growth

Key Assumption(s)

- Toll lanes or managed lanes on I-5 will not be included in any baseline or build alternative.

- PM peak volumes will be used for the analysis of alternatives. AM peak volumes will only be used and/or developed to document existing conditions (2008), year of opening conditions (2020) for the preferred alternative, and horizon year conditions (2040) with the preferred alternative.
- The regional travel demand model will not be used to generate truck volumes in the study area. Truck volumes, routing, and percentages will be determined by updating prior studies related to growth at the Port of Tacoma and potential industrial growth in Fife and the Tacoma Tideflats. These truck volumes will be overlaid on top of the vehicular volumes generated from the regional travel demand model.

Deliverable(s)

- Draft travel demand forecasting methods and assumptions memorandum
- Final travel demand forecasting methods and assumptions memorandum
- Draft travel demand forecasting memorandum
- Final travel demand forecasting memorandum

Task 7.2 – Traffic Operations and Safety Analysis

The CONSULTANT shall conduct traffic operations and safety analysis for the preferred alternative. This analysis will be conducted using the VISSIM traffic operations model. Any analysis of alternatives during the screening process will be conducted using the PSRC regional travel demand model and/or the City of Fife’s Synchro model. For the purposes of this SOW, current conditions (2008), as well as 2020 and 2040 PM peak hour conditions will be evaluated. Any alternatives analysis will be conducted using 2040 PM peak volumes. The 2020 PM peak volumes will be used to document year of opening conditions for the selected preferred alternative. A sensitivity analysis using the PSRC regional travel demand model will be performed for the 2040 PM peak condition, as needed, to assist in evaluating alternatives. The tools that will be used to conduct the traffic operations and safety analysis will include VISSIM and the CITY’s Synchro model. VISSIM will be used to evaluate and analyze operations on I-5. The CITY’s Synchro model will be used to evaluate operations on the local street system and to develop signal timing parameters at ramp interchanges for input into VISSIM. A Traffic operations and accident analysis methods and assumptions memo will be developed to gain consensus on the methods and assumptions to be applied to the traffic and safety operations analysis. The VISSIM traffic operations and safety analysis for the preferred alternative shall include the following tasks.

- Document current year (2008) operations utilizing available data for the freeway segments on I-5 between SR 18 and I-705 and for up to 15 intersections.
- Develop 2040 freeway and intersections analysis for same segments and intersections noted above for the No-Build and preferred alternative.
- Develop accident analysis of current freeway and local street segments and project forward to year 2040 for the No-Build and preferred alternative.

The traffic operations analysis that will be performed for screening alternatives will be conducted using the PSRC regional travel demand model and the City's Synchro model. Additional qualitative comparisons of the operational and safety benefits and impacts of screening alternatives will be considered and summarized in a traffic analysis technical memorandum.

A summary of the scenarios that will receive detailed traffic operations analysis and the tool that will be used to conduct the analysis is provided below:

Project Scenarios for Traffic Analysis	
2008 AM	VISSIM
2008 PM	VISSIM
2020 AM Preferred	VISSIM
2020 PM Preferred	VISSIM
2020 AM No Build	VISSIM
2020 PM No Build	VISSIM
2040 AM Preferred	VISSIM
2040 PM Preferred	VISSIM
2040 AM No Build	VISSIM
2040 PM No Build	VISSIM
2040 PM Alternatives Analysis (2 Build Alts)	EMME/2 Synchro

The CONSULTANT will use EMME/2 (the regional travel demand model) to screen the alternatives down to two(2) build alternatives. This screening process will be at a high level, looking at the differences in raw model volumes and outputs (no LOS analysis). From the two build alternatives, the City and the TAC would then make a decision about what to recommend as the preferred alternative. Only the preferred alternative will be analyzed in detail using VISSIM. The preferred alternative will be analyzed for the 2020 and 2040 AM and PM peak conditions and compared to the No Build alternative. The CONSULTANT will use Synchro (local intersections analysis only-- no freeway modeling) to make refined decisions about the two build alternatives (no VISSIM) to help with the recommendation of the preferred alternative.

