

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorizing the City Manager to Execute a Professional Services Contract with KPFF, Inc in the Amount of \$590,011 for Design of a Sidewalk Project on 5 th Avenue NE from NE 175 th Street to NE 182 nd Street
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:

In November 2018, Shoreline residents approved an increase in the Sales and Use Tax to construct new sidewalks. The ballot measure included 12 specific locations for installation of new sidewalk. KPFF is one of two consultants that has been selected to support staff in the delivery of this program to complete these initial projects within ten years. Under this contract, KPFF will design sidewalks on 5th Avenue NE from NE 175th to NE 182nd Street. Staff is requesting that Council authorize the City Manager to execute a contract with KPFF, Inc in the amount of \$590,011 to perform this design work.

FINANCIAL IMPACT:

The ballot measure requires all projects to be funded with bond revenue that is then paid for with the Sales and Use Tax collected over the next 20 years. In 2019, the City issued the first series of bonds in the amount of \$11.6 million to fund the initial programming, design and construction of several sidewalk routes. Ordinance No. 852 provided \$4,245,000 for the 2019-2020 budget for this sidewalk program. This contract is within that authorized budget.

Additional bonds will be issued in future years. The initial programming within this scope of work will inform a more detailed budget and schedule for expenditures and issuance of future bonds.

RECOMMENDATION

Staff recommends that the City Council authorize the City Manager execute an agreement with KPFF, Inc in the amount of \$590,011 for a professional services contract to provide design services for sidewalks on 5th Avenue NE from NE 175th Street to NE 182nd Street.

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

BACKGROUND

In November 2018, voters approved the 0.2% increase in Sales and Use Tax for the construction and repair of sidewalks. The ballot measure included 12 specific locations for installation of new sidewalk. In March 2019, Council authorized the issuance of bonds to support the program and authorized a budget amendment for the 2019-2020 budget. The staff reports for these authorizations can be found at the following links:

Adopting Ordinance No. 852 – 2019-2020 Biennial Budget Amendment for Sidewalk Projects:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2019/staffreport031819-7d.pdf>.

Adopting Ordinance No. 853 – Authorizing Issuance of Bonds for Sidewalks Supported by Transportation Benefit District 0.2% Sales Tax:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2019/staffreport031819-7e.pdf>.

Staff has now identified two consultants to provide design services to support the new Sidewalk Program for the construction of the 12 sidewalk projects identified in the 2018 ballot measure. Council action is required to authorize execution of the contracts for these design services.

ALTERNATIVES ANALYSIS

In October 2019, staff issued a Request for Qualifications (RFQ) to identify two consultant firms to provide program support and design for the new sidewalk and sidewalk rehabilitation programs. Nine firms submitted Statement of Qualifications. Based on these proposals, staff interviewed four firms of which two firms (KPFF, Inc and DOWL, LLC) were identified as the best qualified to provide design services.

Out of these two firms, KPFF was identified to provide the design of the sidewalk route on 5th Avenue NE from NE 175th Street to approximately NE 182nd Street. This route ties into Sound Transit construction work as part of the Lynnwood Link Extension project to re-align 5th Avenue between NE 182nd Street and NE 185th Street. Attachment A to this staff report includes the scope of work for this proposed contract.

DOWL, LLC has been selected to design 1st Avenue NE from NE 192nd Street to NE 195th Street, which is being authorized under separate action on tonight's agenda. Staff intends to use these two firms for additional design of the remaining ten routes identified in the bond measure. Future Council authorizations will be needed for additional design services.

The alternative to awarding this design contract to KPFF is to not authorize this contract, which would result in the sidewalk program not proceeding with design of the sidewalk on 5th Avenue NE. As staff does not currently have capacity to perform this work in-house, this alternative is not recommended.

COUNCIL GOAL(S) ADDRESSED

Award of this contract supports Council Goal 2: Continue to deliver highly valued public services through management of the City's infrastructure and stewardship of the natural environment, and specifically Action Step 1: Implement the Sidewalk Repair and Construction Program.

RESOURCE/FINANCIAL IMPACT

The ballot measure requires all projects to be funded with bond revenue that is then paid for with the Sales and Use Tax collected over the next 20 years. In 2019, the City issued the first series of bonds in the amount of \$11.6 million to fund the initial programming, design and construction of several sidewalk routes. Ordinance No. 852 provided \$4,245,000 for the 2019-2020 budget for this sidewalk program. This contract is within that authorized budget.

Additional bonds will be issued in future years. The initial programming within this scope of work will inform a more detailed budget and schedule for expenditures and issuance of future bonds.

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ATTACHMENTS

Attachment A – KPFF, INC Contract Scope of Work



EXHIBIT A

SCOPE OF WORK

**5th Ave NE New Sidewalk Project
City of Shoreline**

INTRODUCTION

During the term of this Professional Services Agreement (AGREEMENT), KPFF (CONSULTANT) shall perform professional services for the City of Shoreline (CITY) in connection with the following project: **5th Ave NE New Sidewalk Project (PROJECT)**

PROJECT DESCRIPTION

The City of Shoreline plans to construct sidewalk on both sides of 5th Avenue NE from NE 175th Street to near NE 182nd Court. The sidewalk will connect to new sidewalks that are currently being constructed on 5th Avenue NE between NE 182nd Court and NE 185th Street as part of the Sound Transit 185th Street Link Light Rail Station. Sidewalk on the west side will extend beyond these limits to a new mid-block crossing north of NE 182nd Court. The project will also be providing new curb and gutters, curb ramps, alternatives for planters, drainage improvements, bicycle lane alternatives, utility coordination for relocations.

The services provided by the CONSULTANT team are to: develop alternative concepts; work with CITY to select a preferred alternative; take the preferred alternative through final design; coordinate with stakeholders and utilities; support the CITY through the bidding process.

PROJECT TEAM

The project team includes:

Owner	City of Shoreline
Prime Consultant	KPFF
Civil Engineer	KPFF
Drainage Engineer	KPFF
Structural Engineer	KPFF
Survey	Lin & Associates
Geotechnical Engineer	HWA
Public Outreach	EnviroIssues
Environmental / Permitting	The Watershed Company
Arborist	The Watershed Company
Right-of-Way / TCE's	RES Group NW
Traffic Engineer	Fehr & Peers
Landscape Architect	HBB

MAJOR MILESTONE SCHEDULE

Below is a preliminary schedule of major milestones for the project. After notice to proceed, the CONSULTANT will provide a detailed schedule as described in Task 1.3.

NTP	March 2020
Survey Complete.....	April 2020
30% Design.....	June 2020
60% Design.....	September 2020
90% Design.....	November 2020
Final Design	January 2020

The services will include the tasks as outlined below:

TASK 1: PROJECT MANAGEMENT (KPFF)

The CONSULTANT shall provide project administration and coordination with the CITY to facilitate efficient progress and timely completion of the project.

