Council Meeting Date: May 1, 2017 **Agenda Item:** 7(c)

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorize the City Manager to Execute a Contract for Professional Services with H.W. Lochner for Design and Environmental Services for the SR-523 & Interstate-5 Interchange Project in an Amount not to Exceed $1,259,744
DEPARTMENT:	Public Works
PRESENTED BY:	Tricia Juhnke
ACTION:	____ Ordinance ____ Resolution __X__ Motion ____ Discussion ____ Public Hearing

PROBLEM/ISSUE STATEMENT:

Staff is requesting that the Council authorize the City Manager to execute a contract with H.W. Lochner for design and environmental services related to the SR-523 (N/NE 145th Street) & Interstate-5 (I-5) Interchange Project. The scope of work for this contract is attached to this staff report as Attachment A.

The City of Shoreline is implementing improvements identified in the 145th Street Multimodal Corridor Study to improve access and safety for all travel modes using the corridor and to improve access to Sound Transit's 145th Street Light Station. The SR-523 & I-5 Interchange Project will reduce congestion, improve traffic operations, pedestrian and bike access, and create a "gateway" into Shoreline on this segment of the corridor. In order to advance the project, the City is proposing to contract with a consultant team to provide engineering and environmental services.

RESOURCE/FINANCIAL IMPACT:

H.W. Lochner will provide engineering, design and environmental services for the project. The fee for services will be $1,259,744. The City has received $3,892,500 of Surface Transportation Program grant funding for environmental review and final design, a portion is used for this preliminary work. Matching City funds are available from the Roads Capital Fund. The project cost and budget summary is as follows:

EXPENDITURES	
City Staff	$ 250,000
Direct Expenses	$ 80,000
Consultant Contracts	
30-Percent Design and Environmental ***(H.W. Lochner)***	***$ 1,259,744***
Final Design (available budget)	$ 2,200,000
Miscellaneous	$ 50,000
WSDOT	$ 140,000
Contingency	$ 520,256
Total Expenditures	**$ 4,500,000**

REVENUE	
Roads Capital Fund	$ 607,500
Federal Grant	$ 3,892,500
Total Expenditures	**$ 4,500,000**

RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute a contract with H.W. Lochner for design and environmental services related to the SR-523 (N/NE 145th Street) & I-5 Interchange Project in an amount not to exceed $1,259,744.

ATTACHMENTS:
Attachment A: H.W. Lochner SR 523 & I-5 Interchange Project Scope of Work

Approved By: City Manager ***DT*** City Attorney ***MK***

BACKGROUND

In 2016, the City completed the 145th Street Multimodal Corridor Study which identified needed improvements at the 145th Street and Interstate 5 interchange in addition to improvements on three other segments of the corridor. The interchange improvements are needed to improve traffic operations, pedestrian and bicycle access to the 145th Street light rail station, and to create a "gateway" into Shoreline. The City sought and received a federal transportation grant to reduce the local funding contribution to this project.

The design will progress in two steps. First, the City will contract with a consultant on preliminary design (30-Percent Design) and the environmental documentation such as SEPA and NEPA. These early documents will further refine the project elements and allow greater accuracy in estimating the final design scope and costs. With the information from the 30-Percent design, the City will enter into a contract with H. W. Lochner or another consultant to perform final design.

ALTERNATIVES ANALYSIS

The City requested proposals from qualified firms interested in designing the interchange project. Two qualified firms responded. Based on a review of written qualifications, interviews, and a review of references H.W. Lochner was determined to be the most qualified firm for the project.

RESOURCE/FINANCIAL IMPACT

H.W. Lochner will provide 30-Percent engineering design and environmental services. The City has received $3,892,500 of Surface Transportation Program grant funding for environmental review and final design, a portion is used for this preliminary work. Matching city funds are available from the Roads Capital Fund. The fee for services will be $1,259,744. The project cost and budget summary is as follows:

EXPENDITURES

City Staff	$ 250,000
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Consultant Contracts	
30-Percent Design and Environmental ***(H.W. Lochner)***	***$ 1,259,744***
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Total Expenditures	**$ 4,500,000**

REVENUE

Roads Capital Fund	$ 607,500
Federal Grant	$ 3,892,500
Total Revenue	**$ 4,500,000**

RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute a contract with H.W. Lochner for design and environmental services related to the SR-523 (N/NE 145th Street) & I-5 Interchange Project in an amount not to exceed $1,259,744.

Exhibit A – Scope of Services

City of Shoreline
SR 523 & I-5 Interchange

Prepared for:

the City of Shoreline, Washington

Prepared by:

LOCHNER

915 118th Avenue SE, Suite 130
Bellevue, WA 98005

Contents

EXHIBIT A – SCOPE OF SERVICES

City of Shoreline

SR 523 & I-5 Interchange

Lochner Project Number: 000013029

PROJECT DESCRIPTION

The City of Shoreline completed the 145th Street Multimodal Corridor Study (November 2016) which outlined improvements along the entire length of 145th Street (State Route 523) as well as off-corridor improvements for bikes. The SR-523 and I-5 Interchange project is one of several projects identified in the plan. This project makes improvements for vehicles, bikes, and pedestrians at the I-5 interchange along 145th Street. Proposed improvements include the addition of a non-motorized bridge spanning I-5 to the north of the existing vehicular bridge, providing an for an additional lane of traffic on the existing bridge, adding a new northbound on-ramp to I-5, improvements to adjacent intersections at 4th Avenue and 5th Avenue, and making non-motorized connections between the interchange area and Sound Transit's proposed light rail station north of 145th Street.

This project will improve the SR 523 (145th Street) and I-5 interchange with the construction of a pedestrian bridge crossing, providing for an additional lane of traffic on the existing bridge, construction of a new north bound on-ramp and analysis and prospective improvements to the intersection ramp terminals and the intersections of SR 523 and 4th Ave NE, and SR 523 and 5th Ave NE.

The project design and engineering is anticipated to be delivered in 2 phases. These are:

- Phase I: Interchange Justification Report (IJR), preliminary design and environmental approval
- Phase II: Final design and right-of-way acquisition

This scope of services applies to Phase 1 services.

GENERAL ASSUMPTIONS

H.W. Lochner, Inc. (CONSULTANT) will provide professional services to the City of Shoreline (CITY) as outlined in the tasks descriptions below. The following general provisions/assumptions have been made:

- The CONSULTANT will maintain continuous routine communication with the CITY throughout the project

- For the purposes of budgeting, the anticipated duration of the Preliminary Design and Environmental Approval phase will be approximately twelve (12) months beginning in March, 2017 and ending March, 2018
- Reports and drawings developed under this contract will be provided in hardcopy and electronic (pdf) format
- Engineering drawings will be prepared using MicroStation. Files will be converted to the format requested by the CITY at the completion of each phase and as needed for file sharing with the project team.
- The CONSULTANT will provide the CITY with preliminary plans for review at approximately the 30% level of design
- It is understood and agreed that tasks may be added or deleted from the scope of services by mutual agreement of the CITY (City of Shoreline) and the CONSULTANT (HW Lochner). Additional fee may be required for additional tasks
- Original permits, approvals, agreements or other obligations will be forwarded to the CITY in hardcopy and electronic form.
- The project documents and CADD files will be maintained and stored electronically using ProjectWise. The City will have access to these files at all times throughout the life of the project.
- Federal Funds are included in the project budget for design
- The CITY will provide timely and coordinated review of draft strategies and materials to streamline production and team efficiency
- The CITY will manage public inquiries received via the point of contact and take the lead in preparing responses to questions. Staff will share these communications, as appropriate, with the project team to inform outreach strategies and summaries of public input
- The CITY will serve as the main media contact for the project and will take the lead role on proactive media outreach and media response for the project

DESIGN STANDARDS

Plans, specifications, and contract documents, to the extent feasible, will be developed in accordance with the following, as applicable:

- Washington State Department of Transportation/American Public Works Association, “Standard Specifications for Road, Bridge, and Municipal Construction”, M41-10, 2016
- Washington State Department of Transportation, “Standard Plans for Road and Bridge Construction”, M21-01 last modified date August, 2015
- FHWA and Washington State Department of Transportation, “Manual on Uniform Traffic Control Devices for Streets and Highways” 2009

- A Policy on Geometric Design of Highways and Streets (AASHTO green book), 6th Edition, 2011
- Department of Ecology (Ecology) 2012 “Stormwater Management Manual for Western Washington” (SWMMWW)
- 2011 WSDOT Hydraulics Manual
- City of Shoreline Engineering Development Standards, 2012 or current version
- City of Seattle Standards Plans and Specs
- Applicable provisions of the Americans with Disabilities Act, as amended
- WSDOT Bridge Design Manual (LRFD) 2016
- AASHTO LRFD Bridge Specifications, 7th Edition with 2015 and 2016 Interims
- AASHTO Standard Specifications for Highway Bridges, 17th Edition 2002

TASK 1: PROJECT MANAGEMENT

1.a Contract Management

The CONSULTANT will provide a monthly status/ progress report with invoices every four weeks, itemized by task and subtask, to the CITY that will describe services provided by the CONSULTANT team members during the current reporting period. The progress reports will be prepared in a format approved by the CITY's Project Manager. The monthly status report will include an earned value analysis.