Meeting(s)

- Maximum of three meetings

Assumption(s)

- VISSIM will be used to evaluate traffic operations on I-5 (ramps, ramp intersections, mainline, and interchanges) for the preferred alternative.
- The CITY's Synchro model will be used to analyze traffic operations on the local street system.
- 2040 PM peak volumes will be used for the alternatives analysis. AM peak volumes will only be used to document existing conditions (2008), year of opening conditions (2020) for the preferred alternative, and horizon year conditions (2040) with the preferred alternative.

- Truck volumes will be determined based on future industrial and Port growth. These truck volumes will be overlaid on top of the vehicular volumes generated from the regional travel demand model and will be used in the traffic operations analysis.

Deliverable(s)

- Draft traffic operations and safety analysis methods and assumptions
- Final traffic operations and safety analysis methods and assumptions
- Draft traffic operations and safety technical memorandum
- Final traffic operations and safety technical memorandum

WORK ELEMENT 8: INTERCHANGE JUSTIFICATION REPORT

Task 8.1 – Interchange Justification Report

CONSULTANT shall prepare an IJR for the Proposed Action. The report shall be developed in accordance with WSDOT's Design Manual Chapter 1425. The analysis shall document that the Proposed Action meets the PROJECT's purpose and need statement and will meet the eight point requirements for FHWA approval. The IJR will be reviewed by the CITY, WSDOT, and FHWA. For budgeting purposes, the CONSULTANT shall assume two reviews of the draft IJR by the CITY and WSDOT with each review taking up to three weeks, with an additional two-month review by FHWA.

Deliverable(s)

- Two draft IJR's (one electronic pdf copy and four hard copies), including operational analysis data files
- Final IJR (one electronic pdf copy and four hard copies)

WORK ELEMENT 9: PRELIMINARY ENGINEERING

Task 9.1 – Hydraulics Report

The CONSULTANT shall prepare a Type A hydraulics report meeting outlined standards of the WSDOT Hydraulics Manual and the updated Highway Runoff Manual procedures. The report shall follow WSDOT's Northwest Regions Stormwater Report Checklist and Template using the portions applicable for a hydraulics report. Work outside WSDOT ROW shall meet design standards outlined in the CITY's Low Impact Development Manual.

For budgeting purposes, it is assumed that the CITY and WSDOT will review the hydraulic report three times and provide one consolidated set of comments for each review. After each review, as part of the next submittal, the CONSULTANT shall respond to each review comment indicating how and where the comment was addressed.

The CONSULTANT shall prepare preliminary drainage design plans to the 30 percent design level.

Deliverable(s)

- Two draft hydraulics reports for review (two hard copies)

- Final hydraulics report for approval (one electronic copy and three hard copies)
- Preliminary drainage plans

Task 9.2 – Preliminary Plans

The CONSULTANT will prepare preliminary plans for the project. The objective of this task is to develop project geometrics and engineering design necessary to describe enough of the project to produce the channelization plans of Task 9.4 below, as well as to identify additional ROW needs. The following plans will be included in the preliminary plans set.

- Alignment plans
- Profiles
- Preliminary ROW plans (showing boundaries only and not intended for approval)
- Drainage plans and profiles (as developed for task 9.1)

Deliverable(s)

- Preliminary plans

Task 9.3 – Preliminary Cost Estimate

The CONSULTANT will prepare a preliminary cost estimate for the project.

Task 9.4 – Channelization Plans for Approval

The CONSULTANT shall prepare channelization plans for approval of the new interchange within the project limits. The plans shall be prepared using the latest MUTCD and WSDOT Design Manual guidelines. The plans shall be prepared at 1"=50' scale. The plans shall show elements outlined in the WSDOT Northwest Region Design Guidelines, and the WSDOT Northwest Region Checklist for Channelization Plans. For budgeting purposes, it is assumed that WSDOT will review the channelization plans three times and provide one consolidated set of comments for each review. After each review, as part of the next submittal, the CONSULTANT shall respond to each review comment indicating how and where the comment was addressed.

Deliverable(s)

- Three submittals draft channelization plans for review (two 11x17 hard copies)
- Final channelization plans for approval (one electronic copy and one full-size velum copy)

Task 9.5 – Design Variance

The CONSULTANT shall prepare a list of recommended design deviations, evaluate upgrades, and design exceptions. The CONSULTANT shall submit for approval each recommended deviation and evaluated upgrade. These documents shall be the basis for the development of deviations and evaluate upgrades.