TASK 1.1: MONTHLY PROGRESS REPORTING AND INVOICING

Prepare and submit monthly progress reports containing the following:

1. Invoices showing the actual costs; and
2. Status of work performed during work period.

TASK 1.2: INTERNAL MEETINGS

The CONSULTANT will hold a meet every two weeks with the project team to ensure coordinate design tasks and ensure submittal schedules are on track. A submittal log will be created and maintained to track all deliverables sent to the CITY and other agencies.

Deliverables:

- Prepare and maintain a Submittal Log

TASK 1.3: SCHEDULE

The CONSULTANT will prepare a Gantt Chart style schedule to define design tasks begin/end dates, deliverable deadlines, and major milestones. The schedule will be updated once every 2 months for the duration of the project.

Deliverables:

- Project schedule with regular updates.

TASK 1.4: PROJECT MEETINGS

Project meetings will be held monthly to coordinate with the project team, inform the CITY Project Manager of progress, identify issues, and receive direction. These meetings will be in person at the CITY offices. For scoping purposes, the CONSULTANT shall assume a maximum of two (2) CONSULTANT staff will attend ten (10) meetings.

TASK 1.5: PROPERTY IMPACT TRACKING

At the 30% design level, the CONSULTANT will create a property impact log that identifies potential impacts to private parcels due the construction of the project. The impacts may include slope construction, driveway grading, tree/fence removal, and utility relocations. The log will also track anticipated ROW and easement needs.

The property impact log will be updated at each design level throughout the duration of the project.

Deliverables:

- Property impact log with updates at every design submittal.

TASK 1.6: STAKEHOLDER COORDINATION

Throughout the project duration, the CONSULTANT will communicate the status of design and receive feedback from the stakeholders listed below. The CONSULTANT will attend up to 5 one-on-one meetings with stakeholders to further discuss the project details.

The Project Stakeholders include:

- King County Metro
- Shoreline Fire Department
- Adjacent property owners

TASK 1.7: MANAGEMENT AND QUALITY CONTROL

The CONSULTANT will provide direction and oversight of the project design team to ensure accurate and timely implementation of the work plan and the appropriate coordination of work activities, including the review of each project design team member's work over the course of the project.

This effort provides the leadership to the team to carry out an integrated work plan across disciplines, adhere to deadlines, budget constraints, and other issues.

The schedule will be developed in coordination with the CITY under this task.

This task includes the effort related to providing quality control for the work activities in this scope of work. It will include a review by staff with technical expertise in the specific work area and by senior staff to ensure that the project is technically correct and meets the requirements of the scope of work.

TASK 2: SURVEY (LIN & ASSOCIATES)

The CONSULTANT will perform topographical survey and prepare initial basemapping for the PROJECT. The survey limits start at 15' north of the north edge of pavement of NE182nd Court and continuing south along 5th Avenue NE to north curb line of NE 175th Street. The survey and mapping will consist of ROW to ROW along with 10' outside of the ROW if accessible. The limits will extend 15' perpendicular beyond the NE 5th Avenue ROW line at intersecting streets. The CONSULTANT will use existing basemaps that were created by Lin & Associates for the adjacent Link light rail project and combine them with the topographical survey for this project to create a combined project basemap.

TASK 2.1: CONTROL SURVEYS

The CONSULTANT shall perform control surveys for the project, including datum control surveys, ground control for topographic completion surveys, and control surveys for road right-of-ways. Parcel boundary calculations will not be conducted at this level of project design. Any property corners discovered during the field survey will be surveyed and included in the project basemaps.

Datum control surveys will be performed to provide the project in Sound Transit LLE Project Datum which is based upon Washington State Plane Coordinate System (WSPCS), North Zone (NAD 83/11) horizontal datum, and North American Vertical Datum (NAVD 88). We will provide coordinates and elevations for survey control established and recovered during the course of this survey.

TASK 2.2: TOPOGRAPHIC MAPPING SURVEYS

A professional surveyor, licensed in the State of Washington will perform ground-based topographic surveys to generate existing condition basemaps at a 1"=20' scale and prepare 1' contours generated with a digital terrain model (DTM). The survey will include but is not limited to the following elements within the right-of-way:

Transportation Features:

- Survey roadway centerline
- Top and bottom of curb (flowline)
- Back of sidewalk and at grade changes
- Pavement type
- Driveways

- Street lighting
- Visible areaways
- Sidewalks
- Curb type (granite vs. concrete)
- Channelization (signing and striping include cross walks, bike lanes)
- Bus stop locations (sign and post and loading zone length)
- Traffic signals and appurtences including dimensions of pole foundations
- Height of signal poles and street light poles
- Traffic signal loops including lead-in from loop to hand hole
- Hand holes with their size and orientation
- Curb ramps
- Existing survey monuments
- Overhead trolley wires shall be shown in the basemap to the best approximate location but do not need to be surveyed.
- A sufficient number of survey shots shall be collected to determine the approximate location of the road crown and to construct a surface model adequate to generate 1' contours and a roadway and curb profile.

Outside of Right-of-Way: (if able to survey from ROW)

- Building faces
- Door thresholds
- Fences and fence posts
- Mailboxes
- Steps and stairways
- Back of sidewalk and driveway locations
- Expansion joints in sidewalks

Curb Returns and Bulbs:

- Top and bottom (flowline) of curb at PC/PT and the quarter points of each curb return and bulb
- Roadway surface measured 3-5' perpendicular from the curblines and gutter flowline for each of these locations

- A sufficient number of survey shots shall be taken in the area between the curb return and the right-of-way such that sufficient horizontal and vertical information is available to design new curbs, curb ramps, and surrounding sidewalk.

Surface Utilities:

- Surface location and elevation of water, fire suppression, irrigation, sanitary sewer, storm sewer, gas, electric, and telecommunications including (but not limited to), manholes, vaults, catch basins, inlets, valves, hydrants, cleanouts, and other similar items.

As-Built Underground Features (Sanitary and Storm Sewer):

- Rim and invert elevation of all structures within the project limits
- Structure type (i.e. inlet, catch basin, manhole, etc.)
- Size of structure (diameter and dimensions if a rectangular structure)
- Orientation of structure
- Pipe and structure material
- Measure downs to top of nut on gas and water valves.

Landscaping and Natural Features:

- Vegetation
- Tree location
- Tree type (evergreen or deciduous symbol, labeled trunk and drip diameter)
- Tree size (4" diameter or greater at design breast height (DBH))
- Tree caliper and canopy diameter (as measured on aerial photos or equivalent, shown in text only on the basemap)

Deliverables:

CONSULTANT will provide two (2) AutoCAD 2018 drawings files that contain the following:

- 2D basemap containing all 2D elements including ROW calculations will be flattened to zero elevation.
- 3D surface DTM containing all breaklines and points to create site contours at 1' intervals.

Assumptions:

- CITY right-of-way permits and/or outreach notices will be performed by the CITY (if required).

