



INFORMATIONAL MEMORANDUM

TO: **Transportation and Infrastructure Services Committee**
 FROM: **Hari Ponnekanti, Public Works Director/City Engineer**
 BY: **Adib Altallal, Utilities Engineer**
 CC: **Mayor Allan Ekberg**
 DATE: **January 14, 2022**
 SUBJECT: **S 152nd St. Watermain Replacement & Extension Project**
Project No. 91640102 & 91640103
Design and Construction Management Contract Award

ISSUE

Approve design and construction management agreement with BHC Consultants, LLC (BHC) for the S 152nd St. Watermain Replacement & Extension Project.

BACKGROUND

In 2016, City staff identified the need for upsizing the aging 6” cast iron pipe along S 152nd St. and extending it into Sunwood Boulevard to loop the system in the area and increase the availability of fire flow in the case of an emergency.

DISCUSSION

When the project was identified in 2016, it was planned to be designed and constructed in two separate phases. After further assessment of the situation and the availability of funds, it was determined to be a better choice to combine the two projects into one. Combining the projects will allow us to complete construction at one time, thus saving resources and prevent inconveniencing residents with multiple street closures along this route. Approximately 1,800 LF of 6” cast iron pipe will be replaced with 12” ductile iron pipe. The existing dead-end pipe along S 152nd St. will be extended approximately 150 LF and looped into Sunwood Blvd. Looping the system will increase redundancy and reduce maintenance needs. The design project was advertised, and four consultants submitted proposals. BHC was chosen as the most qualified.

FINANCIAL IMPACT

The project costs will be 100% funded by the water enterprise fund. The contract is for \$312,833.00 for the design and construction management services for the S 152nd St. Watermain Replacement & Extension. A portion of the funds will come from the S 152nd St. 2022-2023 budget and the remaining will be moved from the Water Reservoir project, which is anticipated to be significantly under budget.

	<u>Cost Estimate</u>	<u>Fund Source</u>	<u>2022-2023 Design/CM Budget</u>
Contract	\$312,833.00	S152nd St. CIP	\$180,000.00
		Water Reservoir CIP	<u>165,000.00</u>
		Total	\$325,000.00

RECOMMENDATION

Council is being asked to approve a design and construction management agreement for design services with BHC in the amount of \$312,833.00 for the S 152nd St. Watermain Replacement & Extension Project and consider this item on the Consent Agenda at the January 24, 2022 Special Meeting.

Attachments: 2021 CIP, Pages 60, 65 & 66
BHC Agreement
BHC Scope

CITY OF TUKWILA CAPITAL PROJECT SUMMARY

2021 to 2026

PROJECT: Water Reservoir and Pump Station

Project No. 91240102

DESCRIPTION: Design and construct a new 2.0 million gallon water storage reservoir with a 3,300 gpm pump station.
JUSTIFICATION: The Department of Health is requiring that the City provide additional water storage in the 360 pressure zone, which includes the Commercial Business District. A pump station is needed for fire flow.
STATUS: Design funds will be used to update and expand the site study Carollo completed in 2014.
MAINT. IMPACT: Additional staff will be needed to provide maintenance for the new reservoir and pumps.
COMMENT:

FINANCIAL (in \$000's)	Through Estimated									TOTAL
	2019	2020	2021	2022	2023	2024	2025	2026	BEYOND	
EXPENSES										
Design		50	400	250	50					750
Land (R/W)			500							500
Const. Mgmt.			100	150	550					800
Construction				1,500	1,000	2,500	2,000	1,000		8,000
TOTAL EXPENSES	0	50	1,000	1,900	1,600	2,500	2,000	1,000	0	10,050
FUND SOURCES										
Awarded Grant										0
Proposed Grant										0
Bond			1,000	1,900	1,600	2,500	2,000	1,000		10,000
Mitigation Expected										0
Utility Revenue	0	50	0	0	0	0	0	0	0	50
TOTAL SOURCES	0	50	1,000	1,900	1,600	2,500	2,000	1,000	0	10,050

Location to be determined.

CITY OF TUKWILA CAPITAL PROJECT SUMMARY

2021 to 2026

PROJECT: S 152nd Place Waterline Extension

Project No. 91640103

DESCRIPTION: Design and construct 150 LF of 8" ductile iron waterline in S 152nd Place to Sunwood Blvd.