Assumptions:

- A general summary of activities performed by the CONSULTANT team including meetings held during the reporting period
- Listing of activities by element performed by the CONSULTANT team during the reporting period
- A listing of problems/ issues encountered during the reporting period and their resolution
- A listing of activities to be accomplished during the next reporting period

Deliverables:

- Monthly Status/Progress Reports, Earned Value analysis and Monthly Invoices

1.b Subconsultant Management

The CONSULTANT will be responsible for on-going management of the consultant team for this project in accordance with the provisions of the Agreement. On-going management will include completion of professional services in a timely manner and within the agreement budget. The CONSULTANT will be responsible for:

- Strategic management and reporting
- Developing and maintaining a Project Management Plan consisting of
    - Project Description & Objectives
    - Scope
    - Contract & Budget
    - Schedule
    - Organizational Chart
    - List of Contacts
    - QC/QA Plan
- Conducting regular bi-weekly meetings with internal staff and subconsultants.
- Making assignments to project staff and subconsultants

The CONSULTANT will be responsible for coordinating the activities of the subconsultants as necessary to complete the elements of the Agreement. This coordination will include preparing subconsultant agreements, obtaining monthly progress reports and invoices, timely input for meetings, incorporating services provided into project deliverables and obtaining answers to issues raised by the Management Team. The CONSULTANT's Project Manager will be the contact for questions and requests from the CITY's Project Manager. Discussions, correspondence, or services requested of the CONSULTANT, that impact the scope of services, budget, or products will be directed in writing to the CITY's Project Manager.

Assumptions:

- The Project Schedule will be prepared using Microsoft Project and will be updated bi-weekly or as necessary
- Team meetings are anticipated to be held bi-weekly for twelve (12) months for a total of twenty-four (24) meetings.
- Subconsultants will typically attend meetings by conference call. Assume four (4) in person meetings by subconsultants.

Deliverables:

- Preparation of meeting agendas for bi-weekly coordination meetings
- Preparation of meeting notes for bi-weekly coordination meeting
- Project Management Plan (One PDF with updated documents delivered electronically)
- Project Schedule monthly updates (One PDF with updated documents delivered electronically)

1.b.1 Quality Control/Quality Assurance

The CONSULTANT will provide quality assurance and quality control (QA/QC) throughout the life of the Agreement. The CONSULTANT will develop a project specific Quality Control Plan (QCP). The purpose of the plans is to provide appropriate administration, accounting, budget monitoring, scheduling, communications, and planning and engineering procedures leading to the final product.

The CONSULTANT will provide QA/QC reviews on all deliverables and ensure that deliverables by subconsultants also have QA/QC performed. QA/QC documentation will be provided to the CITY upon request. The CONSULTANT will perform QC checks on all deliverables throughout the life of the project.

As a general practice, the CONSULTANT performs a QA audit for all active projects on an annual basis. It is anticipated that this project will be subject to a QA audit in the summer/fall of 2017 and again in the summer/fall of 2018. QA audits include a review of the QCP and a review of deliverables to confirm that the process described in the QCP has been adhered to for the development of plan sheets, quantity calculations and estimates, technical memorandums and project specifications.

Assumptions:

- QA/QC reviews of documents and drawings will be maintained as part of the project files
- Subconsultants are responsible for developing and implementing quality control procedures for deliverables prior to submitting to the prime CONSULTANT.

Deliverables:

- Project Specific Quality Control Plan will be included with the Project Management Plan

1.b.2 Kick-off Meeting

A Kick-off Meeting will be held at the beginning of the project and attended by key team members of the CITY staff, CONSULTANT and subconsultants. The goal will be to enhance commitment by developing ownership within members of the project team, to confirm assignments of project activities to be completed by each team member, and to finalize development of a definitive Project Schedule.

The meeting will also provide opportunities to establish management procedures, lines of communications, identify lines of authority for decision making, provide clear direction to team members, discuss the project schedule and get buy-in from team members, identify stakeholders and provide a general exchange of views and ideas regarding the execution and development of the project.

Assumptions:

- The Kick-off Meeting will be held at CITY Hall
- The Kick-off Meeting will be attended by key members of the project team as appropriate
- The Kick-off Meeting will include a site walk of the project area unless weather prohibits

Deliverables:

- Kick-Off Meeting Agenda and Meeting Summary (1 electronic copy)

1.c Coordination with the City

The CONSULTANT will maintain regular contact and coordination with the CITY's Project Manager in accordance with the provisions of the Agreement. The CONSULTANT's Project Manager will be responsible for:

- Maintaining regular contact with the CITY and designated project management team staff through informal office visits, telephone conversations, e-mails, correspondence, and faxes
- Maintaining open access to project information by the CITY
- The CITY's Project Manager may contact team members as needed during each phase of the project with a summary of discussions sent to the CONSULTANT's Project Manager

Assumptions:

- Project meetings with the CITY's Project Manager are anticipated to occur bi-weekly for the twelve (12) month duration of the project. These meetings will be attended by up to two (2) CONSULTANT staff. Other CONSULTANT staff will attend if necessary to provide technical expertise. Other CONSULTANT staff may also attend via conference call if appropriate
- CITY staff will provide timely and coordinated review of draft strategies and materials to streamline production and team efficiency
- The CITY will identify and provide contact information (email, mail and phone) for project point of contact at the CITY to include on outreach materials
- The CITY will manage public inquiries received via the point of contact and take the lead in preparing responses to questions. The CITY will share these communications, as appropriate, to inform interim reports on public outreach and/or the final outreach summary
- CITY staff will lead preparation for and attend CITY Council meetings

Deliverables:

- Meeting Agendas and Meeting Summary's (1 electronic copy)
- Other meeting materials will include products that convey the current level of progress

1.d Delivery Plan Support

The CONSULTANT will support the CITY with selection of the appropriate project delivery method. An evaluation based on the project risks, constraints and opportunities will be made and a recommendation provided to the City.

The CONSULTANT will perform the following specific tasks:

- Prepare the Project Summary Package including Project Description and attributes such as scope, schedule and budget
- Prepare the Project Delivery Method (PDM) Attribute Comparison Spreadsheet
- The CONSULTANT will support the CITY with WSDOT coordination through the process

Assumptions:

- The CONSULTANT will follow WSDOT's PDM Selection Guidance
- Up to two (2) coordination meetings with WSDOT including two (2) consultant staff per meeting

Deliverables:

- Project Summary Package (One (1) hard copy and one (1) electronic copy)
- PDM Attribute Comparison Spreadsheet (One (1) hard copy and one (1) electronic copy)
- Meeting materials reflecting the current level of design including agendas and summary notes

1.e Funding Strategy

The CONSULTANT will support the CITY in seeking additional funding required for project construction and right-of-way acquisition (if needed). Possible opportunities include PSRC (STP) Countywide and Regional and TIB.

The CONSULTANT will also assist the City develop an appropriate strategy through which to accelerate funding through Connecting Washington.

Assumptions:

- The CONSULTANT support will include providing graphics, cost estimates and final preparation and submittal
- For estimating purposes, support for three (3) applications is assumed

Deliverables:

- Grant Application submittal packages (Three (3) electronic submittal packages
- Funding acceleration strategy

1.f Interagency Coordination

The SR 523 and I-5 Interchange project involves coordination with several agencies, including at a minimum, City of Shoreline, City of Seattle, King County, Washington State Department of Transportation (WSDOT) Local Programs, Puget Sound Regional Council (PSRC), Sound Transit, and affected Northwest Indian Tribes. In addition, The CONSULTANT anticipates attending coordination meeting with other consultant teams concurrently developing design and construction documents for adjacent projects. The CONSULTANT will work with the CITY to facilitate stakeholder meetings to keep the parties informed about project progress, resolve project issues and obtain approvals.

Assumptions:

- For budgeting purposes the following Interagency Coordination meetings are anticipated:
    - WSDOT Meetings – assume twelve (12)
        - Bridge office
        - Design office / Public Transportation
        - Traffic
        - Other (Enviro, R/W, Permitting)
    - Adjacent projects Consultant Coordination Meetings – assume four (4) meetings
- Additional one-on-one meetings with agencies for coordination are anticipated. These meeting are required for general coordination, progress updates and submittal reviews. Up to four (4) meetings of this nature are anticipated
- Interagency Coordination meetings are assumed to will be held at the City or WSDOT NW Region office and facilitated by City staff

- One-on-one meeting location is anticipated to be held at the agency location
- The CONSULTANT will provide materials to support each meeting

Deliverables:

- Meeting Agendas and Meeting Summary's (1 electronic copy)
- Other meeting materials will include products that convey the current level of progress.

1.f.1 Environmental Interagency Coordination

The CONSULTANT will coordinate initial meetings with each of the key agencies, Sound Transit, WSDOT, King County and the City of Seattle, to discuss what environmental permit reviews will be necessary, and to help define what level of interaction they will require going forward.

1.g Project Close Out

The CONSULTANT will gather the project files from the CONSULTANT team, organize them, and combine into one file. The final files will be delivered to the CITY. Closeout of a project phase does not constitute approval by the CITY.