- Right-of-Entries signed by the CITY and private owner will be provided by the CITY for private properties (if required).
- Basemapping will be provided in: Civil3D 2018 using the Sound Transit 2018 CAD standards (unless directed otherwise prior to commencing work).
- 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 required).
- Trees 4 inches and above 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.
- Right-of-way calculations are needed. The CONSULTANT will combine the existing calculated ROW from the Sound Transit project and supplement to complete ROW calculations within project limits.
- Title reports will be obtained by the CITY for up to fifteen (15) parcels impacted by TCE's.

TASK 2.3: RIGHT-OF-WAY

The CONSULTANT will create parcel maps and legal descriptions for fifteen (15) parcels that are impacted by temporary construction easements (TCE's) along the project alignment.

Deliverables:

- Fifteen (15) parcel maps stamped by a Washington State PLS.

TASK 3: GEOTECHNICAL ENGINEERING (HWA)

TASK 3.1: PROJECT MANAGEMENT

1. **Invoice Generation and Processing:** HWA will prepare monthly invoices, and progress reports for the duration of the design phase of the project.
2. **Geotechnical Task Management:** HWA will provide task management to all geotechnical related aspects of the project. HWA will correspond with the CITY and the design team in the form of meetings, emails, fax, and telephone calls, as necessary

TASK 3.2: GEOTECHNICAL PROJECT SETUP

1. **Project Setup:** HWA will initiate the project and set up billing information in support of invoicing throughout the project management.
2. **Collect and Review Available Geotechnical Data:** HWA will review all readily available geotechnical information from the vicinity of the proposed project. This will include a review of the existing geotechnical reports for adjacent project sites, available geologic maps, online databases, and HWA's library of geotechnical explorations to provide insight into the site soil conditions

TASK 3.3: GEOTECHNICAL EXPLORATION

1. **Perform Geotechnical Site Reconnaissance:** HWA will conduct a geotechnical site reconnaissance of the project corridor. This reconnaissance will be used to identify geotechnical challenges and to assist in planning the geotechnical exploration program.
2. **Plan the Geotechnical Field Exploration Program:** HWA will plan and coordinate the geotechnical exploration program for the project. The exploration program will consist of drilling a series of up to six (6) geotechnical borings to provide data for conceptual design of sidewalks, construction of retaining structures, and luminaire foundations.
3. **Conduct Utility Locates:** HWA will mark the proposed exploration locations and arrange for utility locates using the Utility Notification Center. HWA will make additional site visits to verify that the proposed locations of the borings are clear of utilities prior to finalizing the exploration plans and mobilizing the equipment. HWA will also utilize private utility locates on the day of drilling to further assure the clearance of the subgrade from any buried public or private utilities.
4. **Develop Traffic Control Plans for Geotechnical Explorations:** HWA will coordinate with the CITY and design team and develop site specific traffic control plans for each proposed geotechnical exploration.
5. **Generate Geotechnical Exploration Work Plan Memo:** HWA will prepare a Geotechnical Work Plan Memoranda for the proposed exploration program. The work plan will be submitted to the design team and the CITY for review and approval. The work plan will detail the type, location, and extent of proposed field explorations along with logistics necessary to perform the work such as traffic control plans and staging areas. The work plans will also be used for utility locating clearances and for permitting that may be necessary to access the exploration locations. We assume the CITY or KPFF will provide any required permits or rights of entry at no cost to HWA.
6. **Conduct Geotechnical Explorations:** HWA will conduct a series of up to six geotechnical borings along the project corridor evenly spaced along the corridor, to assess the subsurface soil and groundwater conditions along the alignment. The six borings will be drilled to a depth of 20 to 30 feet below ground surface in support of sidewalk foundation design. These borings will be spaced out approximately 350 feet per boring along the alignment and alternate between the northbound and southbound lanes to assess both sides of the roadway for potential improvements.

HWA will install a 1-inch diameter groundwater monitoring piezometer adjacent to one (1) of the proposed borings to monitor and assess the groundwater fluctuation during the wet season. Data logging transducers will be installed in the monitoring piezometer to record water levels. The water level information collected will be used in geotechnical analyses to developing recommendations for infiltration potential and possible dewatering and construction impacts, as appropriate. These transducers will be set to take groundwater elevation readings every half an hour for 1 year.

Each boring will be drilled with a truck or track mounted drill rig. Given limited space on the shoulder and anticipated utility obstructions, we anticipate that the boring locations will have to be shifted into the traffic lanes and will require a single-lane closure.

Traffic control for borings that have to be located in traffic lanes will include shoulder and single lane closures. Any anticipated lane closures will require flaggers assistance.

The geotechnical borings will be logged by an HWA geotechnical engineer or engineering geologist. The borings will be backfilled per the department of ecology requirement. Samples will be screened visually for signs of contamination. All non-contaminated drilling spoils will be drummed and transported off-site for disposal by the driller.

HWA estimates drilling operation will be completed in two (2) work days.

7. **Generate Boring Logs and Assign Laboratory Testing:** HWA will prepare summary boring logs and perform laboratory testing to evaluate relevant physical properties of the site soils. Laboratory testing will include moisture content, hydrometers, grain-size distribution, cation-exchange and organic content.
8. **Conduct Groundwater Monitoring:** HWA will make two (2) site visits to download and process the groundwater data from the groundwater monitoring well installed. Temporary lane closure and yield signs will be established in order to extract transducers from the groundwater monitoring wells. This data will be used to provide the designer and prospective contractors with seasonal groundwater variations across the site.

TASK 3.4: GEOTECHNICAL ANALYSIS AND RECOMMENDATIONS

1. **Evaluate Field and Laboratory Data:** Based on the borings and the laboratory test results on selected samples, HWA will generate estimates of the soil strength and other properties needed to evaluate the effects the subsurface conditions will have on the proposed improvements.
2. **Generate AASHTO Seismic Design Parameters:** Based on the soils encountered along the alignment, HWA will determine the Site Class for seismic design. The design spectral acceleration parameters will then be selected in accordance with the AASHTO Specifications for Road and Bridge.
3. **Evaluate Liquefaction Potential:** HWA will evaluate the susceptibility of the subsurface soils to liquefaction along the corridor and assess the potential impacts to the proposed improvements.
4. **Conduct Infiltration Screening Analyses and Provide Recommendation:** HWA will evaluate grain size distribution data obtained during the subsurface explorations to determine if onsite infiltration of stormwater is feasible.
5. **Geotechnical Design:** HWA will conduct geotechnical design for the proposed improvements including evaluation of the subsurface soil's conditions and geotechnical recommendations for design and construction of luminaire foundations, sidewalk improvements, and other various elements associated with the proposed improvements.
6. **QA/QC:** All design calculations and recommendations will be reviewed by a senior principal prior to distribution to the design team or the CITY. Geotechnical Report will be prepared by a certified soils scientist, professional engineer, geologist, or hydrogeologist

licensed in the state of Washington.

