

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorizing the City Manager to Execute a Professional Services Agreement with KPFF Consulting Engineers in the Amount of \$897,854 for Preliminary Design of the 148 th Street Non-Motorized Bridge Project
DEPARTMENT:	Public Works
PRESENTED BY:	Tricia Juhnke, City Engineer
ACTION:	<input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input checked="" type="checkbox"/> Motion <input type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing

PROBLEM/ISSUE STATEMENT:

The 2019-2024 Capital Improvement Plan includes the 148th Street Non-Motorized Bridge project. The principal goal of the project is to provide a non-motorized bridge to directly connect neighborhoods west of Interstate-5 with the future light rail station which will in turn connect users to centers of employment, commerce and educational opportunities. The initial work for this project is to develop a schematic design based on the preferred alignment previously approved by Council.

Consultant services are needed to develop the schematic design. KPFF Consulting Engineers has been selected as the most qualified firm to support this project through the construction phase. Staff have negotiated a contract for the preliminary design phase of the work, which includes development of the schematic design, community outreach and stakeholder engagement. Council authorization is needed to enter an agreement with KPFF Consulting Engineers.

RESOURCE/FINANCIAL IMPACT:

The adopted 2019-2024 Capital Improvement Program includes \$499,999 for the schematic design phase of this project, and the City was also recently awarded a \$2,055,000 FHWA STP grant. The budget shown below is for the preliminary design phase of the project only.

EXPENSES

Staff and Other Direct Expenses	\$100,000
<i>KPFF Consulting Engineers – Preliminary Design Contract</i>	\$897,854
Contingency	\$90,000
Total Project Cost	\$1,087,854

REVENUE

FHWA Surface Transportation Program (STP)	\$2,055,000
General Fund Contribution	\$349,999
Roads Capital Fund	\$150,000
Total Project Revenue	\$2,554,999

RECOMMENDATION

Staff recommends the Council authorize the City Manager to execute a professional services contract with KPFF Consulting Engineers in the amount of \$897,854 for the 148th Street Non-Motorized Bridge Project.

Approved By: City Manager _____ City Attorney _____

BACKGROUND

Interstate-5 (I-5) forms a barrier to direct access to the Sound Transit Shoreline South/145th Station from neighborhoods west of I-5. The 148th Street Non-Motorized Bridge project will design a ped/bike bridge spanning I-5 and connecting to the north-end station plaza. Improvements will include integration with the station plaza area (east side of I-5) including ramps and stairs. West side landing improvements will include ramps, stairs, safe pedestrian and bicycle connections to 1st Avenue NE and evaluate the need for a drop-off/pick-up area (“kiss-n-ride”).

In spring 2013, the City of Shoreline began community-based visioning and planning to address future land use, transportation, and neighborhood enhancements in the community’s light rail station subareas. The subarea plans for both station areas were shaped by extensive public and stakeholder engagement. The 145th Street Station Subarea Plan can be found at the following link:

<http://www.shorelinewa.gov/government/projects-initiatives/light-rail-station-area-planning/145th-street-station-subarea-plan-and-feis>.

One of the key concepts that helped to shape the 145th Street Station Subarea Plan was improved east-west connectivity for pedestrians and bicyclists. A key point raised was an east-west pedestrian and bicycle bridge spanning I-5. This bridge will be part of a larger network of bicycle facilities, making local connections as well as regional connections via the Interurban and Burke Gilman Trails.

A feasibility analysis of non-motorized crossing options to the Shoreline South/145th Station, conducted in 2016/2017, determined that such a link is feasible. With confirmation of a feasible crossing, the City identified the 148th Street Non-Motorized Bridge as a capital project and continued coordinating with Sound Transit and WSDOT. The staff report for this council discussion can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2017/staffreport022717-9b.pdf>.

The final feasibility study can be found at:

<http://www.shorelinewa.gov/home/showdocument?id=37025>.

While the funding for the schematic design was approved in the 2018-2023 CIP, the work was delayed pending results for a grant application for the design of the project. In 2018, staffing resources also limited the City’s ability to begin the project. Staff continues to pursue funding partners to move this project forward to design and ultimately construction.

DISCUSSION

On January 28, 2019, the City issued a Request for Qualifications (RFQ) for this project. Two firms submitted Statements of Qualifications (SOQ’s), which were reviewed by staff. One firm, KPFF, was subsequently interviewed and selected as best qualified for this project.

The scope of work was initially to take the project from feasibility to concept design. As a result of the pending award of the STP grant, the scope has been expanded through preliminary design. Authorization to enter into the Agreement for the STP grant is under separate Council action on tonight’s consent agenda.

The scope of work for KPFF Consulting Engineers is attached to this staff report as Attachment A. Work to be completed under this scope includes preliminary design of all improvements, environmental documentation and permitting, assistance in community outreach/stakeholder engagement, preliminary right of way acquisition and easement processes, and cost estimates for right of way and construction. Upon completion of this work, a contract amendment may be approved to authorize KPFF Consulting Engineers to proceed with final design.

The alternative to authorizing the award of this contract is to not award the contract, in which case the project would not proceed. This is not recommended.

COUNCIL GOAL(S) ADDRESSED

This project supports 2018-2020 City Council Goal 3: “Continue preparation for regional mass transit in Shoreline.”

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ATTACHMENTS

Attachment A - KPFF Consulting Engineers Contract Scope of Services

Exhibit A
Scope of Work

***City of Shoreline N 148th Non-Motorized Bridge Project – Bridge and Trail Type,
Size & Location and 30% Design Development Services***

PROJECT DESCRIPTION

The City of Shoreline has conducted a feasibility analysis to evaluate and recommend a preferred alignment alternative for a new pedestrian and bicycle bridge crossing Interstate 5 (I-5) linking the west side of freeway to the planned Sound Transit Shoreline South/145th light rail station. The preferred trail and bridge alignment connects to 1st Ave NE along NE 148th where it crosses I-5 and lands at the northern plaza of the station.

This project is one of many that will improve the area serving the future Shoreline South/145th Station which is expected to open in 2024. Traffic in the 145th Street Station Subarea is projected to increase more than 25 percent over current conditions thereby creating a need for multimodal access improvements that provide safety and separation from vehicular traffic for pedestrians and bicyclists.

This phase of the project picks up where the feasibility study phase left off and provides a bridge and trail Type, Size and Location study and 30% design for the preferred bridge and trail alternative. Funding strategy and support services are also included. Future design phases and construction are dependent on the acquisition of grant funding and are not included at this time.

PROJECT OBJECTIVES

The primary objectives of this work are to:

1. Develop design for a non-motorized bridge that is consistent and supportive of the City of Shoreline's goals and policies.
2. Engage the public and stakeholders in the design process for coordination, permits and to generate support for the project.
3. Attain formal project permissions from the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) with Sound Transit (ST) concurrence.
4. Obtain National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) environmental document approval.
5. Identify all right-of-way (ROW) needs.
6. Develop a project phasing and funding strategy for ROW and construction phases.
7. Maintain eligibility for future Federal funding.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 2

PROJECT TEAM

The project team is made up of the following:

Owner	City of Shoreline
Prime Consultant	KPFF Consulting Engineers
Structural Engineering	KPFF Consulting Engineers
Civil Engineering	KPFF Consulting Engineers
<u>Subconsultants:</u>	
Bridge Architecture	LMN Architects
Urban Design	KPG Inc.
Landscape Architecture	KPG Inc.
Illumination & Electrical	KPG Inc.
Traffic Analysis	KPG Inc.
Public Outreach	Stepherson & Associates
Environmental Permitting	Landau Associates
Geotechnical Engineering	Landau Associates
Surveying	Lin & Associates
Constructability & Cost Estimating	Ott Sakai
Right-of-Way	RES Group NW

PROJECT SCHEDULE

This phase of the project is anticipated to last approximately 11 months following notice-to-proceed (NTP). Estimated deliverable dates are as follows:

- Geotechnical Explorations & Report Complete: 4 months after NTP
- Field Survey & Basemap Generation: 3 months after NTP
- Final Bridge and Landings Type, Size and Locations Memo: 7 months after NTP
- 30% Design: 10 months after NTP

A more detailed schedule will be agreed upon between the Design Team and the City following NTP.

SCOPE OF WORK

The following is a scope of work for the Bridge and Trail Type, Size and Location (TS&L) Memorandum and the 30% Design phase of the project. Future design phases may be included as an addendum to this project but are not scoped at this time.

TASK NO. 1.0 – PROJECT MANAGEMENT AND ADMINISTRATION

Task No. 1.01 Project Work Plan

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 3

KPFF shall provide a work plan to the design team and the City outlining the project objectives, organization of the team, lines of communication, and deliverables.

Task No. 1.02 Project Schedule

KPFF shall create a project design schedule in Microsoft Project that spans from the notice-to-proceed to the completion of this phase of Work. The schedule will include all deliverable submittal dates and project milestones. The schedule shall be updated by KPFF on a monthly basis. Subconsultants and the City will review and provide input on the draft schedule.

Task No. 1.03 Subconsultant Agreements

KPFF shall prepare sub-consultant contracts for all team members.