Deliverables:

- Project Files in Electronic Format

TASK 2: INTERCHANGE JUSTIFICATION REPORT (IJR)

This project includes the preparation of an Interchange Justification Report (IJR) for ramp modifications to the SR 523/I-5 interchange. Improvements to the interchange are anticipated to include:

- The addition of a northbound loop ramp. This ramp will tie into an existing Sound Transit flyer stop which will be abandoned as part of the Sound Transit light rail project
- Modifications to the SR 523 bridge include removing of existing sidewalks to provide for an additional lane of traffic
- A separate pedestrian bridge will be constructed to the north of the existing vehicle bridge
- An additional pedestrian route is anticipated to be constructed on the south side of the existing structure by cantilevering a new sidewalk

Assumptions:

- The 145th Street Multimodal Corridor Study identifies needed improvements along SR 523 and will be used as the basis for the IJR purpose and need
- No new freeway access is being added
- Traffic operation within the interchange area will be modified, however these modifications are not anticipated to change traffic volumes to or from I-5.
- A micro-simulation model of interstate operations will not be required

2.a Leadership and Strategy

The CONSULTANT will work with the City to identify and assemble a support team for the development of the IJR. This team, referred to as the Stakeholder Committee, consists of subject matter experts and decision makers. A separate subset of the Stakeholder Committee will form the Technical Team. This team is comprised of technical experts who can support the technical aspects of the project. This group will likely be comprised of members of the Interagency Technical Team the City has already established as part of the projects planning efforts.

The CONSULTANT will work with the CITY to coordinate and facilitate a scoping meeting with WSDOT to determine if a supplement to the existing IJR is sufficient or if a new IJR will be required. This meeting will also serve to confirm appropriate, Stakeholder Committee, Technical Team and roles and responsibilities.

Assumptions:

- IJR Stakeholder meetings assume four (4) meetings attended by up to four (4) consultant staff.
- IJR Technical Team meetings assume eight (8) meetings attended by up to four (4) consultant staff.

Deliverables:

- Meeting material including agenda and meeting summary notes

2.b Methods and Assumptions

CONSULTANT will prepare a draft and final Assumptions Document, outlining the assumptions and methodology that will be used in the preparation of the IJR. These assumptions will include: the study area limits, years of analysis, traffic analysis tools, collision analysis procedure, travel demand forecast procedures, alternatives to be analyzed, and evaluation measures. The draft document will be presented to the Stakeholders Committee for refinement and approval.

Once the Methods and Assumptions document has been endorsed, the draft IJR will be prepared. The draft will go through review by the support team and once comments and issues have been addressed, the IJR will be finalized.

2.c Proposed Build Alternatives

The proposed improvements to be reviewed and considered by the Stakeholder Committee may include the following options:

- Widening the existing vehicle bridge from 5 travel lane to 6 travel lanes to increase left-turn capacity
- Added northbound on-ramp option for improved intersection operation at 5th Avenue NE and N 145th Street
- Make improvements to the interchange ramp terminal intersections for improved traffic operations and pedestrian connectivity
- Other improvements include:

- Construction of a separate, non-motorized bridge, north of the existing vehicle bridge
- Non-motorized connectivity improvements in the northeast and northwest quadrants of the interchange
- A sidewalk cantilevered from the existing vehicle structure will be analyzed
- Other channelization improvements from 500 feet west of 3rd Avenue to 500 feet east of 5th Avenue. These improvements will be evaluated and refined through the traffic analysis

2.d Data Collection

The CONSULTANT will obtain the following information and data as available for development of the IJR. This information includes:

- The CONSULTANT will obtain available as-built drawings of the existing interchange, ramps and roadways for I-5 mainline and ramps, SR 523/ N 145th Street, 5th Avenue NE, and 4th Avenue NE from WSDOT, King County, City of Seattle, and the City of Shoreline
- The CONSULTANT will obtain existing traffic count data from WSDOT, King County, City of Seattle, PSRC and City of Shoreline. This data will include I-5 mainline and ramp, SR 523/ N 145th Street, 5th Avenue NE, 4th Avenue NE, and 3rd Avenue NE including volumes, turning movement volumes at the ramp intersections for the AM and PM peak hours
- The CONSULTANT will collect AM and PM peak hour turning movement counts, including pedestrians and bicycles, to augment the existing data at up to 15 intersections to be determined during discussions with the CITY, but are anticipated to include:
  - NE 145th Street and
    - 5th Avenue NE;
    - SB I-5 ramp terminal
    - 4th Avenue NE
    - 3rd Avenue NE
    - 1st Avenue NE
  - NE 175th Street and
    - NB I-5 Ramp Terminal
    - SB I-5 Ramp Terminal
  - NE 130th Street and
    - SB I-5 Ramp Terminal
  - 5th Avenue NE and
    - NB I-5 Ramp Terminal south of NE 130th St
    - NB I-5 Ramp Terminal north of NE 145th St
    - NE 148th St

- CONSULTANT will utilize the IJR developed by Sound Transit for the light rail station north of 145th Street, as the basis for this IJR.
- The CITY will obtain the traffic model prepared as part of the Route Development Plan (RDP) traffic analysis for the 145 Street corridor and provide to the CONSULTANT for use as the base model for the traffic analysis for this IJR.
- CONSULTANT will obtain collision data for the last five calendar years from WSDOT, and will also obtain WSDOT's list of Critical Accident Locations (CAL), Critical Accident Corridors (CAC), and Intersection Accident Locations (IAL) in the project area. The CONSULTANT will obtain collision data from WSDOT and the cities of Seattle and Shoreline for each of the local roads described above in the vicinity of the interchanges
- CONSULTANT will obtain copies of the current Comprehensive and Transportation Plans from WSDOT and the Cities of Shoreline and Seattle, as well as their current TIP. CONSULTANT will review the current State Highway System Plan and Statewide Transportation Plan, as well as other project improvement plans and studies for I-5 within the project area, including the proposed Sound Transit Link Light Rail Station and Parking Garage and the Sound Transit 3 BRT Service. CONSULTANT will also obtain copies of other documents as appropriate
- CONSULTANT will obtain existing aerial photography mapping, including recent LIDAR mapping, of the overall project area for project planning, and conceptual layouts from WSDOT, and/or area developers. Aerial mapping will be produced at a scale of 1"=50' with a 2-foot contour interval and show visible surface features

2.e Traffic Forecasts

CONSULTANT will obtain a copy of the current PSRC travel demand model forecasts that will be used to forecast future travel patterns within the study area. CONSULTANT will:

- Review the existing PSRC travel model, including specific demographics for the project area, as well as the existing and future opening year and design year highway networks
- Prepare a summary of proposed improvements in the base highway networks and Coordinate such review with the PSRC and WSDOT
- Prepare AM and PM Peak Hour Traffic Forecasts, post-processing of the refined PSRC travel model output to develop turning movement and summaries for:
    - Base conditions in 2017, opening year of 2025 and design year of 2035
    - Up to three Build Alternatives as approved by the Stakeholder Committee, for the opening year and design year periods

2.f Traffic and Collision Analysis

2.f.1 Baseline Traffic Analysis (AM and PM for Existing, Opening, and Design Year):

CONSULTANT will conduct a traffic analysis for the Interstate and local street system because the proposed improvement could alter general purpose traffic. The traffic analysis will include the following:

- Highway capacity software (HCS) mainline analysis from Exit 174 (NE 130th St) to Exit 176 (NE 175th St);
- Synchro and SimTraffic or VISSUM analyses for the following intersections:
- NE 145th Street and
    - 5th Avenue NE;
    - SB I-5 ramp terminal
    - 1st Avenue NE
- NE 175th Street and
    - NB I-5 Ramp Terminal
    - SB I-5 Ramp Terminal
- NE 130th Street and
    - SB I-5 Ramp Terminal
- 5th Avenue NE and
    - NB I-5 Ramp Terminal south of NE 130th St
    - NB I-5 Ramp Terminal north of NE 145th St
    - NE 148th St

2.f.2 Collision Analysis:

CONSULTANT will conduct a collision analysis to estimate the level of change in collisions on the Interstate system using collision data from WSDOT for the past five years.

2.g Traffic Analysis of Build Alternatives

- Traffic Analysis for Existing, Opening, and Design Year): CONSULTANT will conduct (AM and PM traffic analysis for the Interstate and local street system for the opening and design year conditions for up to three alternatives because the proposed improvement could alter general purpose traffic. The traffic analysis will include the same locations used in the base analysis
- Collision Analysis: CONSULTANT will conduct a collision analysis to estimate the level of change in collisions on the Interstate system for up to three alternatives

2.h Alternative Evaluation

CONSULTANT will use the evaluation procedures defined in the Methods and Assumptions Document to evaluate the alternatives. CONSULTANT will compare the alternatives and present

findings to the Stakeholder Committee for recommendations of a preferred set of improvements. Information from previous traffic and collision analyses will be used, as well as data from the environmental analysis and conceptual design tasks. The following elements are assumed:

- CONSULTANT will develop comparative data by alternative for the Stakeholder Committee and display it in an evaluation matrix for use in evaluating each alternative. This information will be developed using previous elements and other studies
- At a Stakeholder Committee meeting, the CONSULTANT will review evaluation of alternatives for the Stakeholder Committee's revision and approval
- CONSULTANT will develop a summary of the evaluation process and results to document the final improvements

2.i Interchange Justification Report

The CONSULTANT will prepare an I-5 corridor level IJR focusing on the NE 145th St interchange. The corridor area will include the nearby interchanges of NE 130th St and NE 175th St and the local street intersections listed in Task 2.d.