7. **Prepare Draft Geotechnical Engineering Report:** HWA will prepare a draft geotechnical report for the project. This report will contain the results of the subsurface exploration program, including logs, laboratory test results, and a description of surface and subsurface conditions; a site plan showing exploration locations and other pertinent features; and geotechnical engineering recommendations for the design and construction of the proposed roadway improvements.
8. **Prepare Final Geotechnical Engineering Report:** HWA will finalize our geotechnical report once we receive review comments from KPFF and the CITY.
9. **Plan Review:** HWA will conduct a plan review at 90 and 100 percent milestones to ensure that the geotechnical aspects of the project have been properly incorporated into the project plans.

Assumptions:

- Six (6) geotechnical borings will be completed in support of development of the design for the corridor. The geotechnical borings and the installation of the groundwater monitoring well will be completed during the first phase of work in support of the 30% design. Any infiltration borings will be completed at a later phase and will require an additional mobilization of drill rigs in order to complete.
- All geotechnical borings conducted through the roadway will be patched with rapid-setting concrete. No saw cuts and hot mix asphalt patches will be required.
- The subsurface explorations will not be used to assess site environmental conditions. However, visual and/or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and groundwater (either sampled or spoils from drilling) are beyond this scope of services. If contaminated soils and/or ground water are encountered, the material will be properly contained on-site for disposal as mutually agreed upon without additional cost to HWA.
- All non-contaminated drilling spoils and related debris will be drummed on site and transported off site for disposal by the drilling subcontractor.
- All required rights of way and street use permits will be provided by the CITY or KPFF at no cost to HWA.
- The borehole locations will be surveyed by others.
- Soil samples will be collected from the borings using the Standard Penetration Test (SPT) at intervals of 2.5 feet to a depth of 20 feet and at intervals of 5 feet to the depth of termination.
- All Geotechnical Explorations will be completed during daylight weekday work hours. Anticipated work hours will be from 8AM to 5PM.
- Geotechnical explorations will not require WSDOT approval.
- HWA assumes that pavement design will match existing conditions or will be completed by others.

TASK 3.5: BOREHOLE INFILTRATION TESTING – AS DIRECTED

In the event that HWA's grain size analysis does not provide suitable indication to determine the feasibility for onsite infiltration, the completion of small scale pilot infiltration testing will be required to determine the design infiltration rate per the Stormwater Management Manual for Western Washington (SWMMWW). Completion of these tests will include the following tasks.

1. **Plan the Infiltration Testing Program:** HWA will plan and coordinate the infiltration testing program for the project. The exploration program will consist of completing three (3) Borehole Infiltration Test (BIT) at locations designated by the design team.
2. **Conduct Utility Locates:** HWA will mark the proposed exploration locations and arrange for utility locates using the Utility Notification Center. HWA will make additional site visits to verify that the proposed locations of the borings are clear of utilities prior to finalizing the exploration plans and mobilizing the equipment. HWA will also utilize private utility locates on the day of drilling to further assure the clearance of the subgrade from any buried public or private utilities.
3. **Develop Traffic Control Plans for Infiltration Testing:** HWA will coordinate with the CITY and design team and develop site specific traffic control plans for each proposed BIT.
4. **Conduct Borehole Infiltration Testing (BIT):** Due to site constraints, HWA proposes to conduct a series of up to three (3) shallow borings evenly spaced along the project corridor, that will allow the performance of three (3) Modified EPA Falling-Head Percolation Tests. The three (3) borings will be drilled to a depth of 5 feet below ground surface in support of infiltration feasibility. The exact depth of these tests will be determined by the design team upon determination of the depth of the proposed infiltration facility. These borings will be spaced out approximately 350 feet per boring along the alignment. Given the minimal depth of advancement, these borings will be drilled with a limited access rig placed along the shoulder. The BIT's will be conducted within 6-inch standpipe infiltrometers installed within each boring.

Advancement of these borings will require shoulder and sidewalk closures. No flaggers assistance will be required. The infiltration borings will be logged by an HWA geotechnical engineer or engineering geologist. The borings will be backfilled per the department of ecology requirement.

HWA estimates drilling operation will be completed in one (1) work days. Conducting the BIT will be completed on the following one (1) working day.

Assumptions:

- All infiltration borings will be completed outside of the right-of-way and will not require lane closure. These borings will be placed in locations that can be maintained over the course of a night in order to allow for a presoak period of at least 8 hours. HWA assumes the test will be concluded on the following two (2) days. All test locations will be adequately marked and covered for the purpose of public safety.

- The infiltration borings will not be used to assess site environmental conditions. However, visual and/or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and groundwater (either sampled or spoils from drilling) are beyond this scope of services. If contaminated soils and/or ground water are encountered, the material will be properly contained on-site for disposal as mutually agreed upon without additional cost to HWA.
- All non-contaminated drilling spoils and related debris will be drummed on site and transported off site for disposal by the drilling subcontractor.
- All required rights of way and street use permits will be provided by the CITY of Shoreline or KPFF at no cost to HWA.
- The borehole locations will be surveyed by others.
- Soil samples will be collected below the depth of the BIT upon completion of infiltration testing to determine the receptor soil constituents.
- All BITs will be completed during daylight weekday work hours. Anticipated work hours will be from 8AM to 5PM.

TASK 3.5: SMALL SCALE PILOT INFILTRATION TESTS – AS DIRECTED

In the event that HWA's grain size analysis and BIT's indicate that the soils near the base of the proposed infiltration facility are determined to be suitable for onsite infiltration, the completion of small scale pilot infiltration testing will be required to determine the design infiltration rate per the Stormwater Management Manual for Western Washington (SWMMWW). Completion of these tests will include the following tasks.

1. **Generate Small Scale Pilot Infiltration Test Exploration Memo:** HWA shall generate a field exploration memo that outlines our proposed small-scale pilot infiltration test exploration program. This memo will be used to convey critical information to the CITY for permitting and approval processes. The memo will include a narrative explaining the type, depth, location and timing of our proposed small-scale pilot infiltration tests. A figure showing the locations of our proposed field explorations, laydown areas and access points will be provided. Traffic control plans will be included, as appropriate.
2. **Plan and Coordinate Small Scale Pilot Infiltration Tests:** HWA will work with a local contractor to schedule the completion of the small-scale pilot infiltration tests.
3. **Obtain Hydrant Permit and Rent Required Equipment:** HWA will work with local jurisdictions to obtain a hydrant use permit. HWA will also rent the require equipment to convey water from the nearest fire hydrant to the location of the proposed small-scale-pilot infiltration tests.
4. **Conduct Utility Locates:** Prior to conducting the small-scale pilot infiltration testing program, HWA will mark the proposed test locations and notify the one- call utility locating service to have underground utilities located in the vicinity of the proposed tests.