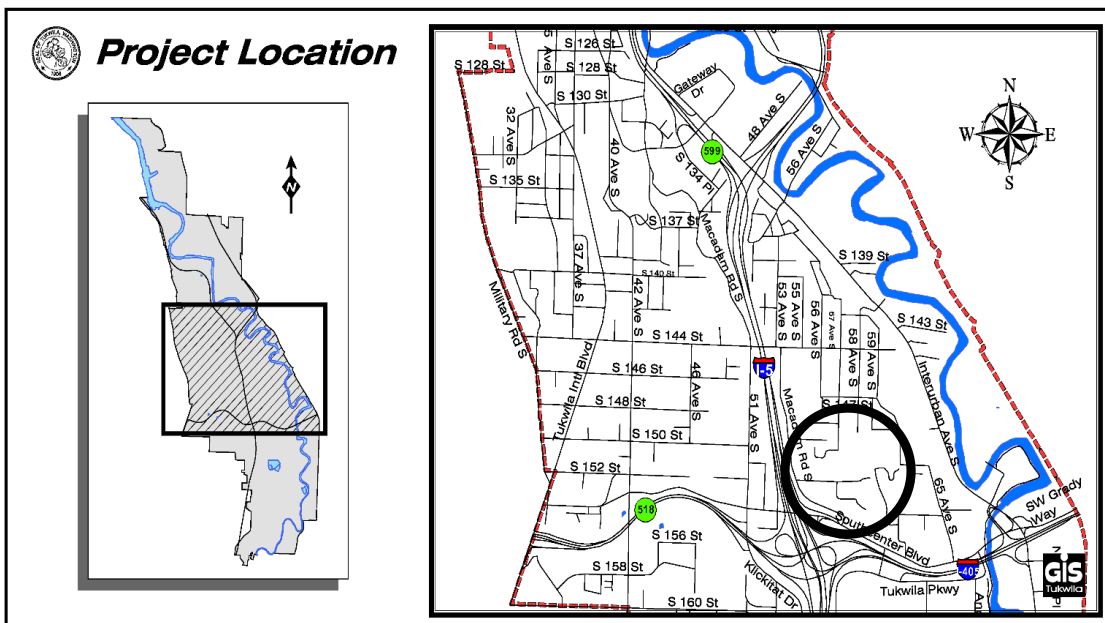
JUSTIFICATION: The proposed waterline will also meet fire flow requirements.

STATUS: Easement acquisitions will be needed.

MAINT. IMPACT: To remove a dead-end in South 152nd Place to improve water quality.

COMMENT: Planned to be combined with S 152nd Street Waterline Replacement project as a separate schedule.

FINANCIAL (in \$000's)	Through Estimated									
	2019	2020	2021	2022	2023	2024	2025	2026	BEYOND	TOTAL
EXPENSES										
Design				40	20					60
Land (R/W)				10						10
Const. Mgmt.					10					10
Construction					100					100
TOTAL EXPENSES	0	0	0	50	130	0	0	0	0	180
FUND SOURCES										
Awarded Grant										0
Proposed Grant										0
Mitigation Actual										0
Mitigation Expected										0
Utility Revenue	0	0	0	50	130	0	0	0	0	180
TOTAL SOURCES	0	0	0	50	130	0	0	0	0	180



CITY OF TUKWILA CAPITAL PROJECT SUMMARY

2021 to 2026

PROJECT: **S 152nd Street Waterline Replacement** Project No. 91640102

DESCRIPTION: Design and construct 1,600 LF of 10" ductile iron waterline to replace the old 6" cast iron waterline in S 152nd St from Macadam Rd S east to the end of the pipe near 58th Ave S.

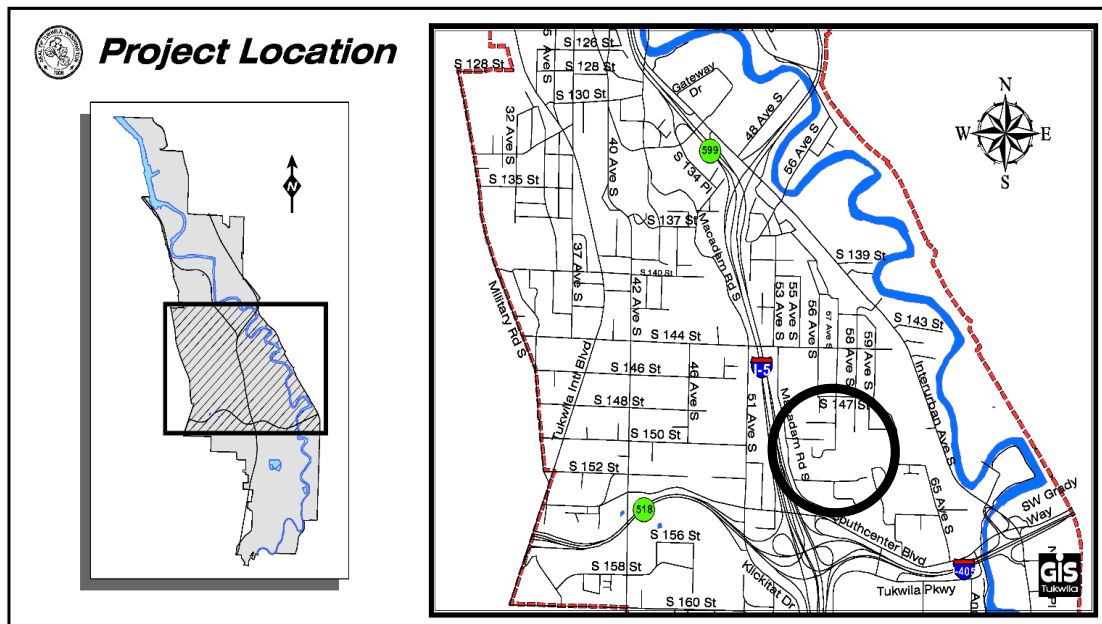
JUSTIFICATION: The existing waterline is cast iron and is subject to cracking and breaking apart with age.