Task No. 1.04 – Progress Reports & Invoices

A progress report form shall be provided to each Subconsultant. This form shall be filled out on a monthly basis and submitted with the invoice for the work described in the progress report. KPFF shall then compile the progress reports into a single document to be submitted to the City with the associated monthly invoice.

Subconsultants shall prepare monthly invoices for work completed. KPFF shall compile the invoices into a single document to be submitted to the City. The overall team monthly invoices will be formatted to provide the billing per project task and include percentage completion and billings to date.

Task No. 1.05 – Project Kickoff Meeting

KPFF and all Subconsultants shall prepare for and attend a two (2) hour long project kickoff meeting. KPFF, in conjunction with the City, shall coordinate the date, time and agenda items for this meeting.

Task No. 1.06 – Project Communication Meetings

KPFF and the Subconsultants shall prepare for and attend monthly project communication meetings with City staff to review the progress of the project and review technical and project management topics. The meetings will be attended by the KPFF Project Manager, key stakeholders, and key members of the design team as needed for discussion of the task items. For the basis of this scope of work the assumed number of monthly meetings attended by each design team member is as follows:

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 4

- KPFF: 16
- KPG: 9
- LMN: 9
- Landau Associates: 7
- Stepherson & Associates: 3
- Lin & Associates: 1
- Ott-Sakai Associates: 1
- RES NW: 1

Task No. 1.07 – Internal Team Meetings & Coordination

The design team shall meet to discuss project issues, schedule, progress, and general coordination of effort as needed.

Assumptions:

- Project kickoff meeting will take place at the City offices.
- Project communications meetings will take place at the City offices and will last approximately one (1) hour.
- Agenda will be provided by KPFF a minimum of two (2) working days prior to the date of the meeting.
- Meeting notes will be prepared and distributed by KPFF for review and comment by meeting attendees within two (2) working days of the date of the meeting.

Deliverables:

- Project work plan, Draft and Final (electronic copy)
- Project schedule with monthly updates (electronic copy)
- Monthly progress reports and invoices (Assume 12)
- Project kickoff meeting, agenda and meeting notes (electronic copies)
- Monthly project communication meetings including agenda and notes (electronic copies)

TASK 2.0 – DESIGN CRITERIA DOCUMENT, WSDOT AND SOUND TRANSIT KICKOFF MEETINGS

Task No. 2.01 – Design Criteria Document

KPFF shall prepare the design criteria document including contributions from KPG and LMN. Potential design criteria include, but are not limited to:

- Minimum bridge/trail/shoulder widths
- Horizontal geometry constraints (including minimum radii for curves) and allowable design speeds for bicycles
- Design Standards (e.g. City of Shoreline 2019 Engineering Development Manual, WSDOT Design Manual, AASHTO, NACTO, etc)
- Maximum allowable vertical grades and rates of curvature for both bridge structures and for access ramps
- I-5 vertical and horizontal clearance requirements

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project

Page 5

- Sound Transit Shoreline South/145th Station clearance requirements
- Roadway clearance parameters
- Emergency access requirements
- ADA requirements
- Maintenance access requirements
- Minimum lighting requirements
- Requirements for stormwater detention and water quality
- Utility clearance requirements
- Structural loading conditions
- Allowable structural deflections and vibrations
- Jurisdictional standards and requirements for landscape and aesthetic treatments

Assumptions:

- The City will distribute the Draft Design Criteria Document for review and comment by City staff.
- All comments received on the Draft Design Criteria Document will be compiled into one document prior to sending to the KPFF and the Subconsultants for review and response.

Deliverables:

- Draft Design Criteria Document (3 hardcopies, electronic copy)
- Comment responses to Draft Design Criteria Document (electronic copy)
- Final Design Criteria Document (3 hardcopies, electronic copy)

Task No. 2.02 – WSDOT/FHWA & Sound Transit/FTA Kickoff Meetings

KPFF will prepare, attend and document one (1) kickoff meeting with WSDOT/FHWA, one (1) kickoff meeting with Sound Transit/FTA. The purpose of these meetings will be as follows:

- Reintroduce these key stakeholders to the project
- Gather information on stakeholder constraints and concerns
- Share Draft Design Criteria document and gather feedback

Feedback received on the Draft Design Criteria document from WSDOT, FHWA, Sound Transit and FTA will be incorporated into the final document. This document will be shared with WSDOT, FHWA, Sound Transit and FTA for their concurrence. It is likely that, the WSDOT and FHWA kickoff meeting may occur simultaneously. Similarly, the kickoff meetings with Sound Transit and FTA may occur simultaneously.

In addition to the kickoff meetings, an allowance for up to two (2) additional meetings with WSDOT/FHWA and Sound Transit/FTA is made for additional discussion of the project and to address any comments on deliverables.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project

Page 6

Assumptions:

- The City will make initial contact with WSDOT and Sound Transit to schedule and coordinate kickoff meeting and invite appropriate City staff.
- KPFF staff in attendance for meetings: Project Manager, Lead Civil, Lead Structural.
- Agenda will be provided by KPFF a minimum of two (2) working days prior to the date of the meeting.
- Meeting notes will be prepared and distributed by KPFF for review and comment by meeting attendees within two (2) working days of the date of the meeting.

Deliverables:

- Kickoff meetings with WSDOT and Sound Transit including agenda, meeting materials and notes.
- Kickoff meetings will be held at City offices and will last approximately two (2) hours each.

TASK 3.0 – TOPOGRAPHIC AND BOUNDARY SURVEY

Lin & Associates (L&A) will perform a field survey of the proposed bridge and trail using a combination of conventional/scanning and GPS survey techniques to obtain necessary ground information and supplemental mapping detail to support design. L&A will scan entire project limits and update the basemap as requested by the design team. This will save time and additional field visits as the point clouds can be data mined for additional data at any time. The approximate limits of the field survey are shown in Figure 1 which is included as an Appendix to this Scope of Work.

Office and field research will be performed to determine existing horizontal and vertical control for the area of the proposed bridge and trail. All apparent aboveground features will be located and shown as well as all existing improvements, including but not limited to: building corners, fences, existing utilities including inverts and pipe sizes where accessible, and spot elevations. The Horizontal datum that will be used will be Sound Transit Lynnwood Link project datum that is based upon NAD83 (2011). All elevations will be based upon NAVD 88 vertical datum, as specified. Contour interval will be 1 foot.

Title reports for the affected parcels will be secured to determine location of existing easements which may impact the route.

Specific property ownership and existing rights-of-way within the proposed route will be determined based upon deed and field research. For acquisition of right of way, descriptions/ALTA and parcel maps will be prepared based upon design needs will be scoped at a later phase if needed. Actual deeds of conveyance will be prepared during later phases and will be provided by other design team members.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 7

All pertinent acquired research and field data will be mapped as a base drawing for design purposes. Basemap will be prepared to a maximum scale of 1" = 40' and will include all field evidence, including property ownership.

Assumptions:

- Topographic and boundary survey information gathered by Lin & Associates for the Sound Transit Lynnwood Link project will be available for use by the project team to start from. No additional survey will be required at the eastern bridge landing location but survey data will be needed to cover project limits west of the east edge of I-5.
- The City will officially request Sound Transit's survey files from the Lynnwood Link Project. L&A will provide the names of these basemap files to the City for use in the request.
- Manholes over 25 feet deep or full of debris/water may not be as-built since they may require confined space entry to access the manhole in order to accurately measure the depth (if needed).
- Trees 4 inches and larger in diameter at breast height (DBH) will be surveyed. Trees will be labeled with trunk and dripline diameter and will only be classified as coniferous or deciduous as far as the tree species, unless directed otherwise.
- Lin & Associates will call one-call and pick-up utilities that are marked. Lin & Associates will coordinate with a private utility locator to verify accuracy and completeness of information obtained from free one-call service.
- Potholing and pipe probe tracing will not be completed in this phase, but can be scoped at a later date if needed.
- Right-of-entries for private properties and WSDOT ROW within the project limits will be obtained by the City.
- All utility purveyors will be contacted by KPFF regarding the location of underground utilities which may impact the proposed route.
- Utility records that the City and KPFF are able to furnish will be provided to L&A to be incorporated into basemap on record layers if L&A is not able to gather survey data upon them.
- Sound Transit CADD standards and layers in AutoCAD 2018 will be used for existing conditions basemap.
- KPFF to provide title block for topographic survey sheets.
- Title reports for private properties within project limits will be provided by the City

Deliverables:

- Update existing Sound Transit Base map (maximum scale of 1"=40')
 - 2D planimetric basemap (Existing utilities, building lines, etc)
 - 3D surface (DTM) basemap (Existing ground line)
- Topographic survey (Signed/sealed hard copies)
- ASCII file of field data points

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 8

TASK 4.0 – GEOTECHNICAL ENGINEERING

Landau Associates, Inc. will provide geotechnical engineering services. The services will include reviewing in-house information, readily available geologic reports and maps, and completing a site-specific subsurface exploration and laboratory testing program as a basis for developing final geotechnical engineering recommendations.

Task No. 4.01 Geotechnical Investigation Program

Prior to beginning the subsurface exploration program described below, Landau Associates will review existing and readily available subsurface exploration data for the project alignment. This will include a review of information gathered as part of the Sound Transit Lynnwood Link project. The purpose of reviewing this data is to plan the exploration program and incorporate information from previous explorations into our design considerations. The data review will also include a review of readily available published geologic and topographic information for the project area.