For budgeting purposes, it is assumed that WSDOT will review the deviations and evaluate upgrades three times and provide one consolidated set of comments for each review with each review taking four weeks. All deviations dealing with I-5 will also require FHWA review and approval and additional review time. After each review, as part of the next submittal, the

CONSULTANT shall respond to each review comment indicating how and where the comment was addressed.

Deliverable(s)

- Design variance inventory (one electronic copy and one hard copy)
- Three draft design deviations and evaluate upgrades for approval (two hard copies)
- Three review comment responses
- Final design deviations and evaluate upgrades for approval (one electronic copy and two hard copies)

Task 9.6 – Construction Phasing Plan

The CONSULTANT shall prepare a phasing plan for the preferred alternative. The phasing plan should also include a planning level cost estimate for each individual component and phase of construction. The CONSULTANT shall prepare a phasing plan/memorandum for review and endorsement by the TAC.

PREPARATION REQUIREMENTS

It is anticipated that all design and engineering for facilities located within WSDOT right-of-way will be developed using English units in accordance with the latest edition, amendments, and revisions of the publications listed below. Design and engineering of facilities located with the City of Fife will comply with City of Fife standards and design policies or in accordance with the following publications as directed by City staff.

WSDOT Publications

- “Design Manual” (M 22-01)
- “Highway Runoff Manual” (M31-016.1) in conjunction with “Hydraulics Manual” (M 23-03)
- “Plans Preparation Manual” (M 22-31)
- Amendments and General Special Provisions
- Standard Item Table
- R/W Manual
- Environmental Procedures Manual (M31-1)
- Northwest Region Current Practices in Signal Design including
 - Back Up Data Requirements (Illumination)
 - Engineering Back Up Data Requirements (Signals)
 - Plans Preparation Checklist
 - Northwest Region Standard Loop Numbering
 - Placement of Advanced Loops
- “Guidelines for Developing Freshwater Mitigation Plans and Proposals” (DOE, 1994)
- American Association of State Highway and Transportation Officials Publications (Latest Versions)
- “A Policy on Geometric Design of Highways and Streets”
- “Standard Specifications for Highway Bridges, Sixteenth Edition”

- "A Guide for Highway Landscape and Environmental Design"
- "Highway Design and Operational Practices Related to Highway Safety" ("Yellow book")
- "Roadside Design Guide"
- Any American Association of State Highway Officials policy applicable where said policy is not in conflict with the standards of State.

U.S. Department of Transportation Publications

- "Manual on Uniform Traffic Control Devices for Streets and Highways"
- "Highway Capacity Manual"

Washington State Department of Ecology (DOE) Publications

- 2005 DOE Stormwater Management Manual for Western Washington

Other Publications

- "National Electrical Code"
- Applicable County and City Publications

Computer Hardware and Software

The CONSULTANT shall provide the PS&E package in the IBM-compatible format of

- Microsoft Office - Windows NT Version 4.0 or latest
- Microsoft Project - Version 4.1a or latest
- Internet Access with Transport Control Protocol/File Transfer Protocol
- (TCP/FTP) capabilities and the CONSULTANT shall have an e-mail address
- CADD - MicroStation, Bentley Systems, Inc. - MicroStation J or latest version, including continuous updates
- Design Software - Inroads latest version, including continuous updates

The CONSULTANT shall obtain the latest versions of CITY's manuals.

Obtaining AASHTO, USDOT, and other non-WSDOT or CITY publications shall be the CONSULTANT's responsibility.

EXHIBIT E: Consultant Fee Determination

Analysis of Costs - BERGER/ABAM Inc.

Direct Salary Cost (DSC)

PERSONNEL	Hours	Pay Rate	Cost
Principal	127	\$72.60	\$ 9,220
Project Manager	1051	\$55.05	57,858
Project Engineer	2276	\$46.09	104,901
Planner/ Scientist	139	\$39.28	5,460
Engineer/ Designer	1908	\$30.79	58,747
Graphics/ CADD	516	\$27.35	14,113
Clerical	149	\$27.16	4,047
<hr/>			
Direct Salary Cost Total	6166	\$	254,345
Salary Escalation (see escalation tab)		\$	10,198

<u>Overhead Cost</u>	<u>160.00%</u>	of DSC	\$	423,269
<u>Net Fee</u>	<u>30.00%</u>	of DSC	\$	79,363