5. **Conduct Pilot Infiltration Testing (PIT):** HWA will conduct one (1) small-scale PIT single ring infiltration tests at the location of proposed infiltration systems to be constructed. The test will be conducted at a depth determined by the design team.

HWA will contract with a local contractor to set up the small-scale Pilot infiltration tests. This preparation will be conducted under traffic control consisting of lane closure to accommodate work in the active travel lanes. The contractor will start by excavating the subsurface soils to the depth of the proposed infiltration facility. A 3-foot diameter PIT ring will be installed at the base of the excavation at the level of the proposed receptor soil and backfilled around with native soil. The excavation and setup for each of the pilot infiltration tests will be conducted the day before each small-scale pilot infiltration test is to be completed. Once the site has been prepared and the PIT ring has been installed, a steel plate will be placed over the excavation upon completion. Cold patch asphalt will be placed around the plate to smooth the transition for vehicles during the night.

The following morning, HWA will reinstall the traffic control and conduct each small-scale PIT. Water for the test will be obtained from the fire hydrant located off of 5th Avenue. Per the department of ecology manual, each small-scale pilot infiltration test will take approximately 8 hours to conduct. Upon completion of the test, the steel plate will be placed back over the excavation and the traffic control will be removed.

Upon completion of testing, the excavation will be extended at least 5 feet below the base of the test to note if groundwater is present below the test location and a mounding analysis is required. HWA anticipates that the tests will take up to 2 days to complete.

The morning after each test, HWA will reinstall the traffic control and reestablish the grade of the travel lane. Grade will be re-established with native soils from the excavation, compacted with a hoe pack, and tested with a nuclear density gauge to ensure suitable compaction is met. A minimum of 12 inches of crushed surfacing top course (CSTC) will be placed as subgrade material and hot mix asphalt will be placed with thicknesses matching the existing pavement section.

6. **Generate Small Scale PIT Log and Assign Laboratory Testing:** All of the soil samples retrieved from the PIT test will be sealed in plastic bags and taken to our Bothell, Washington office for further examination and testing. Soil information will be presented in a summary PIT log that will be generated upon completion of our exploration program.
7. **Conduct Infiltration Rate Analysis:** HWA will evaluate the data obtained from the small-scale PIT test and determine an appropriate infiltration rate for use in design of potential infiltration facilities.
8. **Prepare Infiltration Rate Analysis Letter:** HWA will present the findings of our PIT and Infiltration Rate Analysis into a formal letter report. This letter will be incorporated into the final geotechnical report.

Deliverables:

- Geotechnical Work Plan Memorandum
- Draft Geotechnical Engineering Report

- Infiltration Rate Analysis Letter
- Final Geotechnical Engineering report

Assumptions:

- The number of PIT tests is dependent on the location of the proposed infiltration facility and the variability in subsurface soil conditions encountered on site. For the purposes of this scope, HWA assumes that two (2) small-scale pilot infiltration tests will be suitable. If additional tests are determined to be necessary as a result of our subsurface investigation or determination by the design team, additional costs may be incurred.
- Soil samples will be collected at the base of the excavations using grab sample methods and tested to document the particle size distribution of each receptor soil.
- The PIT excavations will be backfilled with excavated soils. This material will be maintained on site and covered with tarps to prevent oversaturation. Material will be compacted to at least 95 percent of its Modified Proctor maximum density (ASTM D 1557).
- A Rice Density (ASTM D2041) will not need to be conducted on the hot mix asphalt for road patches. Any testing required for placement of hot mix asphalt will be done based on QA testing results provided by the batch plant.
- The excavations will not be used to assess site environmental conditions. However, visual and/or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and groundwater (either sampled or spoils from drilling) are beyond this scope of services. If contaminated soils and/or ground water are encountered, the material will be properly contained on-site for disposal as mutually agreed upon without additional cost to HWA.
- All non-contaminated drilling spoils and related debris, beyond those utilized for the excavation backfill, will be drummed on site and transported off site for disposal by the excavation subcontractor.
- All required rights of way and street use permits will be provided by the CITY or KPFF at no cost to HWA.
- The PIT locations will be surveyed by others.
- The excavation and backfill of the PIT tests will be completed during daylight weekday work hours. Anticipated work hours will be from 8AM to 5PM.

TASK 4: UTILITY COORDINATION (KPFF)

The CONSULTANT will identify potential conflicts with existing utilities and determine pothole locations. The CONSULTANT coordinate with utility representatives to develop relocation plans and attend up to eight (8) one-on-one or group meetings. The bulk of the meetings are anticipated to be with Seattle City Light regarding overhead transmission and distribution power. Additional coordination will be conducted with Ronald Wastwater, Shoreline Water District, and PSE (gas).

Deliverables:

- Utility conflict log.
- Potholing figures showing locations and measure-downs.

TASK 5: PRELIMINARY ENGINEERING (KPFF)

TASK 5.1: DATA GATHERING AND PROCESSING

The CONSULTANT review and process the survey basemap and gather any GIS files, aeriels, as-built plans, and engineering studies pertinent to the PROJECT.

TASK 5.2: ALTERNATIVE DEVELOPMENT AND ANALYSIS

1. The CONSULTANT will prepare conceptual plans and sections that depict new sidewalk for the PROJECT. The conceptual plans will include proposed elements such as curbs, sidewalk, planters, bike lanes, and paving limits. Up to three (3) typical section alternatives will be developed that may include varying widths of bike lanes, amenity zones and sidewalks. Potential walls and impacts to ROW, trees, and utilities will be identified. Figures will be created that display the alternative designs on aeriels. The CONSULTANT will make select a recommended alternative for CITY review.
2. Order of magnitude cost estimates will be generated based on measurements of known quantities. Unit prices will be based on WSDOT Unit Bid Analysis and recent bid history. Percentage-based assumptions will be made for items that cannot be quantified at a conceptual level. Reasonable contingencies will be added to the total construction cost.

Deliverables:

- 11x17 Alternatives figures. (PDF)
- Cost estimates. (PDF and Excel)

TASK 5.3: DESIGN WORKSHOP

The CONSULTANT and CITY will meet at City Hall to discuss the opportunities, challenges, and property impacts of the alternatives. The CONSULTANT will provide an alternative

recommendation and discuss justification of the decision making process. The goal of the workshop is for the group to determine a preferred alternative that will move into 10% design.

Deliverables:

- Materials for Design Workshop
- Meeting Notes

TASK 5.4: PREFERRED ALTERNATIVE 30% DESIGN

Based on the results of the alternative design and workshop, the CITY will provide direction to CONSULTANT to proceed with preparing a 30% design for the Preferred Alternative. The CONSULTANT will prepare a set of construction drawings that will follow typical APWA CAD standards using AutoCad 2018. The plan series anticipated for this project:

- Cover, vicinity map, index, and legend.
- Site Preparation / TESC.
- Typical Roadway Sections,
- Paving, Channelization, and Signing Plans.
- Paving and Grading Details,
- Driveway Profiles,
- Grading and Drainage Plans,
- Retaining Wall Plans, Elevations, and Details,

Landscaping plans are anticipated to be included with the 60% submittal.