The following alternatives will be included in this IJR:

- **Opening Year Proposed Build Alternative** which removes a transit only NB off-ramp, adds a lane on the NE 145th Street overpass, and adds a new loop on-ramp connection to NB I-5
- **Design Year Proposed Build Alternative** will be the same as the Proposed Opening Year Build Conditions

The corridor level IJR will be prepared in accordance with WSDOT's Design Manual Chapter 550; however signing plans will not be prepared at the corridor level.

The following is an outline of the information to be prepared during the development of the corridor level IJR, including the planned review process:

2.i.1 Policy Point Development

2.i.1.1 Policy Point 1 - Need for Access Revision:

The CONSULTANT will prepare a summary documenting the current and projected needs and why the existing access points and the existing or improved local systems are unable to meet the projected needs. The CONSULTANT will use the Purpose and Need statement developed for the NEPA documentation as a base document, with the need based on the traffic and safety summaries prepared for the existing and future No Action Alternatives.

2.i.1.2 Policy Point 2 - Reasonable Alternatives:

The CONSULTANT will prepare a summary documenting the alternatives considered in the Sound Transit Lynnwood Link Extension Project SR 523(NE 145th Street) IJR. The summary will explain how these alternatives met or did not meet the purpose of the improvement.

2.i.1.3 Policy Point 3 – Operational & Collision Analysis:

The CONSULTANT will prepare a summary that documents how the proposed improvements will affect safety and traffic operations at year of opening and design year. The CONSULTANT will document:

- The results of the Interstate mainline operational analyses for the opening year and design year for the Build Alternatives for this IJR
- The comparison of the AM and PM intersection and interchange operational results of the opening and design year Build Alternatives with the opening and design year No Action Base
- The effect of the Build Alternatives on the I-5 mainline operations and adjacent interchanges at NE 130th Street and at NE 175th Street
- A discussion of the collision analysis results for the Existing Conditions, and the opening and design year Build Alternative as compared to the No Action Base Condition
- A discussion of impacts to safety and operations along the I-5 corridor

2.i.1.4 Policy Point 4 – Access Connections & Design:

The CONSULTANT will prepare a summary showing how the proposed improvements will provide fully directional interchanges connected to public streets or roads and designed to meet current design standards. The summary will:

- Discuss the geometric designs of the proposed improvements and show that all movements are included in the design
- Show the preliminary horizontal and vertical alignments including I-5 mainline improvements, and proposed interchange and cross street improvements
- Discuss design criteria and design exceptions that may be needed

2.i.1.5 Policy Point 5 – Land Use & Transportation Plans:

The CONSULTANT will prepare a summary showing how the proposed access point revisions are compatible with existing land use and transportation plans for the area, summarize how current land use assumptions are included in the travel demand model, and discuss that the proposed improvements are consistency with local, regional, and statewide transportation plans.

2.i.1.6 Policy Point 6 – Future Interchanges:

The CONSULTANT will prepare a summary showing how the proposed access point revisions are compatible with the I-5 comprehensive network plan and that the proposed interchange improvements are compatible with other known planned interstate improvements included in the State-wide Highway System Plan.

2.i.1.7 Policy Point 7 – Coordination:

The CONSULTANT will prepare a discussion of the status of coordinating projects and if the actions that are programmed and funded, the consultant will discuss local

jurisdiction plans to provide other local improvements to support the interstate modifications and that their commitment to work with WSDOT to pursue funds for the interchange modifications (level of effort assumed a 1-2 page document). This section will also include a summary of the staging plan for the Proposed Build improvements, including mainline, interchange and local street improvements; including coordination with the City of Shoreline, City of Seattle, King County, and Sound Transit.

2.i.1.8 Policy Point 8 – Environmental Processes:

The CONSULTANT will draft Policy Point 8 for the IJR based on information contained in the IJR completed for Sound Transit at this interchange. We assume that required supporting information for this section will be assessed as part of the NEPA DCE work and that no new information will be required to develop this section.

2.j Conceptual Roadway Design

CONSULTANT will prepare conceptual roadway designs of the proposed access improvements in support of the IJR. The conceptual roadway design will include the northbound on-ramp option and reconfiguration of NE 145th Street.

The conceptual designs will include sufficient geometric information required to show the extent of improvement and their impacts. The preferred alternative will be modeled to develop earthwork quantities and provide cut-fill lines of the extent of improvements and impacts.

2.k Conceptual Structural Design

For each proposed build alternative, the CONSULTANT will develop recommendations for required structural components. The recommended options will include planning level cost evaluations. Each proposed build alternative evaluated will be summarized for review and consideration by the Stakeholder Committee in a Structures Evaluation Report for final selection and which will be carried forward during PS&E design. The Structures Alternative Evaluation Report will likely evaluate the following:

- Existing bridge condition based on information provided by WSDOT
- Bridge loading rating based on information provided by WSDOT
- Feasibility study of one travel lane addition
- Feasibility study of sidewalk cantilever, including implementing the WSDOT Practical Solutions approach and potentially eliminating the sidewalk from the south side of the roadway overpass

2.k.1 Coordination with Architect

The CONSULTANT will coordinate with the project's Architect for the structural components to be evaluated for this task.

2.k.2 Coordination with Geotech

The CONSULTANT will coordinate with the project's Geotechnical Engineer for the structural components to be evaluated for this task.

Assumptions:

- An inspection report of the SR 523 bridge is available from WSDOT and can be made available to the CONSULTANT for the analysis
- As-built plans of the SR 523 bridge are available from WSDOT and can be made available to the CONSULTANT for the analysis
- A recent load rating report for the structure is available from WSDOT

2.l Draft IJR

The CONSULTANT will prepare a draft Corridor-Level IJR containing an executive summary including a description of the proposed improvements, the policy point documentation, and background data included as appendices. The Draft report will be compiled in a three-ring binder in accordance with the outline documented in the Design Manual. Electronic copies, both in WORD and pdf format will be available. The draft IJR will include the following elements:

- Narrative and data from the technical memorandums (Policy Points 1-8)
- Table of Contents
- Executive Summary

2.m WSDOT/FHWA 1st Review

FHWA and WSDOT will review the draft version of the corridor level IJR. Once completed, WSDOT will compile a single set of comments summarized in a comment response form. The CONSULTANT and CITY will then meet with WSDOT to review comments for clarification.

2.n Update and Submit 2nd Draft IJR

The CONSULTANT will review comments and edit the corridor level IJR based on accepted comments. The CONSULTANT will also summarize responses to the comments on the comment response form. The CONSULTANT will then compile the revised IJR and update the appropriate pages for inclusion in the three-ring binders. Electronic copies, both in WORD and pdf format of the revised IJR will be available.

2.o WSDOT/FHWA 2nd Review

FHWA and WSDOT will conduct a second review the draft corridor level IJR. Once completed, WSDOT will again compile the comments into a single set of comments and summarize them in a comment response form. The CONSULTANT and CITY will then meet with WSDOT to review comments for clarification.

2.p Address Final Comments

The CONSULTANT will review comments and edit the corridor level IJR as appropriate. The CONSULTANT will also summarize responses to comments on the comment response form. The CONSULTANT will then compile the revised IJR and provide updates to the appropriate pages in

the three-ring binders. A meeting with WSDOT and FHWA will be held to review the final version of the corridor level IJR and obtain final concurrence.

2.q Submit Final Corridor Level IJR

The CONSULTANT will prepare fifteen final hard copies of the IJR as well as an electronic copy of the IJR and appendices and submit to WSDOT for signature.

Assumptions:

- Scope is for preparing a complete IJR
- Study area for IJR analysis includes study interchange and next interchanges to the north and south
- City to provide current City of Shoreline transportation model
- City to provide latest traffic model developed for the 145th St corridor project
- City to provide current traffic models developed by Sound Transit for the NE 145th St Light Rail Station IJR
- The sound transit VISSIM model calibration analysis is still valid and will be acceptable to WSDOT for use in the IJR report documentation. Recalibration of the VISSIM model is not included in this scope of services.
- For the purposes of traffic forecasting, the opening year and design year will be 2025 and 2035, the same as in the Sound Transit IJR
- City to provide collision analysis prepared by Sound Transit for the NE 145th St IJR
- Mainline and ramp terminal analysis will assume up to 18 model runs for the existing conditions, opening and design year No Action, and opening and design year for up to three alternatives
- No ISATe collision model development and analyses are included in this scope of services.
- The intersection of 5th Ave NE at the NB I-5 on-ramp will be controlled by a traffic signal in the Build Alternative opening and design year
- The intersection on NE 145th St at 4th Ave NE will be closed in the Build Alternative opening year and design year
- Analysis of construction traffic is not included in this scope of services

Deliverables:

- Stakeholder Committee meeting materials. These materials will consist of design related documents supporting the current level of design
- Stakeholder meeting agendas and meeting notes
- Methods and Assumptions Document

- Summary tables and graphics
- Conceptual design for proposed improvements
- Conceptual signing plan for proposed improvements
- Structures Alternative Evaluation Report
- Draft IJR (Six (6) hard copies and one (1) electronic.)
- Draft IJR, second review (Six (6) hard copies and one (1) electronic.)
- Final IJR (Six (6) hard copies and one (1) electronic.)