To characterize subsurface soil and groundwater conditions at the west end of the project alignment, Landau Associates will subcontract a drilling contractor to advance one exploratory boring near the location of the proposed west bridge abutment. The exploratory boring will be advanced to a depth of about 100 ft below ground surface (bgs) using a truck-mounted drill rig. It is anticipated that sufficient geotechnical data for the eastern bridge abutment can be obtained from borings previously conducted for the nearby Sound Transit Lynnwood Link project.

A representative from Landau Associates will observe the advancement of the exploratory boring, obtain soil samples from the boring, and prepare field logs of conditions observed. Soil samples will be obtained from the exploratory boring on about a 2½- or 5-ft depth interval using the Standard Penetration Test (SPT) procedure. The soil samples will be delivered to our laboratory for further examination and classification. Soil samples obtained from the exploration will be held in our laboratory for 30 days after submittal of the final report. After that date, the soil samples will be disposed of unless arrangements are made to retain them. While a monitoring well is not planned for the proposed boring, groundwater occurrence will be noted on our summary boring log if encountered. Upon completion of sampling and logging, the boring will be decommissioned in accordance with the requirements of Chapter 173-160 of the Washington Administrative Code (WAC). Excess cuttings from the exploratory boring will be properly disposed of offsite. The pavement section at the borehole location will be patched using fast setting concrete.

Landau Associates will also subcontract an excavator and operator to conduct three small-scale pilot infiltration tests (PIT) investigations within

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 9

stormwater management areas and excavate one exploratory test pit near the east bridge approach ramp. The PIT investigations will be conducted in general accordance with *2012 Stormwater Management Manual for Western Washington* (as amended in 2014). Landau Associates personnel will monitor the PIT investigations, record the observed infiltration rate(s), and prepare field logs of the conditions observed. Based on the results of the PIT investigations, Landau Associates will develop recommended design infiltration rates for the proposed infiltration facilities. Because of the upcoming construction for the Sound Transit Lynnwood Link project, it is anticipated that Landau Associates will not be able to access the proposed exploration locations on the east end of the project alignment until later in the design phase.

Landau Associates will arrange for underground utility location (“call before you dig”) prior to performing field activities. Landau Associates will also hire a private utility locating service to check for the presence of buried utilities at planned boring and test pit locations.

Landau Associates will complete a geotechnical laboratory testing program consisting of natural moisture content and grain size and/or Atterberg Limits determinations on selected soil samples to aid in classifying site soils. Laboratory testing will include up to 10 moisture content determinations, 4 grain size distributions or Atterberg limits determinations, and 4 combined grain size analyses (sieve and hydrometer).

Task No. 4.02 Geotechnical Analysis and Reporting

Landau Associates will evaluate the information collected as part of the data review and field investigation program in order to develop design-level geotechnical engineering conclusions and recommendations related to the design and construction of the proposed non-motorized bridge project.

Summary logs and a site plan showing the locations of the exploratory boring and test pit and pertinent site features will be included in the draft and final versions of the report.

Seismic design criteria will be provided in accordance with applicable AASHTO standards. KPFF shall provide the governing design standards prior to the evaluation. Liquefaction and lateral spread potential will be provided if warranted; however, Landau Associates’ estimated cost for the geotechnical services proposed herein assume that this task will not be required and if it is required, a budget amendment would be needed.

Recommendations for site preparation and fill placement will include the following: criteria for clearing, stripping and grubbing; an evaluation of the suitability of on-site soil for use as structural fill; gradation criteria for imported fill; guidance for preparation of subgrade soil, which will support

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 10

the bridge approaches; and criteria for structural fill placement and compaction.

Recommendations for design and construction of conventional, shallow spread foundations will include the following: allowable soil bearing pressures, minimum width and depth requirements, friction coefficient, passive earth pressure values, and estimates of foundation settlement. If settlement appears to be an issue, recommendations for mitigating such settlement will be included. Criteria for removal and replacement of unsuitable material at foundation grade will be provided if warranted.

Recommendations shall be provided for the design of drilled, cast-in-place concrete shaft foundations for the bridge abutments. The recommendations will include the following: recommended tip elevation, axial resistance, downdrag loads and loss of side resistance during seismic loading, uplift resistance, lateral shaft analysis, and construction considerations.

Lateral earth pressure criteria for design of proposed bridge abutment walls and permanent retaining walls including equivalent fluid densities for the active, at-rest and passive states of stress will be provided as necessary.

A discussion will be provided related to the feasibility of infiltrating stormwater on-site based on the results of the explorations, laboratory testing and engineering analyses. Recommendations will be in general accordance with Division 3 (Surface Water) of the City of Shoreline's Engineering Development Manual.

A discussion will be provided related to the known or anticipated geotechnical issues that should be considered during design or that could influence construction. The discussion will include methods to mitigate such issues.

Deliverables will include a draft report containing geotechnical findings, conclusions and recommendations. A final report will be created that contains the results of mutually agreed upon comments from other team members and the City.

For estimating purposes, Landau Associates has assumed participation in up to three internal meetings for consultation during design, as requested by the City and KPFF.

Assumptions:

- The main span of the proposed bridge is a single-span structure.
- Landau Associates will not be responsible for coordinating right of entry to gain access to exploration locations. Rights-of-entry required for entry into private property will be obtained by the City.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 11

- The City will request and provide to Landau Associates the relevant geotechnical information gathered by others as part of the Sound Transit Lynnwood Link project.
- The geotechnical data provided by the City will be sufficient to develop design recommendations for the east abutment/foundations of the proposed non-motorized bridge.
- All of Landau Associates' subsurface explorations will be located beyond WSDOT right-of-way, and as such, a General Permit from WSDOT will not be required.
- Because none of the explorations will be accessed from I-5, coordination with WSDOT will not be required prior to site exploration activities.
- Landau Associates will not be responsible for damage to underground utilities that are mismarked or not located.
- The proposed exploration locations will be readily accessible (i.e., no down time) to a truck-mounted drill rig and a small tracked excavator.
- KPFF will provide Landau Associates a project base map in AutoCAD format.
- The subsurface investigation proposed herein can be completed in four days.
- All proposed PITs can be completed during daylight hours (i.e., no PITs will be left open overnight).
- Restoration of disturbed vegetation will not be required; however, Landau Associates will stabilize areas of disturbed ground with mulch or straw at the completion of the subsurface investigation.
- It will be acceptable to restore the pavement at the proposed boring location with a fast-setting concrete patch (i.e., a hot mix asphalt patch will not be required).
- The proposed test pit and PITs will be conducted in non-paved areas (i.e., no pavement restoration will be required).
- The proposed stormwater management area on the east side of Interstate-5 will not be accessible during construction of the Lynnwood Link Project.
- The soils at the project site will not be susceptible to liquefaction or lateral spreading during a design seismic event.
- Ground improvement design by Landau Associates will not be needed.
- A site-specific ground motion response analysis will not be required.
- Depending on the subsurface information that is available for the eastern bridge abutment, it may be necessary to advance additional boring(s) at the actual bridge foundation location(s) at a later time.
- Additional borings may be required if during the design process the locations of the bridge foundations change.
- Landau Associates will not need to provide foundation design recommendations for more than 3 different foundation options.

Deliverables:

- Draft Geotechnical Report (One electronic copy, PDF)
- Final Geotechnical Report (3 hardcopies, one electronic copy, PDF)

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 12

TASK 5.0 —TRANSPORTATION & PARKING ANALYSIS STUDY

KPG will prepare an assessment of transportation and parking impacts associated with the trail from 1st Avenue NE, kiss-and-ride area and bridge approaches based on the preliminary bridge design and the context of the surrounding transportation network.

Task No. 5.01 – Transportation Impact Analysis

KPG will assess the multimodal transportation system, identify potential areas of impact, and recommend potential improvements based on the proposed bridge and trail design and the surrounding transportation network. This analysis will:

- Conduct hourly directional daily traffic counts (tube) for 1st Avenue NE, NE 149th Street, NE 148th Street, NE 147th Street, and 5th Avenue NE for a seven-day period.
- Collect vehicle, pedestrian and bicycle counts for the weekday AM and PM peak periods at the N 148th Street/1st Avenue NE, N 148th Street/Corliss Avenue NE, NE 148th Street/Meridian Avenue N, NE 149th Street/Meridian Avenue N, N 145th Street/1st Avenue NE and N 155th Street/1st Avenue NE and NE 148th Street/5th Avenue NE intersections.
- Conduct a detailed field visit to identify existing non-motorized facilities, areas of pedestrian and bicycle activity, barriers and opportunities, non-motorized destinations, and the potential of alternative and supporting pedestrian and bicycle routes.
- Review 5 years of crash data (to be obtained from WSDOT) for intersections and segments within the study area.
- Review the City's Transportation Master Plan, Subarea Plan, and 145th Street Multimodal Corridor Study to identify adopted bicycle and pedestrian network and planned improvements.
- Estimate potential non-motorized activity for the bridge, at the N 148th Street/1st Avenue NE intersection, and at the 148th Street/5th Avenue NE intersection. This will include a review of proposed bridge catchment areas for commuters to the light rail station, as well as potential school, recreational and other non-motorized trips within 15 minute walkshed of the proposed bridge landings.
- Use the NCHRP 562 methodology, NACTO, and FHWA (MUTCD) guidance to identify the appropriate level of pedestrian crossing treatments at the intersections of N 148th Street/1st Avenue NE, N 148th Street/Corliss Avenue NE, NE 148th Street/Meridian Avenue N, NE 149th Street/Meridian Avenue N and NE 148th Street/5th Avenue NE with the completion of the bridge and light rail station. Treatments will be selected based upon the expected level of non-motorized activity, vehicle travel speeds, and daily vehicle volumes.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project

Page 13

- Review supporting/alternative routes to connect between 1st Ave NE and the bridge, including NE 147th Street and/or access through other properties.