To prepare the sheets listed above, the CONSULTANT will perform design and documentation as follows:

1. Sidewalk Alignment

The CONSULTANT refine the design of the Preferred Alternative to further define sidewalk widths, amenity zone inclusion, swale inclusion, side street limits, and driveway preferences.

2. General Plan Production

The CONSULTANT will prepare a complete set of construction drawings, including cover sheet, index, vicinity map, general notes and legend. The plan production format will follow typical APWA construction drawings. CAD files will be in compliance with APWA standards, and will be developed using AutoCad 2016.

3. TESC & Site Preparation

The CONSULTANT will identify temporary erosion and sediment control (TESC) measures and construction/removal limits on the plans.

4. Paving and Grading

The CONSULTANT will develop paving and grading plans based on the CITY standards, defaulting to WSDOT standards where appropriate. HMA widening and patching will match existing pavement thickness or match a thickness identified by the CITY.

Pedestrian ramps, crosswalks, and sidewalks will be developed to meet ADA guidelines to the maximum extent feasible. The CONSULTANT will prepare the MEF documentation if required.

5. Signing and Striping

The CONSULTANT will develop a channelization plan based on the MUTCD, CITY, and WSDOT requirements. This work will include bike lane signing and striping.

The CONSULTANT will prepare an engineer's estimate of probable costs based on calculated quantities. It is anticipated that reasonable cost assumptions will be made storm drainage facilities and Temporary Construction Easements. Unit prices will be based on past project experience, WSDOT's unit bid analysis, and input from the CITY.

Deliverables:

- 30% Plans: one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; up to three (3) half size hard copies as needed.
- 30% Cost Estimate: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.

TASK 5.5: STORMWATER ASSESSMENT

The CONSULTANT will develop a stormwater strategy for the project based on guidance provided in the Shoreline Engineering Development Manual and Ecology's Stormwater Management Manual for Western Washington (SMMWW). New hard surfaces and pollution generating surfaces will be measured to determine which Minimum Requirements will be triggered. Preliminary sizing of flow control and water quality facilities will be calculated in conjunction with an investigation into LID opportunities at the site. Known stormwater issues within the project limits will be assessed and potential mitigation measures will be recommended.

The stormwater strategy developed in this task will be summarized and included in the Design Memo discussed in Task 3.7.

TASK 5.6: DESIGN MEMO AND SUMMARY SHEET

The CONSULTANT will create a memo summarizing the findings of the alternative design, workshop, and subsequent development of the 30% design and cost estimate. The memo

will document the justifications for design decisions, assumptions, potential risks, and property/utility impacts.

The CONSULTANT will create a summary sheet that will lists basic information about the project. The information shown may include a project description, estimated construction cost, potential challenges/impacts, and the benefits.

Deliverables:

- Design Memo: one (1) electronic memo in Word format; one (1) electronic memo in PDF format; up to three (3) hard copies as needed.
- Project Summary Sheet: one (1) electronic memo in Word format; one (1) electronic memo in PDF format; up to three (3) hard copies as needed.

TASK 6: PLANS, SPECIFICATIONS, AND ESTIMATE; 60%, 90%, FINAL (KPFF)

TASK 6.1: CIVIL ENGINEERING

The CONSULTANT shall prepare plans, specifications, and cost estimates. Plan series are anticipated for this project:

- General
- Right-of-way/Site Preparation/TEESC
- Typical Roadway Sections
- Paving, Channelization, and Signing Plans
- Paving Details
- Curb Ramp Details
- Driveway Profiles
- Grading and Drainage Plans
- Drainage Details
- Retaining Wall Plans, Profiles, and Details
- Landscaping

Deliverables:

- 60% Plans: one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; up to three (3) half size hard copies as needed.
- 90% Plans: one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; up to three (3) half size hard copies as needed.

- Draft and Final Bid Ready Plans: one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; up to three (3) half size hard copies as needed.

Assumptions:

- The CITY shall provide or make available the following items to the CONSULTANT:
 - CITY of Shoreline Design Standards & Guidelines.
 - Existing GIS mapping information of the project including but not limited to general utility location maps.
 - Copies of existing record drawing information of the project area.
 - Updated utility contact information.
 - One set of consolidated review comments for each Major Milestone Submittal (30%, 60%, and 90%).
- The CONSULTANT's deliverables, including record drawings, are limited to the sealed and signed hard copies. Computer-generated files furnished by the CONSULTANT are for the CITY or other's convenience. Any conclusions or information derived or obtained from these files will be at user's sole risk.

TASK 6.2: STORM DRAINAGE

All stormwater management elements of the roadway shall be designed in accordance with the requirements of Shoreline Engineering Development Manual, 2019 and the SMMWW. The CONSULTANT will perform the following tasks:

1. Design a stormwater system that is guided by the stormwater strategy identified in Task 3.7.
2. Conduct a site visit to field-verify existing conditions, utility as-builts, drainage sub-basin delineations, and to generally confirm accuracy of survey base mapping. A maximum of two (2) site visits is anticipated.
3. Address collection, conveyance, detention/retention, and water quality treatment facilities for the project per the required standards.
4. Prepare a Draft and Final Hydraulic Report in conformance with SMMWW standards.

TASK 6.3: COST ESTIMATE

The CONSULTANT will develop a construction cost estimate based on the CONSULTANTS past project experience, WSDOT's historical bid analysis, and input from the CITY. Items will be listed by standard bid item number and specification location.

Deliverables:

- 60% Cost Estimate: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.
- 90% Cost Estimate: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.
- Draft and Final Bid Ready Cost Estimate: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.

TASK 6.4: SPECIFICATIONS

The CONSULTANT will develop contract specifications based on the APWA/WSDOT unit bid format and generated using WSDOT's PSE program. It is assumed that the CITY will provide limited boilerplate specifications for Division 0 and Division 1, with the CONSULTANT making any necessary project specific modifications.

Deliverables:

- 60% Specifications: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.
- 90% Specifications: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.
- Draft and Final Bid Ready Specification: one (1) electronic copy in Microsoft Excel (.xlsx) format, one (1) searchable PDF, and up to three (3) hard copies.

Assumptions:

- The CITY will provide Front End and Division 1 templates.
- The CITY will provide Shoreline General Special Provisions.

TASK 7: PUBLIC INVOLVEMENT (KPFF)

The CONSULTANT will work with the CITY to coordinate and meeting with the general public to convey project information, benefits, and schedule. The CONSULTANT will prepare graphics for use on the project website and attend up to four (4) in-person meetings.

TASK 8: PUBLIC INVOLVEMENT (ENVIROISSUES)

TASK 8.1: PROJECT MANAGEMENT AND COORDINATION

Provide project management (billing invoices, monthly progress reports) and coordination with CITY staff throughout the project's duration. Monitor the project budget and schedule. Meet with the CITY as needed.