TASK 3: SITE INVESTIGATIONS

3.a Survey and Basemapping

Survey and Basemapping will be provided by the CITY.

Deliverables:

- Survey base mapping in Civil 3D format and one hard copy (.pdf) version of the same
- Survey Boundary and Control drawing (stamped and signed) for inclusion with final PS&E

3.b Geotechnical Engineering

3.b.1 Review existing geotechnical and geologic information

- WSDOT historic borings for 145th Street overpass
- Sound Transit Lynnwood Link project
- Regional geologic maps

3.b.2 Review as-built plans and supporting engineering documents for existing structures and improvements

- WSDOT 145th Street overpass
- Transit pedestrian ramps and retaining walls
- Utilities within project limits
- Other nearby improvements

3.b.3 Subsurface exploration at 164 NE 145th Street

- Mark boring location in parking area or driveway of 164 NE 145th Street.
- Call One-Call utility locate service to mark subscriber utilities.
- Call private utility locate service to attempt to mark private utilities.

- Complete one boring to maximum 80 feet below ground surface. Vacuum excavate to about 8 feet below ground surface before commencing drilling to check for utilities (no samples).
- Install single vibrating wire piezometer in the boring.
- Grout hole. Install flush-mounted locking monument.
- Read VWP groundwater pressure about 1 week after completing boring. Install data logger and monitor groundwater pressure for 3 months. Interpret groundwater measurements.
- Complete soil sample visual classification and water content on samples and laboratory index testing on selected samples, including up to 4 combined gradation analyses, up to 2 Atterberg limits.
- Prepare boring log.

3.b.4 Interpret subsurface conditions

3.b.5 Provide TS&L geotechnical engineering recommendations report for

- Foundation types for proposed pedestrian bridge
- Temporary retaining wall types to facilitate construction of pedestrian bridge and widening of existing 145th street overpass
- Permanent retaining wall types for potential permanent retaining walls.
- Excavations, fill slopes, retaining walls for site grading

3.b.6 Participate in meetings and discussions with the design team

Assumptions:

- One subsurface exploration will be conducted for the TS&L phase. The exploration will be conducted in the drive or parking area of 164th NE 145th Street. Right-of-entry and access to be secured by others
- Shannon & Wilson will purchase and calibrate 1 VWP for installation in the boring
- As-built plans and supporting engineering documents for existing structures and improvements will be provided
- Exploration and laboratory test data for Sound Transit Lynnwood Link Final Design will be made available to us in a timely manner
- No engineering calculations will be performed for spread footing or drilled shaft foundation resistance or retaining walls
- TS&L Geotechnical Engineering Recommendations report will be provided in PDF format

Deliverables:

- Draft TS&L Geotechnical Engineering Recommendations report
- Final TS&L Geotechnical Engineering Recommendations report after receiving comments on draft report

3.c Environmental Site Investigations

The CONSULTANT will review available information generated during the Sound Transit study and the City's corridor study, and follow up with Sound Transit as needed to obtain any additional, relevant documentation, including jurisdictional determinations. Based on our current understanding of the area, one wetland and stream were delineated on the Sound Transit station footprint east of I-5. In addition, another wetland may be present on the west side of I-5 in the northwest quadrant of the interchange within the WSDOT right of way, associated with a ditch. We understand that the ST wetland/stream area was determined to be non-jurisdictional by the Corps and should not require further review by the Corps, although other regulatory agencies may need to be contacted for concurrence. Additional review of the west-side ditch wetland may be required. Following collection and review of information, a site visit will be conducted to review mapped features. The west side of I-5 in and near the work area has not previously been formally reviewed for streams and wetlands, so the site investigation will collect new data in this area, assuming that only upland conditions will be found.

Assumptions:

- The CONSULTANT assumes that there are no other stream or wetland critical areas within the project area that would require further assessment. No additional field work will be conducted after completion of the initial site visit.
- Basemaps will be provided to The CONSULTANT for developing supporting environmental documents.
- City will provide or arrange right-of-entry and access to the project area.
- The other regulatory agencies will concur with the initial non-jurisdictional determination and will not require further review or delineation of the wetland.

Deliverables:

- Summary memo confirming or amending the presence and/or classification of previously identified critical areas, and documenting the absence of streams and wetlands in the project areas not addressed in ST investigation. The memo will include recommendations for additional field investigation if needed.

TASK 4: CONCEPTUAL DESIGN, (10% P&E)

4.a Structural Conceptual Design

The CONSULTANT will develop conceptual level design for up to three non-motorized structures. The concepts anticipated include cable stayed, prefabricated truss, and concrete or steel girder.

In addition the CONSULTANT will develop conceptual designs for retaining wall anticipated to be associated with the non-motorized structure and landings.

The CONSULTANT shall prepare a Type, Size and Location report that includes the following elements:

- Bridge type selection
- Preliminary design and detailing
- Preliminary cost estimate

Assumptions:

- Coordination with Urban architect roadway design, geotechnical engineer, and environmental permitting
- Illumination foundations will not require structural evaluation
- Median barriers will not require structural evaluation
- Power poles will not require structural evaluation
- Chain-link fences will not require structural evaluation

Deliverables:

- Type, Size and Location Report (One (1) hard copy and one (1) electronic copy)

4.b Compilation of Conceptual Design

The CONSULTANT will compile the conceptual roadway, structural design elements and concepts developed in Task 6 into a 10% milestone deliverable.

4.c Conceptual level cost estimate

The CONSULTANT will develop a planning level cost estimate to support these concepts. The purpose of this milestone is to facilitate the public outreach described in Task 8.

Deliverables:

- Compiled Conceptual level design alternatives including roadway, structures and the schematic level conceptual drawing listed in Task 6.
- Conceptual level cost estimate

TASK 5: PRELIMINARY DESIGN, (30% P&E)

The CONSULTANT will perform preliminary design engineering of the public roadways and utilities for the interchange access modification improvements and access connections to the SR 523/I-5 interchange to support the environmental documentation. This preliminary design will be an advancement of the conceptual roadway design and conceptual structural design developed under Task 2.

The preliminary design will include: modifications to the existing SR 523/I-5 Bridge to provide an added travel lane, a new non-motorized bridge crossing I-5 north of the existing vehicle structure,

improvements to adjacent intersections, new right turn lane to southbound I-5, a new northbound on-ramp to I-5. The CONSULTANT shall conduct quality control review by senior staff members with appropriate experience and expertise. The following elements are assumed:

5.a Design Documentation

The CONSULTANT shall develop a Design Criteria memo documenting the design standards to be used for the project and documentation of design decisions made as the team moves through the design process. This documentation process will be completed in coordination with the technical team.

Assumptions:

- Design Criteria will be documented in WSDOTs Project Design Parameters worksheets
- The Quantitative Analysis Method with emphasis of safety and capacity will be applied

Deliverables:

- Design Criteria Memo (One (1) hard copy and one (1) electronic copy)
- Design Parameters worksheets (One (1) hard copy and one (1) electronic copy)

5.b Environmental Permit Assessment

Early in the preliminary design phase, The CONSULTANT will develop a permit compliance memo that identifies the necessary environmental permits required for the project, the supporting documents that may be required by the resource agencies, and the approximate timelines for processing the permits.

Deliverables:

- Permit Compliance Memo (One (1) hard copy and one (1) electronic copy)

5.c Roadway Design

The CONSULTANT will advance the preferred alternative defined in Task 2. Advancement of the alternative will include further development of the geometric design, earthwork quantities, channelization design, and safety improvement for the project and will include development and refinement of the roadway plans. Roadway plans are anticipated to include roadway plan and profile, sections, paving plans and signing plans

Assumptions:

- No change in the vertical profile of NE 145th St. or intersecting roadways is anticipated
- Roadway design will be in accordance with the WSDOT Design Manual and the WSDOT Standard Plans and City of Mukilteo Public Works standards
- Contract Specifications will not be prepared for 30% submittal

Deliverables:

- Preliminary Roadway plans (One (1) hard copy and one (1) electronic copy)

5.d Signal and ITS Design

The CONSULTANT will prepare a preliminary signal and ITS design plans based on the proposed improvements and the CONSULTANT's preliminary roadway layouts.

The CONSULTANT will evaluate the impact on the existing signal system and make a preliminary assessment on whether the existing signal poles will require modification or relocation, analyze the possible locations of new signal poles, and determine the need for additional design to comply with improvements, ADA requirements, and current WSDOT standards.