STATUS:

MAINT. IMPACT: The proposed waterline will also meet fire flow requirements.

COMMENT: Planned to be combined with S 152nd Place Waterline Extension project as a separate schedule.

FINANCIAL (in \$000's)	Through Estimated									
	2019	2020	2021	2022	2023	2024	2025	2026	BEYOND	TOTAL
EXPENSES										
Design							100	30		130
Land (R/W)							10			10
Const. Mgmt.									100	100
Construction									700	700
TOTAL EXPENSES	0	0	0	0	0	0	110	30	800	940
FUND SOURCES										
Awarded Grant										0
Proposed Grant										0
Mitigation Actual										0
Mitigation Expected										0
Utility Revenue	0	0	0	0	0	0	110	30	800	940
TOTAL SOURCES	0	0	0	0	0	0	110	30	800	940





PROFESSIONAL SERVICES AGREEMENT

(Includes consultants, architects, engineers, accountants, and other professional services)

THIS AGREEMENT is entered into between the City of Tukwila, Washington, hereinafter referred to as “the City”, and BHC Consultants, hereinafter referred to as “the Consultant”, in consideration of the mutual benefits, terms, and conditions hereinafter specified.

1. **Project Designation.** The Consultant is retained by the City to perform design services in connection with the project titled S 152nd Street Waterline Replacement & Extension.
2. **Scope of Services.** The Consultant agrees to perform the services, identified on Exhibit “A” attached hereto, including the provision of all labor, materials, equipment and supplies.
3. **Duration of Agreement; Time for Performance.** This Agreement shall be in full force and effect for a period commencing upon execution and ending December 31, 2023, unless sooner terminated under the provisions hereinafter specified. Work under this Agreement shall commence upon written notice by the City to the Consultant to proceed. The Consultant shall perform all services and provide all work product required pursuant to this Agreement no later than December 31, 2023 unless an extension of such time is granted in writing by the City.
4. **Payment.** The Consultant shall be paid by the City for completed work and for services rendered under this Agreement as follows:
 - A. Payment for the work provided by the Consultant shall be made as provided on Exhibit “B” attached hereto, provided that the total amount of payment to the Consultant shall not exceed \$312,833.00 without express written modification of the Agreement signed by the City.
 - B. The Consultant may submit vouchers to the City once per month during the progress of the work for partial payment for that portion of the project completed to date. Such vouchers will be checked by the City and, upon approval thereof, payment shall be made to the Consultant in the amount approved.
 - C. Final payment of any balance due the Consultant of the total contract price earned will be made promptly upon its ascertainment and verification by the City after the completion of the work under this Agreement and its acceptance by the City.
 - D. Payment as provided in this section shall be full compensation for work performed, services rendered, and for all materials, supplies, equipment and incidentals necessary to complete the work.
 - E. The Consultant’s records and accounts pertaining to this Agreement are to be kept available for inspection by representatives of the City and the state of Washington for a period of three (3) years after final payments. Copies shall be made available upon request.

5. **Ownership and Use of Documents.** All documents, drawings, specifications and other materials produced by the Consultant in connection with the services rendered under this Agreement shall be the property of the City whether the project for which they are made is executed or not. The Consultant shall be permitted to retain copies, including reproducible copies, of drawings and specifications for information, reference and use in connection with the Consultant's endeavors. The Consultant shall not be responsible for any use of the said documents, drawings, specifications or other materials by the City on any project other than the project specified in this Agreement.
6. **Compliance with Laws.** The Consultant shall, in performing the services contemplated by this Agreement, faithfully observe and comply with all federal, state, and local laws, ordinances and regulations, applicable to the services rendered under this Agreement.
7. **Indemnification.** The Consultant shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the intentional misconduct, reckless acts, or negligent acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, and volunteers, the Consultant's liability hereunder shall be only to the extent of the Consultant's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Consultant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

8. **Insurance.** The Consultant shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees. Consultant's maintenance of insurance as required by the agreement shall not be construed to limit the liability of the Consultant to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

A. **Minimum Amounts and Scope of Insurance.** Consultant shall obtain insurance of the types and with the limits described below:

1. **Automobile Liability** insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident. Automobile Liability insurance shall cover all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.
2. **Commercial General Liability** insurance with limits no less than \$2,000,000 each occurrence, \$2,000,000 general aggregate. Commercial General Liability insurance shall be at least as broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop-gap independent contractors and personal injury and advertising injury. The City shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the City using an additional insured endorsement at least as broad as ISO endorsement form CG 20 26.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.
 4. Professional Liability with limits no less than \$2,000,000 per claim and \$2,000,000 policy aggregate limit. Professional Liability insurance shall be appropriate to the Consultant's profession.
- B. Public Entity Full Availability of Contractor Limits.** If the Contractor maintains higher insurance limits than the minimums shown above, the Public Entity shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract or whether any certificate of insurance furnished to the Public Entity evidences limits of liability lower than those maintained by the Contractor.
- C. Other Insurance Provision.** The Consultant's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance with respect to the City. Any Insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not be contributed or combined with it.
- D. Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.
- E. Verification of Coverage.** Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Contractor before commencement of the work. Upon request by the City, the Consultant shall furnish certified copies of all required insurance policies, including endorsements, required in this Agreement and evidence of all subcontractors' coverage.
- F. Notice of Cancellation.** The Consultant shall provide the City with written notice of any policy cancellation, within two business days of their receipt of such notice.
- G. Failure to Maintain Insurance.** Failure on the part of the Consultant to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days notice to the Consultant to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.
9. **Independent Contractor.** The Consultant and the City agree that the Consultant is an independent contractor with respect to the services provided pursuant to this Agreement. Nothing in this Agreement shall be considered to create the relationship of employer and employee between the parties hereto. Neither the Consultant nor any employee of the Consultant shall be entitled to any benefits accorded City employees by virtue of the services provided under this Agreement. The City shall not be responsible for withholding or otherwise deducting federal income tax or social security or for contributing to the state industrial insurance program, otherwise assuming the duties of an employer with respect to the Consultant, or any employee of the Consultant.
10. **Covenant Against Contingent Fees.** The Consultant warrants that he has not employed or retained any company or person, other than a bonafide employee working solely for the Consultant, to solicit or secure this contract, and that he has not paid or agreed to pay any company or person, other than a bonafide employee working solely for the Consultant, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award or making of this contract. For breach or violation of this warrant, the City shall have the right to annul this contract without liability, or in its discretion

to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

11. **Discrimination Prohibited.** Contractor, with regard to the work performed by it under this Agreement, will not discriminate on the grounds of race, religion, creed, color, national origin, age, veteran status, sex, sexual orientation, gender identity, marital status, political affiliation, the presence of any disability, or any other protected class status under state or federal law, in the selection and retention of employees or procurement of materials or supplies.
12. **Assignment.** The Consultant shall not sublet or assign any of the services covered by this Agreement without the express written consent of the City.
13. **Non-Waiver.** Waiver by the City of any provision of this Agreement or any time limitation provided for in this Agreement shall not constitute a waiver of any other provision.
14. **Termination.**
 - A. The City reserves the right to terminate this Agreement at any time by giving ten (10) days written notice to the Consultant.
 - B. In the event of the death of a member, partner or officer of the Consultant, or any of its supervisory personnel assigned to the project, the surviving members of the Consultant hereby agree to complete the work under the terms of this Agreement, if requested to do so by the City. This section shall not be a bar to renegotiations of this Agreement between surviving members of the Consultant and the City, if the City so chooses.
15. **Applicable Law; Venue; Attorney's Fees.** This Agreement shall be subject to, and the Consultant shall at all times comply with, all applicable federal, state and local laws, regulations, and rules, including the provisions of the City of Tukwila Municipal Code and ordinances of the City of Tukwila. In the event any suit, arbitration, or other proceeding is instituted to enforce any term of this Agreement, the parties specifically understand and agree that venue shall be properly laid in King County, Washington. The prevailing party in any such action shall be entitled to its attorney's fees and costs of suit. Venue for any action arising from or related to this Agreement shall be exclusively in King County Superior Court.
16. **Severability and Survival.** If any term, condition or provision of this Agreement is declared void or unenforceable or limited in its application or effect, such event shall not affect any other provisions hereof and all other provisions shall remain fully enforceable. The provisions of this Agreement, which by their sense and context are reasonably intended to survive the completion, expiration or cancellation of this Agreement, shall survive termination of this Agreement.
17. **Notices.** Notices to the City of Tukwila shall be sent to the following address:

City Clerk
City of Tukwila
6200 Southcenter Boulevard
Tukwila, WA 98188

Notices to Consultant shall be sent to the following address:

BHC Consultants
1601 Fifth Avenue #500
Seattle, Washington 98101
18. **Entire Agreement; Modification.** This Agreement, together with attachments or addenda, represents the entire and integrated Agreement between the City and the Consultant and supersedes all prior negotiations, representations, or agreements written or oral. No

amendment or modification of this Agreement shall be of any force or effect unless it is in writing and signed by the parties.

DATED this _____ day of _____, 20_____.

CITY OF TUKWILA

BHC CONSULTANTS, LLC

Allan Ekberg, Mayor

By: *Ron A Dorn*

Printed Name: Ron Dorn, P.E.

Title: President

Attest/Authenticated:

Approved as to Form:

City Clerk, Christy O'Flaherty

Office of the City Attorney

EXHIBIT A – SCOPE OF SERVICES

CITY OF TUKWILA S 152nd ST WATERMAIN REPLACEMENT & EXTENSION PROJECT

DESIGN SERVICES

December 21, 2021

Statement of Understanding

This Scope of Services is based on BHC Consultants, LLC's (Consultant's) understanding of the City of Tukwila's (City) proposed installation of a new 12-inch ductile iron water main along south 152nd Street, between Macadams Road S. and the existing water main within the Sunwood Phase 1 Condominium (Sunwood Condo). The new water main will replace approximately 1,600 LF of existing 6-inch cast iron water main. In addition to replacing the existing water main, the new 12-inch ductile iron water main will be extended east approximately 150 linear feet to connect to an existing 8-inch public water main within the Sunwood Condo private property. The design will include potable water distribution system pipe, fire hydrants, valves, water services and one check valve vault. The design will include provisions for a 2-inch-thick pavement grind and overlay that extends either full-street width and/or half-street width for the length of the project. The watermain is being replaced due to age and to improve fire flow availability in the project area. These improvements are collectively known as the S 152nd Watermain Replacement & Extension Project (Project).