Deliverables:

- Seven Monthly invoices.
- Up to four (4) meetings with the CITY.
- Construction coordination as needed.

TASK 8.2: PUBLIC OUTREACH SUPPORT AND MATERIALS

Envirolssues will provide support to the CITY to conduct outreach to the public and near neighbors in the project area, including a public meeting in spring 2020, notification and public information materials.

1. Develop a communications and outreach plan that defines the CITY's process for working with and engaging key stakeholders on sidewalk design.
2. Scheduling and attendance of initial stakeholder interviews/briefings with key stakeholders, including developing interview questions, briefing packets, and summaries.
3. Distribute 8.5" x 11" fact sheets/FAQ's to up to fifty (50) residents, businesses and organizations that will be directly affected by construction and respond to questions and concerns.
4. Distribute posters for up to five (5) key project locations.
5. Elected official outreach support, including up to two (2) briefings to CITY Councilors and associated preparations.
6. Support for right of way activities, including up to ten (10) meetings with neighbors related to temporary construction easements.
7. Develop and distribute a pre-construction survey to neighbors email. The results will be summarized by the CONSULTANT.
8. Support planning and implementation of a public meeting, including:
 - a. Meeting logistics and planning, and providing event equipment and supplies.
 - b. Logistics materials development (i.e., comment form/worksheet, sign-in sheets, nametags, directional signage).
 - c. Set-up, staff (one facilitator and one additional staff), facilitate, and summarize public meeting.
 - d. Collaborate with the CITY to provide interpretation services and child care, as needed.
9. Develop content and graphics layout for materials and notifications to support the

project, including:

- a. Fact sheet/FAQ
- b. Display boards

Deliverables:

- One communications and outreach plan.
- Up to 7 stakeholder interviews/briefings.
- Up to 2 elected official briefings.
- One pre-construction survey and summary.
- One poster, including distribution to no more than five locations.
- One fact sheet/FAQ, including distribution to up to 50 residents and businesses.
- One meeting plan.
- One comment form.
- One meeting summary.
- One presentation.
- One Currents/Shoreline alerts content.
- Up to five display boards.
- Webpage content.
- Two on-corridor signs (yard signs or A-frame signs), including coordination of printing and distribution at up to five locations.
- Translation of up to three documents, in up to three languages, as needed.

Assumptions:

- EnviroIssues will develop copy, coordinate review, develop graphics, and coordinate printing for all materials and notifications.
- EnviroIssues will coordinate scheduling for the stakeholder briefings. The sidewalk program projects will use the same CITY webpage. EnviroIssues will draft content for the full program webpage. Content about specific projects will be added as needed. The CITY will host and manage website updates
- The sidewalk program projects will use the same CITY webpage. EnviroIssues will draft

content for the full program webpage. Content about specific projects will be added as needed. The CITY will host and manage website updates.

TASK 9: ENVIRONMENTAL AND ARBORIST SERVICES (WATERSHED)

TASK 9.1: ARBORIST SERVICES

1. Information gathering, Coordination with the design team, and monthly invoicing.
2. Fieldwork to inventory and assess trees located within the survey limits figure attached to this proposal. Inventory will consist of health, species, DBH, Critical Rootzone, and canopy radius. Results of the inventory will be compiled into a Tree Inventory Table, which will be appendix to the arborist report described below.
3. Prepare inventory report and provide professional evaluation of trees that will be impacted by the proposed sidewalk project. The assessment will include information collected in the tree inventory. Provide options (with advantages/disadvantages) on how to address the trees if the adjacent sidewalk will be constructed. Make recommendations for tree protection measures, preventative actions, and post construction monitoring plan to be enacted before, during, and after construction. Recommendations will be coordinated with project team for inclusion into bid documents and plan drawings.
4. Respond to CITY comments and questions.
5. Quality Control Review.

Deliverables:

- Arborist Inventory Report (Word and PDF formats).

TASK 9.2: ENVIRONMENTAL SERVICES

1. Information gathering, Coordination with the design team, and monthly invoicing.
2. Site visit.
3. Preparation of SEPA Checklist.
4. Respond to CITY comments and questions.
5. Quality Control Review.

Deliverables:

- SEPA Checklist (Word and PDF formats).

Assumptions:

- This proposal assumes that if needed, additional trees picked up in the field investigation that were not on the original survey, will be survey located by others.

- If the project alignment changes, any additional analysis required will be completed on a time and materials basis beyond the scope provided above, but only with client approval.
- This proposal does not include critical areas reconnaissance or delineation.
- This proposal does not include preparation of any deliverables other than those specified above (e.g. critical areas report).
- Assessment of geologically hazardous areas is not included in this scope.
- This proposal does not guarantee issuance of permits.
- This proposal does not include the formal submittal of permit applications to any regulatory agencies or responses to any agency comments following formal submittal of our documentation.
- This proposal does not include hazard tree risk assessment (ISA Level II or Level III Hazard Risk Assessment).
- The assessment represents a snapshot at the time of the field work and may not necessarily remain accurate in the future.
- Any required access permissions will be acquired by others.
- No construction observation and monitoring are included with this proposal.
- This proposal assumes that an AutoCAD file of proposed project extents, existing conditions, and alignment will be provided following contract approval and/or when preliminary drawings becoming available.

TASK 10: LANDSCAPE ARCHITECTURE (HBB)

This work includes planting design within planter strips between the proposed curb and sidewalk and landscape restoration at the back of sidewalks.

TASK 10.1: PROJECT MANAGEMENT

A monthly invoice and progress report will be prepared and submitted to the CITY. The progress report will describe the work represented by the invoice.

TASK 10.2: QA/QC REVIEW

Conduct four (4) quality control reviews for the 30%, 60%, 90%, and 100% Bid PS&E submittals. All QA/QC reviews are by a senior licensed landscape architect. Time includes debrief reviews with project manager and computer tech staff and performing interdisciplinary reviews at each submittal with review comments.

TASK 10.3: TEAM MEETINGS

Attend one (1) kick-off meeting with the CITY and design team.

Prepare for and attend three (3) coordination meetings with the design team.

TASK 10.4: 60% SUBMITTAL

This work will include 60% plans will only identify the areas to receive planting and landscape restoration. A 60% cost estimate and the technical specifications in WSDOT format will be prepared.

Deliverables:

- 60% planting plans.
- Plant list with plant cut sheets.
- 60% cost estimate with WSDOT bid items.
- Draft outline technical specifications WSDOT format.

TASK 10.5: 90% SUBMITTAL

This work will include 90% plans will only identify the areas to receive planting and landscape restoration. A 90% cost estimate and the technical specifications in WSDOT format will be prepared.

Deliverables:

- 90% planting plans.
- Plant list with plant cut sheets.
- 90% cost estimate with WSDOT bid items.
- Draft outline technical specifications WSDOT format.