Assumptions:

- The analysis will be conducted for the weekday AM and PM peak hours for existing (2019), 2024 year of opening, and 2040 horizon year.
- City will provide traffic volume forecasts for 2024 (year of opening) and 2040 (horizon year) for study area roadways.
- The City will provide available Synchro files in the area.
- KPG will include a limited budget for additional traffic counts to supplement City data.
- The City shall make available station area planning documents and Sound Transit station area studies that document expected changes to traffic volumes, modal split, bicycle and pedestrian corridor improvements and other factors that may affect non-motorized vehicle demand in the vicinity of the bridge.

Task No. 5.02 – Parking Impact Analysis

KPG will conduct a parking impact analysis assessment to identify current on-street parking demand and supply in the immediate area of the bridge and the potential changes to the parking supply related to the proposed bridge design. The analysis will include:

- Supplement, as needed, the City-collected data for the weekday midday on-street parking demand within the study area defined as follows: N 147th Street, N 148th Street, N 149th Street and N150th Street, between Meridian Avenue NE and 1st Avenue NE; Corliss Ave N between N 150th Street and N 145th Street; and 1st Avenue NE between N 155th Street and N 145th Street.
- Assessment of impacts to on-street parking supply related to the bridge and planned non-motorized improvements within the study area.
- Documentation of potential parking impacts and suggestions for actions to better utilize available parking.

Task No. 5.03 – Kiss-and-Ride Analysis

Evaluation of traffic impacts to nearby local streets from potential kiss-and-ride activity, particularly at the west bridge approach. The analysis will include the following streets between 1st Ave NE and Corliss Ave NE using collected traffic data to understand the baseline 85th percentile speeds and traffic volumes:

- NE 149th St
- NE 148th St
- NE 147th St

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 14

Based on the data collected and forecasted kiss-and-ride activity, strategies for traffic calming will be identified using the City's most recent traffic calming criteria.

Future year (2025 & 2040) traffic analysis, to include Kiss-and-ride traffic volumes will be performed for the intersections of 145th/1st Ave NE and 155th/1st Ave NE. Based on results, recommendations will be developed for mitigating excessive delay or to limit access to a preferred route.

Task No. 5.04 – Transportation and Parking Memorandum

KPG will summarize its analysis and findings from Tasks 5.01, 5.02 and 5.03 in a technical memorandum, using graphics and tables to illustrate the findings and conclusions of the analysis.

Deliverables:

- Draft Transportation and Parking Assessment Memorandum (electronic copy)
- Final Transportation and Parking Assessment Memorandum (3 hardcopies, electronic copy)

6.0 – PUBLIC OUTREACH & STAKEHOLDER ENGAGEMENT

Stepherson & Associates (Stepherson) will provide Public Outreach and Stakeholder Engagement services.

Task No. 6.01 – Public Outreach Communication Coordination Meetings

Stepherson will plan, facilitate and report on Public Outreach communication coordination meetings with City. The purpose of these meetings will be to plan and coordinate Public Outreach efforts with City staff. Stepherson will plan and meet regularly as a team to coordinate work.

Assumptions:

- Assumes up to twelve (12) meetings.
- These meetings will occur at City offices or over the phone.
- Meetings will last approximately one (1) hour.
- KPFF Project Manager and the Public Outreach Lead will participate in these meetings.

Deliverables:

- Agenda and pre-meeting materials
- Meeting minutes and action items

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 15

Task No. 6.02 – Public Involvement Plan

Stepherson will develop a public involvement plan (PIP) that identifies approaches for effectively informing and involving all audiences and is equitable in its distribution of outreach resources to various communities. It will include key messaging, a stakeholder list, and outreach tools/methods and associated timeline. Plan will include targeted outreach to disadvantaged/Title VI populations. Stepherson will schedule, plan and attend a kickoff meeting with City staff prior to PIP development. The PIP will be developed in coordination with the City and early stakeholder interviews and a community demographic analysis will inform the plan.

Assumptions:

- Assumes one (1) PIP kick-off meeting that will last approximately 1.5 hours and occur at City offices. Up to three (3) Stepherson staff will attend. KPFF Project Manager will also attend this meeting.
- City will provide to Stepherson any existing stakeholders lists, summary of community commitments and other pertinent outreach document upon Notice to Proceed.

Deliverables:

- PIP kick-off meeting agenda, pre-meeting materials, meeting minutes and action items
- Plan, attend and report on up to six (6) stakeholder interviews. KPFF Project Manager will attend these interviews.
- Draft PIP (electronic copy)
- Final PIP (3 hardcopies and electronic copy)
- Key messages (up to 2 updates)

Task No. 6.03 – Communication Materials Development

Stepherson will coordinate with the City and the design team to facilitate preparation, production and distribution of all public-facing communication materials, including project fact sheet, brochure/folio, frequently asked questions (FAQ) and topic sheets (topic-specific sheets might describe elements of a bridge, right-of-way and/or trail connections) and web content. Materials could include translation in up to three (3) languages.

Assumptions:

- Stepherson will provide content updates, photos and graphics to City for City-hosted project website. Webpage updates will be submitted to City for review, approval and posting.
- The City will provide printing and mailing services.
- Stepherson will coordinate translation of materials.
- The City will pay for translation services.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 16

Deliverables:

- Project fact sheet: one (1) draft and one (1) final at early preliminary design as well as one (1) draft and one (1) final at 30% design (electronic copy)
- Project brochure/folio; two (2) drafts and one (1) final at early preliminary design as well as one (1) draft and one (1) final at 30% design (electronic copy)
- Project FAQ: one (1) draft and one (1) final for early preliminary design as well as one (1) draft and one (1) final at 30% design (electronic copy)
- Project topic sheets: one (1) draft and one (1) final, for up to 2 topic sheets (electronic copy)
- Website update content (up to 4)

Task No. 6.04 – Project Open House

Stepherson will plan, coordinate, promote and attend three (3), in-person open houses. The first open house will provide information and gather input on the alternatives developed in the TS&L phase. The second open house will provide information and gather input on the preferred concept alternative. The third open house will provide information and gather input on Draft 30% design. Stepherson will prepare a detailed event plan for the open house that identifies goals, team member roles, all supplies and materials and a work back schedule for meeting preparation. Stepherson will develop all supporting open house materials.

Assumptions:

- The City will host meetings by coordinating meeting space.
- The City will provide printing and mailing services for the open house announcements/invitations.
- The City will use their communication channels to actively promote the open house.
- Assumes a 3-hour event, plus 2 hours set up and clean up time.
- KPFF Project Manager, two (2) Stepherson staff, Lead Civil, Lead Urban Design and Lead Bridge Architect will attend the open house
- KPFF, LMN and KPG will provide graphics and content for open house materials.

Deliverables:

- Detailed event plan for three (3) open house events
- Meeting materials (sign-in sheet, comment form, directional signage) for three (3) open house events
- Mailer/postcard for three (3) open house events
- Up to ten (10) 24"x36" presentation quality display boards per open house event

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 17

Task No 6.05 – Online Open House and Survey

Stepherson will plan, set up, draft content, promote and report on three (3) online open house and survey as companions to in-person open houses. The online open houses will have up to 10 pages, contain project and City branding elements, and include a survey.

Assumptions:

- Up to two (2) drafts, one final and maintenance of online open house site for up to three weeks.
- Will utilize Stepherson’s online open house platform infocommunity.org.
- The online open house will meet City branding standards and guidelines.

Deliverables:

- Survey questions
- Online open house and survey
- Review of up to 1500 (approx. 500/survey) survey responses
- Three (3) online open house activity and survey reports (1 draft, 1 final)

Task No. 6.06 – Briefings and Community Presentations

Stepherson will schedule, prepare for, staff and report on one-on-one meetings, stakeholder briefings and community presentations. This includes briefing support with each of the 3 churches (2 briefings/each) near the eastside bridge landing, the Parkwood community (2 briefings/each) and up to 12 briefings with Title VI populations and other stakeholders.

Assumptions:

- Assumes two (2) briefings with each of the three (3) churches, and the Parkwood community (8 total)
- City will provide existing property owner contact information
- City will participate in briefings (with 3 churches and any other property owners where right-of-way may be acquired)
- One (1) Stepherson staff and KPFF Project Manager will attend these briefings and presentations.
- Stepherson will coordinate interpretation services, if required.
- City will pay for interpretation services, if required

Deliverables:

- Draft and Final individual stakeholder briefing reports (up to 18) (electronic copy)

Task No. 6.07 – Correspondence

Stepherson will support City in the development of responses to public communications.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 18

Assumptions:

- Stepherson will draft responses. The City will review, finalize and distribute responses.