Scope of Services

The following scope of services outlines the tasks associated with the design of the watermain improvements. In general, the Consultant will prepare construction bid documents for the proposed improvements and support the City with permitting, public outreach, and easement acquisition. Ancillary services that will be provided by the Consultant via sub-consultants include topographic surveying, utility locates, geotechnical investigation, property valuation, arboricultural consulting, and development of traffic control plans. The Consultant will also provide support to the City during the construction phase. The water system improvements will be designed and constructed in accordance with the requirements of the current edition of the 'Water System Design Manual' by the Department of Health for water, the City of Tukwila Municipal Code for Water and Sewers, and the City's design standards. The design will include provisions to allow for continuous water service during construction with only brief interruptions for tie-ins.

The project includes extending the water main east across private property (the Ladera-Heatherwood Apartments) to an existing 8-inch ductile iron water main within a paved drive lane of the Sunwood Condo property, which includes crossing a paved parking lot and undeveloped landscape, with large mature trees, on the private properties. The City will make initial contact with the property owners to inform them of the project scope and objectives, to obtain rights-of-entry for the Consultant, and to establish points of contact and lines of communication. The Consultant will assist the City with easement acquisition by performing property valuation and easement negotiation.

The alignment of the water main extension will be determined based on the location of existing utilities and discussions with the property owners. Construction of the water mains using conventional open trench construction methods is preferred, but trenchless construction methods, such as auger boring or horizontal directional drilling (HDD) may be required to preserve mature trees on private property. Design/engineering fees for water main construction using auger bore or horizontal directional drilling construction methods are higher because additional geotechnical investigation and analysis is required, and additional drawings and specifications are required. Design for trenchless construction will require scope and budget adjustments and either a contract change will be issued

using Management Reserve Funds or a contract amendment will be negotiated based on the design parameters at the time of tasking.

An area of “potential geologic instability”, as defined in the Tukwila Municipal Code (TMC) Chapter 18.45 may exist at or near the east end of the project limits. An assessment will be made during the site investigation by the Consultant and, if warranted and authorized by the City, a critical area report will be developed.

The team is comprised of the following firms and will be referenced throughout this scope by their abbreviated name:

Firm	Abbreviated Name	Role
BHC Consultants, LLC	BHC	Prime Consultant / Overall Project Management / Water Design Services / Permitting / Public Outreach / Easement Negotiation
KPG	KPG	Topographic Survey/Easement Exhibits
ABS Valuation	ABS	Property Valuation
Shoffner Consulting	SC	Tree assessment
Applied Professional Services, Inc.	APS	Utility Locates / Utility Potholing /Traffic Control Plans
Landau Associates, Inc.	LAI	Geotechnical Services / Critical area Report

Separate tasks will be used to track and monitor progress for each utility. Each task description includes the following six components:

- 1) Description: Summary description of task.
- 2) City Responsibilities: Elements that will be provided by the City.
- 3) Work Tasks: Tasks that will be completed by Consultant or its sub-consultants.
- 4) Deliverables: The finished product that will be delivered to the City.
- 5) Assumptions: Assumptions used to develop each Work Task.
- 6) Meetings: Meetings identified for each Work Task. This component assumes: Consultant's team will minimize attendees at meetings; meetings with City staff will be conducted virtually or at the City's offices; and community meetings will be held virtually or physically at a location near the Project area or at the City's offices.

BHC proposes the following task elements within this scope:

Task 100: Project Management: This task will be used to track and monitor the progress of the project and to coordinate with the design team and the City.

BHC

City Responsibilities:

- 1) Review and approve this scope of services and associated budget.
- 2) Review and approve contract changes and contract amendments, if necessary, due to additional services or levels of effort not included in this scope becoming necessary.
- 3) Participate with Consultant in monthly project coordination meetings.

Work Tasks:

- 1) Perform contract management including setting up the project in Consultant 's accounting system and prepare and execute contracts and contract changes/amendments with each subconsultant.

- 2) Provide monthly invoices with status reports and schedule updates.
- 3) Develop and maintain a Change Management Log to document formal changes in project scope, budget and schedule and to serve as a method of implementing and tracking changes in project scope, budget and schedule.
- 4) Develop the project management plan.
- 5) Coordinate with the project team to review current and upcoming tasks, deliverables, and coordination efforts.
- 6) Coordinate with City staff by e-mail, phone, or video conference and during virtual monthly project coordination meetings.