- The CONSULTANT will coordinate and consult with WSDOT to evaluate existing signal and ITS equipment
- The CONSULTANT will prepare preliminary plans for the signal system showing location and preliminary details of poles, cabinets, loops, junction boxes, etc.
- The CONSULTANT will prepare preliminary plans for the ITS system showing location and preliminary details of communications, cameras, and fiber optic routes

Deliverables:

- Preliminary Signal and ITS Plan (One (1) hard copy and one (1) electronic copy)

5.e Channelization Plans

The CONSULANT shall prepare Channelization Plan for the interstate access improvements at SR 523 and I-5 interchange project using WSDOT design and plan procedures. These improvements are anticipated to include:

- Re-channelization of SR 523 between 3rd Ave NE and 5th Ave NE
- A new north bound on-ramp
- Intersection improvements at the interchange ramp terminals

Assumptions:

- Roadway design will be in accordance with the WSDOT Design Manual and the WSDOT Standard Plans and City of Shoreline Engineering Development standards
- Plans preparation will be in accordance with WSDOT Plans Preparation Manual
- No deviation or design exceptions are anticipated
- The Channelization plans shall follow the WSDOT NW Region Channelization Plan Checklist
- Three (3) rounds of WSDOT review are anticipated

Deliverables:

- Draft Channelization Plan Submittal (One (1) hard copy and one (1) electronic copy)
- Response to Comments (One (1) hard copy and one (1) electronic copy)
- Second Draft Channelization Plan Submittal (One (1) hard copy and one (1) electronic copy)
- Response to Comments (One (1) hard copy and one (1) electronic copy)

- Final Channelization Plan Submittal (One (1) hard copy and one (1) electronic copy)

5.f Structural Design

The CONSULTANT will develop preliminary plans based on the concepts selected in Tasks 2, Task 4 and 6. The CONSULTANT will continue its efforts in the development of preliminary structural design to support the Proposed Alternative which will include:

6.f.1 Non-Motorized Bridge

The CONSULTANT shall prepare preliminary plans for the non-motorized bridge concept selected in previous tasks:

- Bridge type selection
- Preliminary design and detailing
- Preliminary cost estimate

Assumptions:

- Illumination foundations will not require structural evaluation
- Median barriers will not require structural evaluation
- Power poles will not require structural evaluation
- Chain-link fences will not require structural evaluation

Deliverables:

- Preliminary Non-Motorized Bridge plans (One (1) hard copy and one (1) electronic copy)

6.f.2 Retaining Wall

The CONSULTANT shall prepare preliminary retaining wall plans:

- Wall type selection
- Preliminary design and detailing
- Preliminary cost estimate

Assumptions:

- Coordination with Urban architect roadway design, geotechnical engineer, and environmental permitting
- Wall sizing and locations will be determined by On-ramp geometry, R.O.W., Non-Motorized Bridge design, and Gateway elements

Deliverables:

- Preliminary Retaining Wall plans (One (1) hard copy and one (1) electronic copy)

6.f.3 Existing Bridge Modifications

The CONSULTANT will prepare preliminary plans including general plans and modifications including cross sections and details associated with the removal of the existing sidewalk and construction of a cantilevered sidewalk on the south side of the existing bridge.

Assumptions:

- The feasibility as determined in task 2 will be advanced in this task.

Deliverables:

- Plan, profile and elevation and cross-sections and details.

6.g Stormwater Design

The CONSULTANT will prepare the Stormwater Plans for the SR 523 and I-5 access modifications. The Stormwater Plans will include conveyance, water quality and preliminary flow control and water quality facility sizing. The 30% Design Submittal will include sufficient plan information to demonstrate the proposed stormwater facilities while not including details and final design information such as invert elevations. The preliminary drainage analysis and design will be developed to support the environmental documentation and shall comply with the WSDOT Highway Runoff Manual requirements or the Department of Ecology's Western Washington Storm Water Manual. Stormwater downstream runoff routes will be analyzed for capacity.

Deliverables:

- Stormwater Plans (One (1) hard copy and one (1) electronic copy)
- Draft Drainage Analysis (One (1) hard copy and one (1) electronic copy)

6.h Preliminary Plans

The CONSULTANT shall compile the plans prepared for the various designs noted above into the 30% plan set. This plans set shall be used to conduct the 30% Design Review by the CITY, WSDOT and other stakeholders. The 30% plans shall include the following plans: Roadway Sections, Roadway Profiles, Stormwater Plans, Paving Plans, Retaining Wall Plans, Signal Plans and Signing plans.

Assumptions:

- Plan sheets scale is anticipated to be 1:100. Detail sheets will be added for clarity as required.

Deliverables:

- 30% Plans package (11" by 17") - (One (1) hard copies as required and one (1) electronic copy.

6.i Preliminary Cost Estimate

The CONSULTANT will calculate quantities and prepare an estimate of probable construction costs using bid items.

Assumptions:

- The Preliminary Cost estimate will utilize WSDOT Standard Item table.

- Unit Prices for standard items will be determined using WSDOT Unit Bid Analysis.

Deliverables:

- Preliminary Cost Estimate (4 hard copies and 1 electronic copy)

TASK 6: GATEWAY

6.a Site Inventory, Analysis and Coordination

- The CONSULTANT will prepare a basemap for the preliminary design phase, review preliminary engineering plans and existing conditions data as necessary, and complete up to two site visits to confirm aesthetic design and pedestrian and bicycle circulation coordination with neighborhood, 5th Ave NE streetscape, adjacent wetland, proposed Sound Transit station, and 145th Street Multi-modal Corridor Study. The CONSULTANT will participate in the following meetings:

COORDINATION

- Up to three (3) client meetings,
- One (1) Sound Transit public art coordination meeting
- One (1) city planner/Arts Council meeting,
- Two (2) Public Meetings
- Two (2) City Council meetings
- Up to five (5) consultant team meetings throughout the preliminary design phase.
- This task involves setting a design theme and character for the non-motorized bridge(s), retaining walls, approach pedestrian/non-motorized hardscape areas and landscape gateway areas (Gateway landscape at the northwest intersection of N. 145th St. and 5th Ave NE, from I-5 right of way to south edge of Sound Transit Station, including underneath trackway; Approach plaza west of I5 between off-ramp and 3rd Ave NE, including underneath trackway).
- This design phase will begin with development of an aesthetic design theme and conceptual design. The conceptual design will define the general character of the pedestrian bridge and gateway areas. This will largely be independent of the identification of the type, size and location of the pedestrian bridge, as the theme and character of the bridge can be expressed in different structure types.

SCHEMATIC DRAWINGS

- The following schematic drawings will be provided:
- Non-Motorized Bridge, Retaining Wall and Gateway Schematic Concept Plan (1 sheet, 2 alternatives)
- Non-Motorized Bridge, Retaining Wall and Gateway Schematic Detail Area Plans (up to 2 areas, 2 alternatives)
- Non-Motorized Bridge Aesthetic Design Character Sketch (2 alternatives)
- Non-Motorized Bridge, Retaining Wall, and Gateway Elevations (up to 3, 2 alternatives)

- Gateway with Plaza Path Character Sketch (2 alternatives)
- Retaining Wall Design Character Sketch (2 alternatives)
- Non-Motorized Bridge, Retaining Wall and Gateway Schematic Concept Plan (1 sheet, preferred alternative)
- Non-Motorized Bridge, Retaining Wall and Gateway Schematic Detail Area Plans (up to 2 areas, preferred alternative)
- Non-Motorized Bridge Aesthetic Design Character Sketch (preferred alternative)
- Non-Motorized Bridge, Retaining Wall, and Gateway Elevations (up to 3, preferred alternative)
- Gateway with Plaza Path Character Sketch (preferred alternative)
- Retaining Wall Design Character Sketch (preferred alternative)

Deliverables:

- Aesthetic Theme and Character definition – memorandum and power point presentation (up to 2)
- Alternatives Design memorandum (up to 8 pages, total)
- Preferred Alternative Design memorandum (up to 5 pages, total)
- Schematic Conceptual drawings as listed above

6.b Preliminary Design

This task includes the preliminary aesthetic design of the non-motorized bridge, retaining walls, and gateway pedestrian hardscape and landscape areas to advance the design of the preferred aesthetic theme and character.

The design will be refined, including identification of products and materials proposed for the non-motorized bridge (potential) tower, railing, fall barrier, decorative paving, lighting and site furniture concepts, landscape area conceptual landforms, and landscape planting character. The design concepts will be detailed adequately to allow for coordination with client and design team and to incorporate aesthetic design details of the non-motorized bridge, gateway areas and retaining walls into the project engineering design. The Consultant shall prepare preliminary aesthetic and landscape architectural design plans (approximately 30 percent complete) for the non-motorized bridge, retaining walls, and gateway areas.

The following drawings will be provided:

- Non-Motorized Bridge, Retaining Wall and Gateway Layout and Grading Concept Plan (3 sheets at 1”=20’ scale)
- Non-Motorized Bridge, Retaining Wall and Detail Area Plan (2 sheets at 1”=10’ scale)Gateway Landscape Concept Plan (1 sheet at 1”=20’ scale)
- Sections (up to 4)
- Elevations (up to 4)

Deliverables:

- Thirty percent landscape architectural design plans (as per list above)
- Design memorandum including product and materials information (up to 5 pages, total)
- Preliminary construction cost estimate

TASK 7: ENVIRONMENTAL PERMITTING

7.a Pre-application consultation.
We will meet with the City planning department to discuss the anticipated local permit process. In addition, we will meet with the City's project manager to discuss the NEPA support documents.

7.b Permits, Approvals and Right of Way (ROW).
The City will provide information to the CONSULTANT regarding the status of ROW negotiations or acquisitions.