Deliverables

- Up to twenty five (25) draft communication responses (electronic copy)

TASK 7.0 – EASEMENT & PROPERTY ACQUISITION SUPPORT SERVICES

RES Group NW shall provide right-of-way (ROW), easement and property services.

Specific tasks include:

- Review Title Reports: RES Group NW shall review up to four (4) title reports and identify any problematic encumbrances and/or title issues and propose potential solutions.
- Perform Feasibility and Evaluation: RES Group NW shall perform a feasibility evaluation of the bridge and trail alternatives developed during the TS&L phase with respect to ROW impacts.
- Determine Preliminary ROW Costs: RES Group NW shall prepare preliminary cost estimates for any permanent easements, ROW acquisition and temporary construction easements for each trail and bridge alternative considered in the TS&L phase and for the 30% design. The preliminary ROW costs will be incorporated into the bridge TS&L Report and the 30% Design cost estimate.
- Determine ROW Impacts: RES Group NW shall develop a list of pros and cons for the ROW/property impacts for each trail alternative. These will be incorporated into the TS&L Report.
- Determine WSDOT airspace lease/easement requirements and estimated costs required for the pedestrian bridge crossing of I-5.
- Determine Sound Transit easement requirements and estimated costs for eastern bridge landing at Shoreline South/145th station.

Assumptions:

- Title reports for affected properties will be obtained by the City

Deliverables:

- Draft Technical Memo describing results of work/task described above (3 hardcopies, electronic copy)
- Final Technical Memo describing results of work/task described above (3 hardcopies, electronic copy)

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 19

TASK 8.0 – ENVIRONMENTAL SERVICES

Landau Associates understands the City will be pursuing federal funding assistance for the project, likely from the Federal Highway Administration (FHWA) administered through the Washington State Department of Transportation (WSDOT).

This task covers consulting services to coordinate with regulatory agencies and to provide required permit applications and associated environmental documentation to obtain agency approvals for the proposed project.

Task No. 8.01 – Team, Agency, and Pre-Application Meetings

Landau Associates will assist in scheduling and participating in pre-application meeting, as needed, with the City and WSDOT Local Programs to coordinate permit conditions for the project.

This task includes participation in at least two scoping meetings with WSDOT Local Programs/FHWA and/or other potential state/federal funding agencies to coordinate environmental documentation requirements associated with project federal funding.

Assumptions:

- Four (4) agency meetings are included in this task. KPFF Project Manager will attend all meetings.
- All time budgeted for meetings and workshops include travel time and the deliverables mentioned in this task.
- Meetings will occur at City of Shoreline offices
- No additional studies will be required as part of the response to agency comments.

Deliverables:

- Meeting summaries will be provided in e-mail correspondence.
- Response to agency comments will be provided in e-mail correspondence

Task No. 8.02 – State Environmental Policy Act (SEPA) Checklist

Landau Associates will prepare the expanded SEPA Checklist for the project in conformance with WAC 197-11-960 and City standards. The expanded SEPA Checklist (Checklist) will briefly describe the project and address the project's effects on elements of the environment, as outlined in the Checklist. To prepare the Checklist, Landau Associates will use project design information and other available studies prepared for the project, such as the documentation prepared for the additional tasks/subtasks included in this proposal.

As necessary to complete the expanded SEPA Checklist, Landau Associates will review Sound Transit Lynnwood Link Extension (LLE) documents and City documents such as the comprehensive plan, zoning code, and other

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 20

development regulations. This task includes Landau Associates staff efforts for preparation and participation in a public hearing should one be necessary.

Assumptions:

- Additional studies for impacts associated with traffic, air, noise, or housing are not included in this subtask.
- Figures to be included with the checklist will be limited to those prepared under other tasks in this scope of work.
- The project will not require preparation of a SEPA Environmental Impact Statement. Either a Determination of Non-Significance (DNS) or a mitigated DNS will be issued for the project.
- City of Shoreline staff will prepare and publish the DNS (or mitigated DNS).
- Information to prepare the SEPA Checklist will be gathered from interviews with agency/utility provider representatives, readily available public documents and documentation prepared for the additional tasks/subtasks included in this proposal; no additional field work or other primary investigations will be required.
- Landau Associates will provide a draft copy of the SEPA Checklist to the City and KPFF for review. KPFF will provide one set of consolidated comments to Landau Associates, and Landau Associates will prepare a final SEPA Checklist for publication by the City based on those comments. Should additional rounds of review and comment be requested by KPFF and/or City, a scope and budget amendment will be required.
- This proposal does not include time for Landau Associates to respond to any public or resource agency comments on the SEPA Checklist after the Checklist has been published for public comment. Should KPFF and/or the City request Landau Associates' involvement in responses or revisions to the SEPA Checklist based on public or agency comments, a scope and budget amendment will be required.

Deliverables:

- An electronic (MS Word) copy of the draft SEPA checklist.
- An electronic (Adobe PDF) and one paper copy of the final SEPA Checklist.

Task No. 8.03 - WSDOT Local Program National Environmental Policy Act Categorical Exclusion Form

Landau Associates will prepare a preliminary version of the WSDOT Local Programs National Environmental Policy Act (NEPA) Categorical Exclusion (CE) Form (formerly the Local Agency Environmental Classification Summary [ECS]). The purpose of the preliminary NEPA CE form is to facilitate discussion with WSDOT Local Programs to determine subsequent NEPA compliance needs.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 21

To complete the preliminary version of the CE form, we will compile and review environmental information from readily available public domain resources to gain a general understanding of relevant environmental resources along the project corridor.

Task 8.01 includes participation in scoping meetings with WSDOT Local Programs/FHWA regarding documentation requirements associated with federal funding. At a minimum, this scope of services assumes that the NEPA CE form will include a Hazardous Materials Linear Corridor Screening assessment (see Task 8.04), effect determination for species listed under the Endangered Species Act (ESA) and Essential Fish Habitat (EFH) evaluation (see Task 8.05), a determination of project impacts on cultural resources (see Task 8.06), Environmental Justice (Task 8.07), documentation of a wetland/waterway delineation and mitigation sequencing (see Task 8.08), and Section 4(f) Task 8.09). The NEPA CE form will also require a discussion of stormwater treatment and detention, which will be based on design and information provided by KPFF.

Assumptions:

- The proposed project will receive funding from FHWA administered through WSDOT Highways and Local Programs.
- The proposed project will be determined to be a Class II Documented Categorical Exclusion (DCE) and neither a NEPA Environmental Impact Statement nor an Environmental Assessment will be required.
- Air quality, noise, Section 6(f), sole source aquifer, and floodplain, analyses will be documented in the ECS. Individual discipline reports and modeling/impact evaluation efforts will not be required for these elements of the environment.
- Wetlands/waterways impacts will be avoided.

Deliverables:

- An electronic (Adobe PDF or MSWord) copy of the draft NEPA CE form.
- An electronic (Adobe PDF and MSWord) copy of the NEPA CE form.

Task No. 8.04 – Hazardous Materials Linear Corridor Screening

Landau Associates will conduct a screening-level assessment of sites along the project corridor for the potential presence of contamination. The screening-level assessment for the project corridor will include the following components:

- Reviewing available aerial photographs to assess past uses of the project corridor and adjacent properties from the present back to their first developed use, or back to 1940, whichever is earlier.
- Reviewing listings from a subcontracted database service (Environmental Data Resources Inc.) of confirmed and suspected contaminated sites within a 1-mile radius of the project corridor abstracted from US Environmental Protection Agency, tribal, and Ecology environmental databases.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 22

- Reviewing reports documenting previous environmental investigations completed at sites along the project corridor (if available from the City, Sound Transit, and/or WSDOT).
- Conducting a site reconnaissance of the project corridor to visually and physically observe current land use activities and environmental conditions.
- Based on a preliminary search of nearby cleanup sites using Ecology’s “What’s in my Neighborhood” application, there are no active cleanup sites within 1/4-mile of the project alignment. It is therefore unlikely that Landau Associates will need to visit Ecology’s Northwestern Regional office in Bellevue, Washington to review documents available from the agency files for sites of potential hazardous and problem waste concerns
- The data collected will be summarized in a technical memorandum.

Assumptions:

- A Hazardous Materials Discipline Report to address Hazardous and Problem Waste may be required by WSDOT based on its review of the preliminary NEPA CE form. Preparation of a Hazardous Materials Discipline Report is not included in this scope of services. The level of detail and report format for a Hazardous Materials Discipline Report is dependent on the project activities, and type and number of potential hazardous material impacts identified. A scope and cost estimate to complete a Hazardous Materials Discipline Report, if required by WSDOT, will be provided following receipt of review comments from WSDOT regarding the preliminary NEPA CE form.
- The hazardous materials corridor screening technical memorandum will not meet the requirements of a Phase I Environmental Site Assessment under ASTM E1527-13.
- Building interiors will not be accessed as part of the site reconnaissance.
- Conditions at immediately adjoining properties may not be observable from accessible from public access areas and, as a result, may not be identified during the site reconnaissance.