TASK 10.6: FINAL SUBMITTAL

This work will include Final plans will only identify the areas to receive planting and landscape restoration. A Final cost estimate and the technical specifications in WSDOT format will be prepared.

Deliverables:

- Final planting plans.
- Plant list with plant cut sheets.
- Final cost estimate with WSDOT bid items.

- Draft outline technical specifications WSDOT format.

TASK 10.7: BID SUPPORT

Respond to contractor questions during bidding process. Assist with one (1) addendum submittal.

Assumptions:

- Back of sidewalk landscape restoration limited to hydroseed erosion control or bark mulch topdressing to meet and match existing landscape conditions.
- Urban design for special paving, pedestrian lighting, signage, site furnishings and/or underground soil cells are not included.
- Public meetings and/or special color rendered presentation graphics are not included.
- Arborist services are not included.
- Irrigation design is not included.
- Construction observation services are not included.
- KPFF will be responsible for providing a roadway sight line exhibit for planting heights.
- KPFF will provide design services for water service connection to irrigation meter and electrical service connections to irrigation controller.
- Planting plans will be prepared at scale 1"=20' full size. Sheets will include 2 planting plans, 1 planting schedule, and 1 sheet for details.
- Planter strips will only be included for up to half the length of the project.

TASK 11: RIGHT-OF-WAY SERVICES (RES GROUP NW)

This work includes Temporary Construction Easements (TCE) from approximately twenty (20) properties, zonings varying from low density residential and mixed-use residential along 5th Avenue NE from NE 175th Street to NE 182nd Court.

TASK 11.1: PRELIMINARY RIGHT-OF-WAY SERVICES

Project Funding Estimate (PFE) and Administrative Offer Summary (AOS):

Following review of the right-of-way plan, SOVA Consulting will prepare a PFE and AOS for the impacted parcel. The PFE report will utilize consistent comparable sales and valuation techniques. AOS will be written for those acquisitions valued under \$25,000 in the PFE.

Appraisal and Appraisal Review:

Appraisal and appraisal review contracts shall be handled directly by the CITY. RES Group NW will make necessary recommendations to the CITY.

TASK 11.2: ACQUISITION SERVICES

Right-of-Way Documentation, Negotiations, and Closing:

1. RESGNW will assist the CITY in developing all right-of-way documents/offer letters in accordance with the CITY's right-of-way procedures manual for acquisition of impacted properties.
2. RESGNW will draft the acquisition documents using CITY approved forms or QC any forms that are created directly by CITY staff for pre-acquisition review by the WSDOT LPA coordinator, only if necessary, before any offers are made to property owners.
3. RESGNW agents will act in good faith at all times and never coerce owners in an attempt to settle the parcels. All negotiations will start with an in-person presentation of all offers when feasible. We will identify property owner issues, concerns and differences early on and document that information in the individual parcel negotiation diaries.
4. RESGNW will work with CITY staff throughout the negotiation process with the property owner until settlement is reached on each parcel.

TASK 12: STRUCTURAL ENGINEERING

TASK 12.1: STRUCTURAL ENGINEERING

The CONSULTANT will prepare retaining wall plans, supported by structural analysis. Plan sets are anticipated to include retaining wall plans, elevations, details, and schedules.

TASK 12.2: STRUCTURAL SPECIFICATIONS

The CONSULTANT will prepare structural special provision specifications warranted by the project design.

TASK 12.3: STRUCTURAL COST ESTIMATE

The CONSULTANT will prepare structural cost estimates for each submittal phase. The cost estimate will be formatted to reflect the bid item breakdown.

TASK 12.4: SUBMITTALS

The CONSULTANT will conduct quality control and quality assurance checking of documents, provide responses to review comments, update documents to incorporate review comments, and compile submittal packages.

Assumption(s):

- Retaining walls are assumed to be gravity block walls.
- A maximum of approximately 1000 lineal feet of retaining walls will be required.
- Maximum wall heights will be no more than approximately 10 feet.

Deliverable(s):

- 30% Submittal:
 - 30% submittal of construction drawings, one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; three (3) half-size hard copy sets (if needed).
 - 30% cost estimate per bid item, one (1) electronic copy in Microsoft Excel (.xlsx) format and one (1) copy in searchable PDF format; three (3) hard copies (if needed).
- 60% Submittal:
 - Comment responses from 30% Submittal.
 - 60% submittal of construction drawings, one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; three (3) half-size hard copy sets (if needed).
 - 60% cost estimate per bid item, one (1) electronic copy in Microsoft Excel (.xlsx) format and one (1) copy in searchable PDF format; three (3) hard copies (if needed).
- 90% Submittal:
 - Comment responses from 60% Submittal.
 - 90% submittal of construction drawings, one (1) electronic set in AutoCAD format; one (1) electronic set in searchable PDF format; three (3) half-size hard copy sets (if needed).
 - 90% cost estimate per bid item, one (1) electronic copy in Microsoft Excel (.xlsx) format and one (1) copy in searchable PDF format; three (3) hard copies (if needed).
 - An electronic and hard-copy (if needed) of the special provisions and supplemental technical specifications.
- Final Submittal:
 - The Final submittal will include electronic files and hard-copy drawings and details; special provisions and supplemental technical specifications; and updated cost estimates at the Final design level for project design review.
 - Hard-copy sheets will match the electronic files that are submitted. The work will be complete. Drawings will have incorporated or resolved all comments made during the 90% design review and other informal reviews.

TASK 13: BID SUPPORT SERVICES (KPFF)

TASK 13.1: CONSTRUCTABILITY REVIEW

1. The CONSULTANT will review the plans and specifications prior to project advertisement to provide comprehensive analysis of constructability, value engineering suggestions, and other possible design enhancements to facilitate construction. The analysis will focus on the constructability of design elements with respect to typical construction best practices and the CONSULTANT's CM experience.
2. Investigate and make recommendations if savings can be achieved with minor design changes related to construction practices or sequence.
3. Review the project documents for clarity and completeness with respect to the bid process. This analysis will include:
 - Verifying cross references between plans, details and specifications
 - Determination of suitability (project specific relevance) of specifications
 - Bid tab breakdown and evaluation of lump sum items
 - Overall evaluation with respect to lessons learned on similar projects

Deliverable(s):

- Constructability Review Technical Memo.
- Constructability Comments and Tracking Form.

TASK 13.2: BID SUPPORT SERVICES

The CONSULTANT will assist the CITY during the bidding period. Activities may include:

1. Modifying contract documents to reflect comments and inputs by the CITY on the Final documents.
2. Providing input to CITY staff to answer questions from potential bidders during the advertisement period.
3. Preparing revised documents associated with Addenda packages.
4. Preparing updated Final documents, as required to be issued for bid by the CITY staff.

Deliverable(s):

- Modified Final documents.
- Inputs for contractor questions during bidding.
- Preparation of Addenda inputs (assume two).

Assumption(s):

- Bidding period will be four weeks or less.