7.c National Environmental Policy Act (NEPA) Documented Categorical Exclusion (DCE) through FHWA.
The CONSULTANT will complete the following sections of the DCE form, as described below, for the proposed project:

i. Project Description. The City or the CONSULTANT will develop an official project description to be used for the environmental permitting
ii. Critical and Sensitive Areas: The CONSULTANT will complete this section based on existing information from previous studies, our site visit and information from the City.
iii. Cultural Resources/Historic Structures: The CONSULTANT will complete this section using information and analysis provided by the cultural resources subconsultant.
iv. Hazardous and Problem Waste: The CONSULTANT will complete a desktop Hazardous Materials Analysis to identify if potentially contaminated sites are present within the project corridor. The CONSULTANT will review available historical records and databases and will conduct a windshield survey of the project corridor. The CONSULTANT will address the DCE questionnaire and prepare a memo documenting the analysis.
v. 4(f)/6(f) Resources: The CONSULTANT will complete this section under the assumption that no 4(f)/6(f) resources are located within the project corridor.
vi. Agricultural Lands: The CONSULTANT will complete this section.
vii. Rivers, Streams or Tidal Water: The CONSULTANT will complete this section based on existing information from previous studies and information from the City.
viii. Tribal Lands: The CONSULTANT will complete this section.

ix. Water Quality/Stormwater: The CONSULTANT will complete this section.

x. Previous Environmental Commitments: The CONSULTANT will complete this section with input from the City of Shoreline, Sound Transit, City of Seattle and King County.

xi. Environmental Justice: The CONSULTANT will complete this section, assuming that the project area may contain minority or low-income populations, but will not have short- or long-term "disproportionate, high and adverse" effects on those populations. A letter will be prepared that summarizes the required analysis, limited to documentation of readily available demographic information and the project details that preclude adverse effects. If the analysis does not support this assumption, additional analysis will be required that is not included in this scope of work. The letter will also include a summary of the public outreach efforts and results, using information provided by the City and CONSULTANT.

xii. Biological Assessments (BAs) and Essential Fish Habitat Evaluations. The CONSULTANT will complete this section, which will include a supporting BA.

Assumptions:

- ROW purchases will be offered after the NEPA DCE has been signed by WSDOT and Federal Highway Administration; thus, Appendix F will not be necessary
- No additional studies or supporting information other than those identified above will be required to complete the DCE
- Documents will be revised one time based on CONSULTANT review, one time based on City review, and one time based on WSDOT review
- The Affect Determination in the BA will be either 'no effect' or 'not likely to adversely affect'.

Deliverables:

- Completed WSDOT DCE form, including draft and final
- Environmental Justice evaluation, including draft and final
- Hazardous Waste evaluation, including draft and final
- Biological Assessment meeting WSDOT standards, including draft and final

7.d State Environmental Policy Act (SEPA) Checklist.

The CONSULTANT will prepare a SEPA checklist for the proposed project. We anticipate that this project will require supporting documents for geotechnical issues, stormwater, traffic, cultural/historical resources and wetland jurisdiction determination. If a public hearing is required by the City, the CONSULTANT will attend.

Assumptions:

- It is assumed an Environmental Impact Statement (EIS) is not required and the project will be issued a Determination of Non-significance or Mitigated Determination of Non-Significance by the City
- Documents will be revised one time based on CONSULTANT review, and one time based on City review
- Fees for City permit applications and environmental reviews are not included
- Other than attendance at a public hearing (if held), no other public outreach would be conducted or attended by the CONSULTANT

Deliverables:

- SEPA checklist, draft and final

7.e Phase 1 Environmental Site Assessment (ESA)

Shannon & Wilson (S&W) will complete a Phase I ESA for King County parcel # 2881700371 located at 164 NE 145th Street in the City of Shoreline. The purpose of a Phase I ESA is to identify to the extent feasible, pursuant to the process described in the ASTM International (ASTM) Standard Practice E1527-13 (Phase I ASTM Standard), recognized environmental conditions (RECs), controlled RECs (CRECs), and/or historical RECs (HRECs) associated with the subject property. To accomplish the stated objectives of a Phase I ESA in accordance with ASTM guidelines, the following scope of work will be conducted:

- Site Visit and Reconnaissance. Conduct a site visit and reconnaissance of the immediate site vicinity to look for RECs on the site and to evaluate the potential for adverse environmental impact from adjacent land uses. RECs may include, but are not limited to, solid waste disposal, drains, sumps, underground storage tanks (USTs), aboveground storage tanks, drums, spills, stains, and hazardous materials. Look for stressed vegetation, fill, and other indicators of potential contamination.
- Interviews. Conduct interviews with available and appropriate owners, occupants/tenants, and local government officials to obtain information indicating RECs in connection with the property.

- Agency Records Review. Obtain and review available agency records that help identify RECs in connection with the subject property. Review standard federal, state, and tribal databases for the site and nearby properties within the ASTM-recommended search distances.
    i. Federal agency lists to be reviewed include:
        1. National Priorities List (NPL).
        2. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites.
        3. Resource Conservation and Recovery Act (RCRA) treatment, storage, and disposal (TSD) facilities.

4. RCRA Corrective Actions (CORRACTS) for TSD facilities.
5. RCRA generators.
6. Emergency Response Notification System sites.

ii. Washington State Department of Ecology (Ecology) lists include:

1. Hazardous Sites list (HSL).
2. Confirmed and Suspected Contaminated Sites (CSCSL) list.
3. Landfill and/or solid waste disposal sites.
4. UST and leaking underground storage tank (LUST) lists.

The NPL, RCRA TSD facilities with CORRACTS, and the HSLs will be reviewed for sites within a one-mile radius of the site. The CERCLIS, RCRA TSD facilities without CORRACTS CSCSL, state landfill/solid waste disposal sites, and the LUST lists will be reviewed for sites within a half-mile radius of the site. All other lists will be reviewed for the site and adjoining properties.

- Historical Use Records. Review available historical use information records with regard to previous land use or other activity that could have led to the presence of hazardous or dangerous materials, including petroleum products, in the environment at the property. Potential sources of information include aerial photographs; topographic maps; current and previous owners; abutters; historical societies; libraries; county assessor records; Polk city directories; Metskers, Sanborn, and Kroll maps; and files of federal, state, and local environmental agencies. The actual sources available for a given study will vary and may include other sources, as well as any or all of the above. Sources used will be referenced in the report along with the name of the person contacted, where appropriate.
- Physical Setting Sources. Review and obtain information about the physical setting of the property. The physical setting sources will include (when available) a current U.S. Geological Survey 7.5-minute topographic map, geologic/hydrologic maps and reports, and soil maps.
- Report. S&W will prepare a draft and final report that will include an opinion about the conditions observed at the property, a site history, a summary of the findings, an evaluation of on-site conditions, and our opinions and conclusions. The report and opinions will be based solely on the services described.

Assumptions:

- City will provide 50-year Chain of Title Report with an ownership cover sheet for the title insurance company to S&W.
- Phase I ESA scope of work does not include provisions to collect and test soil and/or water samples, or other media including but not limited to fluorescent light ballasts, urea formaldehyde insulation, and lead-based paint or asbestos, or to test radon gas levels.

- The City or the CONSULTANT will provide S&W with an official description of the project including a figure showing the property boundary of the subject property.
- The City will provide right-of-entry and access to the subject property and for any and all buildings on the subject property.
- Interviews may be conducted by telephone and will be arranged by the City.
- Phase I ESA will be conducted only for the subject property.
- Client will provide available relevant information concerning site conditions, including previous environmental, geotechnical, and wetland reports,
- A single report review cycle will be required.
- Documents will be revised one time based on CONSULTANT and City review.
- No meetings have been included.

Deliverables:

- Prepared Report including draft and final

TASK 8: PUBLIC STAKEHOLDER OUTREACH

Recognizing the importance of community context, values and needs, the CONSULTANT will use best outreach practices and a flexible approach to engaging CITY leadership, key stakeholders, community organizations, and residents and the broader traveling public early and throughout the development of the final design for SR 523/ N 145th Street project. The goals of the public involvement process will be to build public trust, solicit input on the key corridor issues and design alternatives, and generate community support for the final design the CITY selects.

8.a Public Involvement Plan

EnviroIssues will develop one public involvement plan that captures the team's approach to both internal and agency engagement as well as broader public engagement during the final design phase of the interchange project. The plan will:

- Be a living document that can be updated to include additional or new audiences or outreach strategies identified during the design phase in order to reach affected stakeholders
- Include specific strategies to engage historically underrepresented populations in the interchange design process. To inform these strategies, EnviroIssues will conduct an updated demographic analysis – using EPA's online tool, EJSCREEN – of the project area to identify populations who currently identify as limited-English speaking and/or low-income
- Describe strategies to integrate and meet required public involvement for the identified environmental review process into the overall outreach plan

Deliverables:

- Update demographic analysis of project area (1 draft and 1 final)

- Public involvement plan (2 drafts and 1 final)

8.b Agency Engagement

The Lochner team will provide support services and opportunities for meaningful and thoughtful engagement and input from partner agencies who will be involved in developing and/or approving the final Interchange Justification Report (IJR) for the SR 523 (N/NE 145th Street) and Interstate-5 interchange.