Deliverables:

- An electronic copy of the draft Screening-Level Hazardous Materials Linear Corridor technical memorandum in MS Word format.
- An electronic copy of the final Screening-Level Hazardous Materials Linear Corridor technical memorandum in Adobe PDF format.

Task No. 8.05 – Biological Assessment (BA) Section 7 Endangered Species Act (ESA); Magnuson-Stevens Act Essential Fish Habitat (EFH) Evaluation

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 23

Landau Associates will prepare a No Effect Determination for selected species federally listed as threatened or endangered in the action area under the ESA and EFH Evaluation for the proposed project. Landau Associates will obtain updated species lists from agency websites, request site-specific species and habitat information from the WDFW priority habitats and species database, and review information from the Washington Natural Heritage Program.

Evaluation of specific project details, such as construction techniques and equipment used, timing of construction, and best management practices (BMPs) will be based on information provided by KPFF.

The report will establish the project action area, which incorporates the furthest extent of both aquatic and terrestrial impacts. Appropriate environmental baseline information and species history will be summarized in the No Effect Determination. A determination of “no effect” (NE) is anticipated. The project is not expected to impact EFH.

Landau Associates will prepare a draft No Effect Determination and EFH for review and comment by KPFF and the City, and then a final document.

Assumptions:

- 30% level of design will be sufficient for preparation of the No Effect Determination and EFH Evaluation report.
- The project will have a NE determination on listed species or their designated critical habitat and a formal Biological Opinion will not be required. The project will have no adverse impact to EFH.
- In-water construction will not be required as part of the proposed project.
- This task does not include meetings with agency staff from the U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries.
- Design and construction details required for permit applications that are not directly related to a critical areas determination will be provided to the Landau Associates biologist. Such elements include, but are not limited to, stormwater drainage report; temporary sediment and erosion control plan; proposed construction timing, sequencing and duration; and primary types of construction equipment to be used.
- This task does not include efforts to perform a 6-month update review of species listings.
- The scope of work does not include monitoring of any federally listed or state listed species during construction activities. Should any monitoring of these species be required, an addendum to this scope and budget can be prepared.

Deliverables:

- An electronic (Adobe PDF) copy of the draft No Effect Determination and EFH Evaluation report.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 24

- An electronic (Adobe PDF) and three paper copies of the final No Effect Determination and EFH Evaluation report.

Task No. 8.06 – Cultural Resources Investigation

Landau Associates will obtain the services of Equinox Research and Consulting International Inc. (ERCI) to support the City in determining cultural resources in the project area in compliance with Section 106 of the Historic Preservation Act and the Governor’s Executive Order 05-05.

ERCI will perform the following activities:

- Assist the client in developing an Area of Potential Effects (APE).
- Prepare for and participate in project-related meetings as requested.
- Carry out background research on the project and study area including reviewing the research previously carried out by Landau Associates.
- Design and implement archaeological field testing for prehistoric and historic-period sites – Landau Associates estimate 40 or fewer shovel tests will be required to test the areas of the project that are not covered with asphalt or otherwise inaccessible.
- Fill out archaeological site/isolate inventory forms for all sites encountered during testing.
- Determine eligibility (National Register of Historic Places) on all sites encountered during testing.
- Analyze survey results and prepare recommendations in a report in compliance with tribal, federal, or/and state regulations.

Landau Associates will assist ERCI in identifying the Area of Potential Effects, provide coordination of field services, and provide report review for consistency with other project documents.

Assumptions:

- Human remains will not be found during field testing.
- A Memorandum of Agreement (federal process for disturbing an archaeological site) or State Permit Application for site disturbance is not included in this scope.
- Preparation of Historic Property Inventory Forms is not included in this scope.

Deliverables:

- Draft and final Cultural Resources Assessment report.

Task No. 8.07 – Environmental Justice

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 25

Landau Associates shall prepare the WSDOT Environmental Justice – Decision Matrix to assist the project team in determining whether minority or low-income groups or individuals should be targeted during the project’s public involvement process. Based on available existing demographic information, we will inventory the population potentially impacted by the project to determine the extent of populations that conform to U.S. Department of Transportation (USDOT) definitions for “minority” and “low-income.” We will examine US Census block information for the project area and local school district attendance records, and we will compare demographic information of the people within the study area to the larger City/County populations to evaluate whether any minority or low-income populations reside within the project limits that exceed the characteristics of the City or the County as a whole.

Landau Associates shall also prepare a WSDOT Environmental Justice “letter to file” for the proposed project. The “letter to file” will be prepared consistent with Section 458 of the WSDOT Environmental Procedures Manual. This work will include the following:

- A summary of the City’s process for compliance with Title VI of the Civil Rights Act, public involvement that has occurred for the project and documentation of any issues related to minority and low-income populations that have arisen through the project’s public involvement process.
- A summary of the demographic information.
- Evaluation of any disproportionately high and adverse effects on minority or low-income populations as defined by the USDOT, which will include but not be limited to impacts associated with transportation, housing, community cohesion, and health and social services.
- A description of any measures that shall be taken to address disproportionately high and adverse effects on minority or low-income populations.

Landau Associates will prepare a draft Environmental Justice letter to file for review and comment by KPFF and the City, and then a final document.

Assumptions:

- The City will provide sufficient information on the project's public involvement for Landau Associates to summarize in the report.
- Landau Associates shall not conduct door-to-door surveys of impacted dwellings or businesses.

Deliverables:

- Decision matrix, and draft and final Environmental Justice letter to file.

Task No. 8.08 – Wetland/ Waterway Delineation and Critical Areas Report

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 26

Landau Associates will conduct wetland delineations in accordance with the 2010 USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. The ordinary high water mark (OHWM) of waterways, will be delineated using guidance provided in Ecology's Determining The Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State.

Landau Associates will compile and review environmental information from readily available public domain resources to gain a general understanding of potential wetland issues at the site. Public domain resources include, but are not limited to:

- Natural Resources Conservation Service Soil Survey data
- National Wetlands Inventory mapping
- Local Critical Areas mapping
- U.S. Geological Survey topographic mapping
- Recent aerial photography

The field investigation will include an examination of vegetation, soils, and hydrology within the project area. Flagging will be placed along the wetland/waterway boundaries and will be confined to the project area. Any wetland/waterway habitat that extends beyond the project area, and within 300 ft referred to as the study area, will be estimated both visually and using public domain resources to assess extent. Included in this task is time to provide the project surveyors with a hand-sketch of wetland/waterway boundaries to assist the surveyors to locate project flagging. We also included time to review the survey map and request any necessary changes to accurately represent existing wetland/waterway conditions.

If necessary, wetlands within the study area will be rated in accordance with Ecology's Washington State Wetland Rating System for Western Washington, and buffer widths will be determined in compliance with the City of Shoreline Critical Areas Regulations. Stream typing and buffer widths will be based on Chapter 20.80.280 of the City of Shoreline Municipal Code, and the water typing system presented in Chapter 222-15-131 of the Washington Administrative Code (WAC).

Landau Associates will prepare a draft Wetland and Waterway Critical Areas Report in a format acceptable to the City and other regulating agencies that will include:

- A summary of the methodology used
- The size and rating of each wetland and waterway; a characterization of wetland vegetation, soils, and hydrology; and field data sheets
- A scaled site map showing the locations of wetland/waterway boundaries and buffers, locations of wetland data plots, and site topography
- Summary of mitigation sequencing.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 27

- Supporting photographs

The draft report will be provided to KPFF and the City for review. Comments will be reviewed and incorporated into a Final Wetland and Waterway Delineation Report. The delineation report will be used in pre-application meetings for the purposes of discussing potential project impacts and determination of agency jurisdiction.

Assumptions:

- Flagging will be placed only within the project area boundaries where accessible. The ordinary high water line of Thornton Creek is not readily accessible and will be estimated based on best available data.
- A piped segment of Thornton Creek crosses the project limits, but the waterway or associated buffer will not require compensatory mitigation.
- This task includes rating for one wetland.
- KPFF will supply survey information in AutoCAD format to Landau Associates pertaining to the delineation and project plans.
- Impacts to wetlands and below the OHWM of waterways and associated buffers will be avoided.

Deliverables:

- An electronic (Adobe PDF) of the draft Critical Areas Report for Wetlands and Waterways.
- An electronic (Adobe PDF) of the Final Critical Areas Report for Wetlands and Waterways.

Task No. 8.09 – Section 4(f) Documentation

If requested, Landau Associates will prepare the WSDOT Section 4(f) De Minimis Impact Determination form. The form will provide summary of:

- Project description
- Description of Section 4f resource (i.e. park and/or historic sites) affected by the project and proposed impacts (including figure).
- Summary of public outreach efforts.

Landau Associates will prepare a draft form for review and comment by KPFF and the City, and then a final document.

Assumptions:

- Impacts to the Trail Along the Rail that may be associated with the project will meet the requirements of a Section 4(f) de minimis impact.
- Concurrence letter from the agency with jurisdiction over the Section 4f resource will be provided to Landau Associates by the City.