SUBTOTAL \$ 767,174

Reimbursables

Travel/Parking	\$	152
Reproduction/Postage		1,050
Computer/Special Equipment		-
Miscellaneous		-

SUBTOTAL 1,202

BERGER/ABAM SUBTOTAL 49.2% \$ 768,377

Subconsultants: (See Exhibit G)

DKS Associates	SBE		22.4%	Participation	\$	350,325.67
ESM Consulting Engineers LLC	SBE	DBE	3.6%	Participation	\$	55,469.58
GeoEngineers			2.7%	Participation	\$	41,575.40
Heffron Transportation, Inc.	SBE	DBE	3.9%	Participation	\$	60,407.43
VA Firm/Team (Allowance)			0.0%	Participation		
Widener & Associates	SBE	DBE	11.9%	Participation	\$	185,995.83
		Total DBE	19.3%			

SUBCONSULTANTS SUBTOTAL \$ 693,774

Management Reserve \$ 100,000

GRAND TOTAL \$ 1,562,150

Prepared By _____

Date _____



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

February 28, 2008

360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Mr. Russ Blount
Public Works Director
City of Fife
5411 East 23rd Street
Fife, WA 98424-2061

High Priority Project

Dear Mr. Blount:

We are pleased to advise you that the Federal Highway Administration (FHWA) has recently released the 2008 allocation for the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for User's (SAFETEA-LU) High Priority Projects program. FHWA has limited federal aid funding for your project as follows:

WA149	Port of Tacoma Road	\$342,190
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The final project amount may change due to annual USDOT administrative fees and subsequent congressional actions. At this time, FHWA has allocated the FFY 2005, 2006, 2007, and 2008 funds for federal reimbursement of \$285,039. These federal funds are available at 100 percent and require no local match. WSDOT will notify you once FHWA issues the FFY 2009 allocation.

SAFETEA-LU does provide some flexibility in funds management; for example, advance construction. Advance construction allows an agency to begin incurring expenditures at their expense. To maximize the funding flexibility for local agencies, WSDOT requires a Quarterly Project Report form be completed by the end of March, June, September, and December. The online database can be found at the following website:
<http://www.wsdot.wa.gov/TA/ProgMgt/OPR/OPR.html>. To access the database, your account name is Fife and password is Fife684 (the password is case sensitive).

To obligate funding for the project, please refer to your Local Agency Guidelines (LAG) manual for additional information. Projects utilizing federal funds must be included in your current Transportation Improvement Program (TIP). Once your TIP amendment is approved, WSDOT will amend the Statewide Transportation Improvement Program (STIP). Also, project expenditures incurred before receiving notice from us of federal fund obligation are ineligible.

For assistance please contact Neal Campbell, your Region Local Programs Engineer, at (360) 357-2666.

Sincerely,

Kathleen B. Davis
Director
Highways & Local Programs Division

cc: Neal Campbell, Olympic Region Local Programs Engineer, MS 47440
Bob Drewel, Puget Sound Regional Council

RECEIVED
PUBLIC WORKS

MAR 14 2008

City of Fife



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

September 2, 2008

360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Mr. Russ Blount
Public Works Director
City of Fife
5411 East 23rd Street
Fife, WA 98424-2061

**City of Fife
I-5/Port of Tacoma Rd. Interchange
IMD-0450(001)
FUND AUTHORIZATION**

Russ

Dear Mr. Blount:

We have received FHWA fund authorization, effective August 29, 2008, for this project as follows:

PHASE	TOTAL	FEDERAL SHARE
Preliminary Engineering	\$902,520	\$902,520

Enclosed for your information and file is a fully executed copy of Local Agency Agreement LA-6723 between the state and your agency. All costs exceeding those shown on this agreement are the sole responsibility of your agency.

WSDOT authorization to proceed with right of way and/or construction is contingent upon receipt and approval of your environmental documents.

WSDOT authorization to proceed with construction is contingent upon receipt of your Right of Way Certification.

All future correspondence relating to the project is to be submitted to your Region Local Programs Engineer, Neal Campbell at (360)357-2666.

Sincerely,

Stephanie Tax
Manager, Program Management
Highways & Local Programs Division

ST:jg:ac
Enclosure

cc: Neal Campbell, Olympic Region Local Programs Engineer, MS 47440