8.b.1 Internal Engagement

As a first step to agency engagement, the Lochner team will first support City staff to engage key internal stakeholders, including offering one-on-one briefings with City Councilmembers, and hosting inter-departmental coordination meetings, including with the City Manager's office. The purpose of this early coordination is to confirm internal expectations and goals for the interchange design process are understood and met, and key decision-maker's questions and concerns are addressed proactively and throughout the design process prior to the need for a decision to move the project forward.

8.b.2 Interagency Technical Team Interchange Subcommittee

Leveraging the Interagency Technical Team (ITT) structure from the previous Multimodal Corridor Study phase completed in 2016, the Lochner team will identify and facilitate meetings and coordination with an Interchange Subcommittee of the ITT. The Interchange Subcommittee will be formed to focus on policy issues specific to the interchange, including identification of the appropriate lead-agency for the environmental process and agreement on the public outreach process for the interchange. The subcommittee will also focus on design issues specific to the interchange, including placement of multi-modal facilities, interstate access points and traffic revisions, safety improvements, and future construction phasing and coordination. The Lochner team will also develop a subcommittee charter document to capture the purpose, key agreements of and focus of the Interchange Subcommittee following the group's initial meeting. EnviroIssues will support the Lochner team as it provides updates and information during meeting of the full ITT for the corridor design process..

Assumptions:

- City staff will lead implementation and documentation of one-on-one briefings with City Councilmembers and inter-departmental meetings
- The corridor design team will lead the re-convening and re-chartering of the full ITT and lead regular or standing meetings of the full ITT
- The Lochner lead interchange design team will convene, charter and lead Interchange Subcommittee meetings of the ITT to focus and gain buy-off on specific design issues related to the interchange design to complete the IJR process
- City staff and the Lochner team will lead preparation for and attend City Council and/or other City boards or commission with support from EnviroIssues

Deliverables:

- Update demographic analysis of project area (1 draft and 1 final)
- Preparation and coordination of up to seven (7) one-on-one briefings with City Councilmembers
- Preparation and coordination of up to five (5) inter-departmental meetings
- Preparation and coordination of up to eight (8) pre-meeting interviews with ITT Interchange Subcommittee members
- Preparation, coordination and facilitation of the initial ITT Interchange Subcommittee meeting
- ITT Interchange Subcommittee Charter (2 draft and 1 signed final)
- Support for up to four (4) full City Council briefings and/or City boards or commissions
- Support for up to four (4) ITT updates and presentations

8.c Public Outreach

EnviroIssues will provide support services and opportunities for meaningful and thoughtful engagement and input from the broader public on the SR 523 (N/NE 145th Street) and Interstate-5 interchange design. Key points of public input anticipated related to the interchange design will include placement of multi-modal facilities, including the terminus of the proposed bike and pedestrian bridge on the north side of the current I-5 bridge crossing, timing of construction and maintenance of traffic, potential City gateway design features, and proposed traffic operations and safety improvements.

8.c.1 Stakeholder Briefings

EnviroIssues will schedule and support the City as staff conduct stakeholder interviews and/or briefings with local leaders and or community groups, including updates to the Citizen's Advisory Task Force. The interviews and/or briefings provide an opportunity for key stakeholders to share their unique perspectives, and the perspectives of the community members they represent, on the interchange design. This information will allow the team to proactively address the community's desires, goals and concerns regarding the future SR 523 (N/NE 145th Street) and Interstate-5 interchange design.

EnviroIssues support will include scheduling, developing questions and materials for, and documenting input received during the interviews. An additional round of stakeholder outreach will also take place prior to the second public meeting, to review the preliminary preferred interchange design with key stakeholders.

8.c.2 Public Meetings

Public workshops and meetings provide an opportunity for the broader public to meet with project staff and offer meaningful input at key decisions points as a part of the project planning and design process.

Two public meetings are planned for the interchange design project. The initial meeting will be held to re-engage the public in the interchange design conversation and to present the conceptual design, with some refinements, based on the earlier corridor planning phase. The team will solicit input on the overall interchange design, traffic modifications, and the design and placement of multi-modal facilities, including the pedestrian and bike bridge landing. The second meeting will be held to present the 30% interchange design and solicit additional design feedback and input on traffic and construction impacts.

EnviroIssues will develop a meeting plan, agenda and materials (i.e. comment form, meeting guide, handouts, presentation and display boards) for each public meeting. Support will also include scheduling, coordination with corridor public meetings, leading meeting logistics, determining room layout, providing event equipment and supplies and documenting input received.

8.c.3 Materials and Notifications

EnviroIssues will develop content and graphic design for project materials and notifications, and provide updates as the project progresses and/or as key milestones are reached. Materials will include a project fact sheet, frequently asked questions (FAQ) document, and displays for public meetings. Notifications will include a project poster, postcard, online display ad, and content City staff can leverage and place on the City's website, social media, e-newsletter or ShorelineAlerts, newsletter (Currents), and/or provide to local organizations, neighborhood associations and key stakeholders to use in their own avenues for communicating with their constituents.

Once the final interchange design is determined, EnviroIssues will develop a project newsletter for the City to mail to businesses and residents that will benefit from the project but also may be affected by construction, to share the final design and pre-construction information.

Assumptions:

- Broad public outreach opportunities will be timed and formatted, when possible, to support required public engagement to fulfill the State Environmental Policy Act (SEPA) or National Environmental Policy Act (NEPA) review processes (i.e. scoping and/or comment periods) for the interchange
- Where possible, public outreach opportunities for the interchange will be coordinated with outreach opportunities for the full N/NE 145th Street corridor design process, Sound Transit's 145th Street station and/or other local projects that may draw like stakeholders
- City staff will identify and provide contact information (email, mail and phone) for the project point of contact at the City to include on outreach materials
- City staff and the Lochner team will provide formatted and public-friendly maps and data to incorporate into meeting materials and displays

- City staff will take the lead in notifying the public of public input opportunities for the interchange with support on strategy and content from EnviroIssues. This includes:
    - *Coordination and printing of direct mailings using "print-ready" materials from EnviroIssues (i.e. mailings, display ads, website content or graphics, social media, e-newsletter, Currents articles)*
    - *Providing content to other local avenues of communications*
    - *Maintenance of a stakeholder contact and email list of interested parties, utilizing the City's ShorelineAlerts system where applicable.*
    - *Distribution of project posters and materials at identified local gathering places in the project area*
- City staff will print outreach materials when possible, unless they do not have equipment to produce the piece. In this case, the City will be billed directly for external printing or mailing services

8.d Public Outreach Summary

EnviroIssues will prepare an outreach summary at the conclusion of the interchange design process. The summary will include an overview of the outreach approach, how input was solicited and used to inform the interchange design, what was heard from internal and external stakeholders, agencies and the broader community and an evaluation of the outreach process. The summary can be used to fulfill the policy chapter requirements for the SR 523 (N/NE 145th Street) and Interstate-5 Interchange Justification Report.

Assumptions:

- Broad public outreach opportunities will be timed and formatted, when possible, to support required public engagement to fulfill the State Environmental Policy Act (SEPA) or National Environmental Policy Act (NEPA) review processes (i.e. scoping and/or comment periods) for the interchange
- Where possible, public outreach opportunities for the interchange will be coordinated with outreach opportunities for the full N/NE 145th Street corridor design process, Sound Transit's 145th Street station and/or other local projects that may draw like stakeholders
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    - *Providing content to other local avenues of communications*

  - *Maintenance of a stakeholder contact and email list of interested parties, utilizing the City's ShorelineAlerts system where applicable.*
  - *Distribution of project posters and materials at identified local gathering places in the project area*
- City staff will print outreach materials when possible, unless they do not have equipment to produce the piece. In this case, the City will be billed directly for external printing or mailing services

Deliverables:

- Up to ten (10) key stakeholder interviews and/or briefings with local leaders and or community groups, including updates to the Citizen's Advisory Task Force
- Up to two (2) public meetings are anticipated. One meeting will be related to conceptual design, and a second meeting will be anticipated at the 30% design level. The deliverables for these two initial meetings include;
  - *Two (2) public meeting plans and agendas*
  - *Two (2) comment forms*
  - *Two (2) meeting summaries*
  - *Two (2) staff at each public meeting*
- Materials and notifications (1 draft and 1 final of each)
  - *Fact sheet (initial)*
  - *FAQ (initial)*
  - *Display boards (16 total)*
  - *Presentations (2 total)*
  - *Content for two (2) City Currents articles and/or other avenues for communication*
  - *Postcard (2 total)*
  - *Display ads (2 total)*
  - Outreach summary (2 drafts and 1 final)

TASK 9: RIGHT-OF-WAY PLAN

9.a ROW Plan

Right-of-way is not assumed to be needed for the project as currently planned. If required, exhibit maps will be prepared for up to 4 parcels to assist with the right-of-way acquisition process. This task will include providing acquisition areas (square feet) as required by the right-of-way agent. The acquisition process will be included in the future scope of services

Assumptions:

- Right of entry will be facilitated by the City
- Title reports with supporting documentation, if required, will be obtained by the CITY

Deliverables:

- Exhibit maps to support right-of-way acquisition.