Deliverables:

- Draft and final Section 4f de minimis Impact Determination form.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 28

TASK 9.0 – PROJECT DESIGN WORKSHOPS

KPFF, KPG, LMN and Stepherson will prepare for and participate alongside the City in design workshops. The purpose of these workshops will be to work together to develop trail, bridge and landing alternatives in support of the TS&L memorandum. Six (6) design workshops are planned with an optional seventh workshop.

- A. Workshop No. 1 – Internal Team Brainstorming
 - Participants: KPFF, KPG and LMN
- B. Workshop No. 2 – Internal Team Brainstorming
 - Participants: KPFF, KPG and LMN
 - Materials: Conceptual Sketches (LMN & KPG)
- C. Workshop No. 3 – Kickoff Workshop with City
 - Participants: City, KPFF, KPG and LMN
 - Materials: Conceptual Sketches (LMN & KPG)
- D. Workshop No. 4 – Alternative Refinement
 - Participants: City, KPFF, KPG and LMN
 - Materials: Conceptual 3D models for up to four (4) alternatives (LMN), conceptual sketches (LMN & KPG)
- E. Workshop No. 5 – TS&L Alternatives Selection & Public Outreach
 - Participants: City, KPFF, KPG, LMN and Stepherson
 - Materials: Conceptual 3D models for up to three (3) alternatives (LMN), conceptual sketches (LMN & KPG)
- F. Workshop No. 6 – Preferred Alternative Selection
 - Participants: City, KPFF, KPG, LMN
 - Materials: Conceptual 3D models for the preferred alternative (LMN), conceptual sketches (LMN & KPG)
- G. Workshop No. 7 – Optional Agency Coordination/Public Outreach

The City reserves the right to supplement this scope of work to conduct an additional workshop that may include the Mayor, City Council or other stakeholders. This work will be scoped and additional fee estimated at the request of the City at a later date (if necessary).

Assumptions:

- Design workshops are assumed to last up to four (4) hours.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project

Page 29

- The internal brainstorming session workshops will be held at KPFF offices. All other workshops will be held at the City offices.
- The City will coordinate and invite appropriate City staff and other stakeholders needed to attend the workshops.
- KPFF Project Manager, Lead Civil, Lead Structural, Lead Urban Design and Lead Bridge Architect will attend all workshops. Lead Public Outreach will attend one (1) workshop. Other design team staff will attend as needed.

Deliverables:

- Conceptual drawings (plans and sections), 3D conceptual models
- Agenda, meeting notes and action items from workshops (KPFF)

TASK 10.0 – BRIDGE & TRAIL TYPE, SIZE AND LOCATION (TS&L) MEMORANDUM

The following tasks are anticipated for the Bridge and Trail TS&L memorandum:

Task No. 10.01 – Civil Engineering

KPFF shall perform the civil engineering work in support of the TS&L Memo.

The Civil portion of the TS&L report shall document the alternative and preferred concept alignments and shall include the following:

- Review topographic survey and geotechnical report for completeness.
- General plans and profiles, including site/street work associated with the trail and bridge, church properties, 1st Ave NE and the connection to the Shoreline South/145th St station.
- Support development of kiss-and-ride design concepts at 1st Ave NE.
- Concept utility relocations, as necessary.
- Surface water runoff collection and dispersion concepts.
- Identify affected property ownership.
- Identify wall locations and develop wall profiles.
- Preliminary construction quantities for civil items.

The above civil tasks will be developed at a concept level for the TS&L phase in support of the preferred alternative selection.

Assumptions:

- Up to four (4) trail and bridge landing alternatives will be evaluated

Deliverables:

- General plan and profile for each trail alternative (three combined plan/profile sheets to cover project footprint)

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 30

- Preliminary civil construction quantities for each alternative considered

Task No. 10.02 – Structural Engineering

KPFF shall perform the structural engineering work in support of the TS&L memo.

Bridge alternatives shall be developed for trail and landings alternatives. The member types and sizes shall be determined for discussion in the workshops and inclusion in the TS&L report. Conceptual level structural analysis shall establish the member types and depth, railing types, bridge foundation types, wall types and other miscellaneous structures required. Program costs including administration, and design costs shall be estimated for the proposed structures.

Assumptions:

- Up to three (3) bridge structure types will be evaluated. This includes all walls and approach structures that may be required.

Deliverables:

- General bridge plan, profile and typical section for each bridge alternative considered
- Preliminary structural construction quantities for each bridge alternative considered

Task No. 10.03 – Urban/Trail Design and Bridge Architecture

KPG shall perform trail design work in support of the TS&L memo.

LMN shall perform bridge architecture design work in support of the TS&L memo.

KPG shall develop urban/trail concepts for the east and west bridge landing and connections, trail alignments, kiss-and-ride area, and east plaza area. This work includes the following tasks:

- Development of Bridge landing alternatives at east and west side of I-5.
- Trail connection alternatives to 1st Ave
- Development of kiss-and-ride design concepts at 1st Ave NE
- Develop presentation quality graphics for use in reports and open house materials
- Address adjacent mitigation issues (e.g. fencing) along private property
- Development of East Plaza area, connecting proposed TOD woonerf area and light rail entry plaza

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 31

LMN shall develop architecture concepts for the bridge and landings which includes the following tasks:

- Bridge architectural concept design development alternatives in coordination with structural design
- One (1) physical study level model, scale to be determined
- 3D concept models for bridge alternatives

Assumptions:

- A preferred alignment has been determined from previous phases of the project and is the basis of the TS&L memorandum.
- Up to four (4) landing and trail alternatives will be evaluated.
- Up to three (3) bridge types will be evaluated.
- Trail design shall be per applicable AASHTO and NACTO guidelines and standards
- 3D conceptual modeling will be used to study bridge design alternatives. These models will be of massing quality and not rendered. The software format to be used will be at the discretion of LMN (Revit or Rhino).
- No architectural drawings will be produced, with the exception of the 3D views listed below.
- A physical model base will be produced at an appropriate scale for use in studying bridge alignment and structural options. Alternatives produced, including the Preferred Alternative, will be of “study model” quality.
- Topographical info will be provided to LMN to produce the digital model and the physical study model base.

Deliverables:

- Concept level urban design plans for trail alignment, bridge landing, kiss-and ride-area and connecting east plaza (KPG)
- Urban design presentation graphics, including sections, elevations and perspectives (watercolor renderings, Photosims, Sketchup models as appropriate) for trail connections, trail, bridge landings and plaza (KPG)
- Presentation quality graphics of preferred alternative for use in reports and open house materials (KPG)
- (6) Presentation-quality graphics of preferred alternative for use in reports and open house materials (LMN):
 - Overall aerial view
 - View from west approach
 - View from east approach
 - View from I-5 northbound
 - View from I-5 southbound
 - View on bridge looking east
- One (1) physical study level model of the preferred alternative, scale to be determined (LMN)
- 3D concept models for bridge alternatives (LMN)

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 32

Task No. 10.04 – Landscape Architecture

KPG shall provide Landscape Architecture services in support of the TS&L memo.

Anticipated tasks include the following:

- Tree locations and conceptual landscape areas
- Develop plant and tree palette with photo examples
- Determine code and jurisdictional research for landscape and tree requirements
- Determine extents of property restoration

Assumptions:

- Conceptual design will review and consider current information and plans for the proposed light rail facility

Deliverables:

- Concept level landscaping plans for inclusion in the TS&L memorandum

Task No. 10.05 – Illumination and Electrical Design

KPG shall perform the illumination and electrical design services in support of the TS&L memo.

Anticipated tasks include the following:

- Develop conceptual sections and elevations for TS&L phase, including recommended lighting fixtures for trail, bridge approaches and bridge.

Assumptions:

- Conceptual Illumination Design will reflect bridge and trail alternatives.

Deliverables

- Conceptual elevations and cross sections of luminaire poles and luminaires
- Conceptual level illumination design of aesthetic fixtures for bridge and trail lighting for the TS&L memorandum

Task No. 10.06 – Constructability Review & Cost Estimating

Ott-Sakai will provide constructability review and cost estimating services in support of the TS&L memo. Anticipated tasks include:

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 33

- Prepare for and attend brainstorming sessions with KPFF to discuss feasible bridge construction techniques in relation to construction over I-5 and immediately adjacent to Sound Transit’s Shoreline South/145th st light rail station
- Prepare concept level cost estimates and constructability narrative for each bridge and trail alternative considered for the Bridge TS&L report. This information will be included in the bridge alternatives analysis.

Assumptions:

- There will be two (2) brainstorming sessions with each lasting approximately two (2) hours.
- Concept level bridge design and trail alignments will be provided two (2) weeks prior to the delivery date of the Draft TS&L memo for cost estimating and constructability review.
- Quantities to be provided by the design team.