Deliverables:

- 1) Monthly status reports with invoices and updated monthly schedule (Adobe pdf format). Invoices will include the City's corresponding project number for tracking purposes.
- 2) Agendas, meeting notes, and action items for each project coordination meeting with the City.
- 3) Copies of pertinent emails and correspondence.

Assumptions:

- 1) Earned Value Management tracking will be used to monitor project status with estimates of the percent complete being provided for each task.
- 2) Project status reports will include the following:
 - a) Project status summary narrative by task.
 - b) Project budget summary table
 - c) Earned value table
- 3) The Design phase will last approximately 13 consecutive months and will be followed by the Construction phase, which will last about 8 consecutive months for a total project length of 21 consecutive months. Extensions to the project schedule that are outside Consultant's control may require a Contract Amendment.
- 4) Coordination meetings with the City (up to 12) will be held monthly during the project design phase and each will last about one (1) hour or less.

Meetings:

- 1) Project kickoff meeting (virtual) with the City, lasting up to 1.5 hours.
- 2) Twelve (12) monthly project coordination meetings (virtual) with the City, each lasting up to 1 hour in length.

Task 200: Utility Location Services: This task will be used to collect available utility record drawings and to field-locate and surface-mark (paint) the approximate locations of underground utilities within the project area.

APS, BHC

City Responsibilities:

- 1) Make initial contact with property owners and assist Consultant efforts to obtain rights-of-entry for Consultant, including for APS, to perform utility locates and to mark surfaces with spray paint.
- 2) Provide electronic copies of maps and record drawings (as-builts) of the existing City owned and maintained utilities.
- 3) Provide copies of information obtained during City's potholing activities at the intersection of S 152nd Street and 57th Ave S.

Work Tasks:

- 1) Request available franchise utility companies' record drawing information, including underground power, gas, telephone, fiber optic and other known utilities and incorporate this information into the base drawings.
- 2) Locate Utilities: Attempt to locate and mark underground utilities. Activities include:
 - a) Coordinating with underground utility locating company (APS) to mark the approximate locations of underground utilities prior to conducting the topographic survey.
 - b) APS will attempt to locate underground utilities and water services using sound/electric signal conducting equipment for conductible utilities.

Deliverables:

- 1) None – The utility markings will all be performed in the field.

Assumptions:

- 1) Utility locates are based on available information and may not be accurate or complete and shall not be used for construction. Contractor shall be responsible for contacting 811 to obtain utility locates from the utility purveyors and for physically verifying the actual locations of utilities and identifying potential conflicts, if any.
- 2) Locaters will attempt to locate and surface mark water mains, water services, hydrant laterals, gas lines, and conductible utilities (power, communication, fiber, etc.).
- 3) Locaters will not mark sewer mains, side sewers, storm drainage pipes, drainpipes, or irrigation lines, however, locations of sewer mains and storm drains will be shown on the design drawings based on the surveyed locations of the sewer and storm drain structures the pipes connect to.
- 4) Obtaining rights-of-entry will be needed for, and will be sufficient for, performing utility locates within the Sunwood Condo property and the Ladera-Heatherwood Apartments property, whether in or adjacent to existing or proposed easement areas.
- 5) Private property owners will allow access to utility locaters and the surface marking of buried utilities with dashed painted lines.
- 6) Private utilities on private property will not be marked unless allowed by property owners and such locates may be incomplete as drawings for such utilities are not typically available from utility providers or property owners.

Meetings:

- 1) No meetings are planned for this Task.

Task 300: Field Survey: This task will be used to develop an AutoCAD survey base drawing that will be used for developing the AutoCAD design base drawing and will include surveying the surface-marked underground utilities and conducting a topographic field survey to identify existing surface conditions within the project limits, using electronic survey equipment and one- or two-person field crews, and incorporating King County GIS rights-of-way and property boundaries.

KPG, BHC

City Responsibilities:

- 1) Provide electronic copies of maps and record drawings (as-builts) of the existing City owned and maintained utilities.
- 2) Assist Consultant efforts to obtain rights-of-entry for Consultant, including for KPG, to perform field survey on private property.
- 3) Review proposed language for notices and correspondence to property owners.

- 4) Provide electronic copy of City letterhead for notices and correspondence.

Work Tasks:

- 1) Obtain rights-of-entry (ROE) for the Sunwood Condo property and Ladera-Heatherwood Apartments Property prior to start of field survey. Communications with property owners will be developed under Task 550.
- 2) Establish horizontal and vertical control points that are compatible with the City's Infrastructure Design and Construction Standards: NAD 83 (NSRS 2011) horizontal datum & NAVD88 vertical datum.
- 3) Conduct field mapping to locate the following:
 - a) Back of sidewalks.
 - b) Curbs/edges of pavement and pedestrian sidewalk curb ramps.
 - c) Wet utilities (water, sewer, storm, and gas), including meters, valves, hydrants, manholes, catch basins, and other associated appurtenances, but excluding side sewers.
 - d) Conductible utilities (power, telephone, fiber optic), including utility poles, meters, utility marking paint, and associated appurtenances.
 - e) Other surface features or improvements that may impact the design and construction of replacement or repairs to water facilities.
 - f) Vegetation, landscaping, and fencing within 10 feet of the existing water meters, and fire hydrants.
 - g) Provide traffic control/safety compliance for the field crews per the City's requirements.
- 4) Utility Surveying Services will include:
 - a) Surveying the underground utility markers established by APS under Task 200.
 - b) Surveying utility surface features.
 - c) Performing measure downs for sewer and stormwater structures (manholes and catch basins) and obtaining and recording pipe size, material, and invert elevations where feasible at each structure. Similar information for the nearest drainage structures outside the mapping limits will also be collected.
- 5) Reduce field data and prepare base drawings using a scale of 1-inch equals 20 feet and two-foot elevation contours.
- 6) Road rights of way within the project limits will be determined from available public records (i.e. records of survey, plats, state right-of-way plans, etc) and found survey monuments. GIS data obtained from King County will be used to depict the apparent property lines.
- 7) Conduct field review and finalize AutoCAD Civil 3D survey base map.
- 8) Calculate and enter boundaries of easements within Ladera-Heatherwood Apartments from City-furnished recorded easements and plat documents.
- 9) Develop text for notices and correspondence for City review. BHC will mail notices to property owners on City letterhead.

Deliverables:

- 1) None. The survey base map is a work product that will be used for development of the design.

Assumptions:

- 1) Project limits for the base survey extend to the boundaries of the public right-of-way along S 152nd St, from Macadam Road S to the east end of the cul-de-sac and within the easement at the Ladera-Heatherwood Apartments, 5821 S 152nd St (parcel # 1157200380) and within a future easement within the Sunwood Condo (parcel # 8141400000). Project limits for the contingent survey extend north, down the steep slope to the toe of the slope within the City-owned parcel (parcel #1157200387).
- 2) Obtaining rights-of-entry will be needed for, and will be sufficient for, performing field survey within the Sunwood Condo property and the Ladera-Heatherwood Apartments property, whether in or adjacent to

- existing or proposed easement areas. Communications with property owners will be developed under Task 550.
- 3) Property boundaries shown on the design drawings for properties will be based on King County GIS that is imported and georeferenced and "best fit" based on surveyed locations of existing survey monuments. Property lines may be altered further based on the results of research and calculations performed for other tasks, such as the display of easement boundaries.
 - 4) GIS is not considered survey grade and a record of survey will not be required.
 - 5) The intent is to locate the new utilities within existing rights of way, and within new and existing easements, with new meters and hydrants adjacent to the existing meters and hydrants.
 - 6) Not every surface feature within the rights of way and easements will be surveyed and mapped; instead, the surface features necessary to show for purposes of design and construction will be surveyed and shown. Trees 8-inches DBH or greater within the survey limits defined above will be located and identified as evergreen or deciduous. Determining tree dripline limits is not included except that tree driplines will be shown within private property easements.
 - 7) Permits will not be required to complete the utility locates or the field survey.
 - 8) The design team will adhere to the City's standards for control and CAD deliverables.
 - 9) Monuments will not be disturbed by the design team so monument destruction forms/permits will not be required. The contractor shall be responsible for these forms should the contractor's work disturb any monuments.

Meetings:

- 1) No meetings are planned for this Task.

Task 400: Design Services: This task will be used to design the watermain improvements and to develop the contract documents the City will use to solicit bids from contractors to construct the proposed improvements to the water facilities and the associated grind and overlay of the pavement. This task also includes limited bid support services.

BHC

City Responsibilities:

- 1) Assist Consultant efforts to obtain rights-of-entry for Consultant to perform design services on private property.
- 2) Provide electronic copies (PDF) of the City's Standard Details to be included in the contract documents.
- 3) Provide electronic copies (MS Word) of the City's standard Bidding Documents, Contract Documents, General Conditions, and Special Provisions to the Standard Specifications.
- 4) Provide a consolidated set of written review comments on design submittals.
- 5) Verify water meter sizes within the project area.
- 6) Perform hydraulic modeling, as required, and specify sizes of water main to be installed.
- 7) Specify size of check valve to be installed on new 12" DI water main at boundary of pressure zones 360 and 400.
- 8) Specify quantity and locations of fire hydrants to be installed. Coordinate with Fire Marshal, as required, for locations of replacement fire hydrants.
- 9) Administer the advertisement of the call for bids for the project.
- 10) Participate at the pre-bid meeting, if any.
- 11) Host and lead the bid opening meeting.
- 12) Receive, open, and process the bids, including the preparation of the bid tabulation, reviewing the apparent low bidder references, preparing a recommendation for contract award, and awarding the contract to the lowest responsible bidder.
- 13) Provide consolidated bid results.

- 14) Provide venues for design review meetings if not conducted virtually.