Deliverables:

- Concept level cost estimates and constructability narrative for up to four (4) bridge and trail alignments for inclusion in the TS&L memo
- Concept level construction schedules for up to four (4) bridge and trail alignments for inclusion in the TS&L report

Task 10.07 – Bridge and Trail Type, Size and Location (TS&L) Memo

The TS&L memo shall describe the project, the proposed structure, and give reasons why the bridge and trail type, size, and location were selected. KPFF shall produce the report based on input received from Subconsultants. The design of the trail, landings and bridge will be advanced to the following levels:

Environmental Review, Permitting & Documentation

- Agency coordination conducted
- Conceptual utility relocations identified
- Permits needed verified and submittal applications begun

Trail Geometry

- Typical trail section
- Deviations (if needed) identified and approved
- Horizontal and vertical constraints defined

Storm Water

- Preliminary storm water management options identified
- Conceptual drainage facilities identified

Trail & Bridge Illumination

- Design standards identified
- Preliminary illumination options identified

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 34

Right-of-Way

- Preliminary right-of-way needs identified
- Title reports ordered

Landscaping

- Preliminary plant palette defined
- Conceptual planting plans

Structures

- Preliminary bridge plan and elevation
- Preliminary feasible construction method identified
- Foundation layout complete
- Typical structure sections complete
- Bridge drainage requirements determined
- Number and type of utilities to be located on the bridge identified

Public Outreach and Stakeholder Engagement:

- Open House for TS&L Alternatives completed
- Initial Stakeholder engagement completed

Utilities

- Preliminary utility conflicts identified
- Relocation alternatives and schedule constraints from utilities
- Franchise and permit process initiated
- Utility property rights identified

The above information will be distilled into a technical memorandum which will follow the general format listed below:

- Executive Summary
- Project Description
- Design Criteria
- Conceptual Studies
 - Aesthetics
 - Site constraints
 - Regulatory constraints
 - Construction requirements
 - Urban design
 - Structure types
 - Approach styles
 - Maintenance
- Project alternatives considered
- Alternatives Evaluation
- Cost estimates (PE, ROW, Inspection, Construction)
- Preferred Alternative Recommendation
- Appendices
 - Photographs

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 35

- Conceptual plans
- Workshop Meeting Minutes
- Technical Memorandums & Reports

Assumptions:

- The City will distribute the Draft TS&L report for review and comment by City staff and stakeholders.
- All comments received on the Draft TS&L report will be compiled into one document prior to sending to KPFF and the Subconsultants for review and response.

Deliverables:

- Draft TS&L Memo (3 hardcopies, electronic copy)
- Comment responses to Draft TS&L Memo (electronic copy)
- Final TS&L Memo (3 hardcopies, electronic copy)

TASK 11.0 – BRIDGE & TRAIL 30% DESIGN

Following the selection of the preferred alternative from the TS&L phase, KPFF and the Subconsultants will perform the work necessary to complete the 30% design.

KPFF will compile and submit to the City all deliverables described below in one complete package.

The following tasks are anticipated for the 30% design:

Task No. 11.01 – Civil Engineering

KPFF shall perform the civil engineering work in support of the 30% design submittal.

The preferred alternative will be advanced to the 30% design level which includes the following civil design drawings:

- Cover Sheet
- Trail Plan, Profile, Paving, Grading (3 combined plan/profile sheets to cover project footprint)
- Typical Sections (1 sheet)
- Utilities and Storm Water plans (3 sheets)

KPFF shall prepare a Stormwater Technical Memorandum. The memorandum shall include the preliminary design and engineering calculations of stormwater flow control and water quality facilities for the project. The document will serve as the basis for completing a full Drainage Report during final design. The Memorandum will be complete to the level it satisfies the requirements for NEPA Water Quality Documentation.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 36

KPFF shall create a spreadsheet of potential utility conflicts and recommendations for resolving each utility conflict. KPFF shall work with the City to arrange a utility coordination meeting with all affected utilities to discuss utility conflicts and resolution.

KPFF shall provide 30% civil quantities and identify ROW needs necessary for cost estimating.

Assumptions:

- Stormwater will be managed in accordance with the City of Shoreline Engineering Design Manual 2019 and WSDOT Highway Runoff Manual.
- Stormwater water quality and flow control BMPs will be conceptually designed.

Deliverables:

- 30% design Civil Plans (1 hardcopies, electronic copy)
- Stormwater Technical Memorandum (3 hardcopies, electronic copy)
- Utility conflict matrix (electronic copy)

Task No. 11.02 – Structural Engineering

KPFF shall perform the structural engineering work in support of the 30% design submittal.

The preferred alternative will be advanced to the 30% design level which includes the following structural design drawings:

- General Structural Notes
- Bridge Plan & Elevation
- Bridge Foundation Plan
- Foundation Details (2 sheets)
- Bridge Typical Sections (2 sheets)
- Bridge Construction Sequence (2 sheets)
- Wall Plan & Profiles (2 sheets)
- Wall Details

KPFF shall provide 30% structural quantities necessary for cost estimating.

Deliverables:

- 30% design Structural Plans (1 hardcopies, electronic copy)

Task No. 11.03 – Urban/Trail Design and Bridge Architecture

KPG shall perform Urban/Trail Design work in support of the 30% design submittal.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 37

The preferred alternative will be advanced to the 30% design level which includes the following urban/trail design drawings:

- Kiss and Ride Layout and 1st Avenue NE Trail Connection Plan
- Trail Layout Plan
- West and East Bridge Landing Plan
- East Plaza Plan
- Typical Trail Sections

KPG shall provide 30% urban/trail design quantities necessary for cost estimating. Cost estimating is excluded from KPG scope.

LMN shall perform bridge architecture work in support of the 30% design submittal.

The preferred alternative will be advanced to the 30% design level which includes the following bridge architecture design drawings:

- 3D View Images of Bridge Design (massing study quality) (4 Sheets)

Assumptions:

- Architectural design drawings will consist of 3D images depicting multiple views
- No Urban Design custom details will be produced for the 30% Design
- The physical study model will be revised to reflect the 30% Design Phase, but not be included to presentation level of completion
- Cost estimating and quantity take-offs are excluded from LMN scope

Deliverables:

- 30% Urban/Trail design drawings (1 hardcopies, electronic copy)
- Updated Physical Model
- 30% Architectural design drawings (1 hardcopies, electronic copy)

Task No. 11.04 – Landscape Architecture

KPG shall perform the Landscape Architecture and Irrigation Design work in support of the 30% design submittal.

The preferred alternative will be advanced to the 30% design level which includes the following landscape design drawings:

- Landscape Plans
- Landscape Schedule and Standard Details

KPG shall provide 30% landscape architecture design quantities necessary for cost estimating Landscape/Planting/Irrigation design. Cost estimating is excluded from KPG scope.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 38

Deliverables:

- 30% Landscape Plans (1 hardcopies, electronic copy)

Task No. 11.05 – Illumination and Electrical Design

KPG shall perform the Illumination and Electrical Design work in support of the 30% design submittal.

The preferred alternative will be advanced to the 30% design level which includes the following:

- Evaluation of lighting performance throughout the project using the AGI illumination model.
- Illumination Plans for Trail Design, Bridge Landings and connecting Plaza areas
- Illumination pole and luminaire elevations and sections
- Coordination with local power company for proposed electrical power connection services

KPG shall provide 30% illumination design quantities and/or illumination element cut sheets necessary for cost estimating.

Assumptions:

- No electrical wiring design will be included in the 30% Design
- No illumination details will be included in the 30% Design.

Deliverables:

- Illumination Design Report (3 hardcopies, electronic copy)
- 30% Illumination Plans (1 hardcopies, electronic copy)

Task No. 11.06 – Constructability Review & Cost Estimating

Ott-Sakai will provide constructability review and cost estimating services in support of the 30% design submittal. Tasks include:

- Perform a constructability review of 30% design documents for general constructability of design concepts.
- Prepare a construction cost estimate for the 30% Design for each discipline. Where practical, the bid items shall be standard bid items described in the standard specifications and listed in the standard bid item list.
- Prepare a construction schedule showing estimated sequencing and durations of primary construction activities required to complete construction of the project based on the 30% Design plans.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
 Page 39

Assumptions:

- Draft 30% design plans will be provided two (2) weeks prior to the delivery of the 30% design plans for cost estimating and constructability review.
- Quantities to be provided by the design team.

Deliverables:

- Constructability Review comments on 30% plan set (electronic copy)
- Itemized construction cost estimate for 30% Design (electronic copy)
- Construction Schedule (Microsoft Project Format)

Task No. 11.07 – 30% Deliverables Preparation & Submittal

KPFF will assemble all plan sheets and deliverables listed under Task 11 and compile them into a single deliverable for submittal to the City.

Deliverables:

- Compiled 30% deliverables (Plans, cost estimate, reports, memos, etc) (1 hardcopy, electronic copy)

TASK 12.0 – PROJECT FUNDING SUPPORT

Following the completion of the 30% design phase, KPFF will provide project funding support services. Tasks include:

- Research potential design and construction funding sources
- Identify all requirements and application information required for each funding source
- Confirm application timelines
- Conduct periodic check-ins with City staff, key stakeholders and other funding experts to determine if new funding sources have come into existence
- Provide application narrative writing assistance

The results of this work will be summarized in a Funding Opportunity Matrix. This matrix will summarize the aforementioned items in a clear and concise manner.

Assumptions:

- The City will prepare and file all funding applications. KPFF will support this effort as described above.
- 24 hours of funding support services (e.g. application narrative writing, application support materials, etc) are assumed for this task.

Exhibit A – Scope of Work
City of Shoreline, N 148th Non-Motorized Bridge Project
Page 40

Deliverables:

- Funding Opportunity Matrix (electronic copy)

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