Work Tasks:

- 1) Prepare 30% Design Contract Documents for the proposed utility improvements. Activities will include the following:
 - a) Review available project related information, which may include City utility construction record drawings, grid maps, and GIS maps as well as utility purveyor record drawings. Incorporate the pertinent utility information into the base drawings.
 - b) Prepare 30% design drawings showing base drawing information (existing topographic survey, utility locations, and parcel/right of way line information), proposed alignment of water mains (plan-view only), water services, water meters, valves, hydrants, and existing utilities to be abandoned or removed.
 - c) Visit the site to perform a field reconnaissance of the existing features and to verify locations of existing features and conditions as they relate to the design.
- 2) Prepare 60% Design Contract Documents for the proposed utility improvements. Activities will include the following:
 - a) Address the City's 30% design review comments.
 - b) Obtain and incorporate the City's standard details into the design drawings.
 - c) Prepare 60% design contract specifications to support the design drawings. This will include obtaining and incorporating the City's standard specifications into the Contract Documents. The 60% Submittal will include the advertisement for bid with placeholders for dates, Instructions to Bidders, the Bid Proposal, the Bid and Performance Bond forms, Non-Collusion Declaration Form, the Certification of Compliance with Wage Payment Statutes Form, the Contract Agreement, and the City's boilerplate Special Provisions.
 - d) Prepare profile view for proposed water main alignment and check valve vault drainage.
 - e) Prepare a 60% design opinion of probable construction cost (OPCC) showing bid items, quantities, unit costs, and total probable costs for construction of proposed improvements.
 - f) Conduct internal quality assurance/quality control reviews.
 - g) Submit 60% design documents to the City for review and comment.
 - h) Participate in a design review meeting with the City to discuss the City's review comments.
- 3) Prepare 90% Design Contract Documents for the proposed utility improvements and pavement overlay.
 - a) Address the City's 60% design review comments.
 - b) Prepare 90% Contract Drawings. These documents will include the necessary project specific details and notes to address the water improvements; pavement restoration plans and requirements; and standard construction and TESC notes.
 - c) Prepare 90% Contract Specifications. These documents will refine the documents included in the 90% Contract Specifications to make them more project specific and will also include the intended date for the bid opening, cross references in the project's Special Provisions will be checked and confirmed.
 - d) Prepare 90% OPCC showing bid items, quantities, unit costs, and total probable costs for construction of proposed improvements.
 - e) Conduct internal quality assurance/quality control reviews.
 - f) Submit 90% design documents to City for review and comment.
 - g) Participate in a design review meeting with the City to discuss the City's review comments.
- 4) Prepare 100% Contract Documents for the proposed utility improvements.
 - a) Address the City's 90% design review comments.
 - b) Prepare 100% Contract Drawings. These documents will include the necessary project specific details and notes to address the water system improvements; pavement restoration plans and requirements; and standard construction and TESC notes.

- c) Prepare 100% Contract Specifications. These documents will refine the documents included in the 60% Contract Specifications to make them more project specific and will also include the intended date for the bid opening, cross references in the project's Special Provisions will be checked and confirmed.
- d) Prepare 100% OPCC showing bid items, quantities, unit costs, and total probable costs for construction of proposed improvements.
- e) Conduct internal quality assurance/quality control reviews.
- f) Submit 100% design documents to City for review and comment.
- 5) Prepare Final Contract Documents (Bid Documents) for the proposed utility improvements
 - a) Address the City's 100% design review comments.
 - b) Prepare the final Contract Drawings that may be used by the City to solicit bids from Contractors.
 - c) Prepare the final Contract Specifications that may be used by the City to solicit bids from Contractors.
 - d) Prepare the final OPCC that may be used for evaluation of bids received from Contractors.
 - e) Conduct internal assurance/quality control reviews.
 - f) Submit the final Contract Documents to the City.
- 6) Provide Bid Support Services
 - a) Upload PDF bid documents electronically to Builder's Exchange.
 - b) As requested by the City, develop written response to bidder questions during the bid advertisement period.
 - c) As requested by the City, assist the City in preparing up to one addendum to the bid documents.
 - d) Submit addendum to Builder's exchange.
 - e) Attend a pre-bid meeting with potential bidders.
 - f) Attend bid opening meeting.
- 7) Participate in three (3) virtual design review meetings to be held with the City after the 30, 60 and 90 percent design submittals to review and discuss the City's review comments.

Deliverables:

- 1) The 30% design submittal will include:
 - a) One electronic (Adobe PDF) version of the design drawings.
- 2) The 60%, 90%, and 100% design submittals will each include:
 - a) One electronic (Adobe PDF) version of the design drawings.
 - b) One electronic (Adobe PDF) version of the Contract Documents.
 - c) One electronic (PDF) copy of the OPCC.
- 3) The Final Contract Documents submittal will include:
 - a) One electronic copy of the Design Drawings, Contract Documents, and OPCC.
 - b) Design Drawings in AutoCAD Civil 3D and Adobe PDF.
 - c) Contract Documents in Microsoft Word and PDF format.
 - d) OPCC in Microsoft Excel and PDF Format.

Assumptions:

- 1) Drawings will be prepared using AutoCAD/Civil 3D 2018 and meet the following standards:
 - a) Developed for plotting at full size (22" x 34") and half size (11" x 17"). Full-size plan view drawings will be drawn at a scale of 1" = 20'. Details generated for the improvements may use other scales as needed.
 - b) Each plan drawing will address up to approximately 500 feet of water main improvements, but less for odd length or off-shaped sites, and sites requiring larger scale detail drawings. Pertinent notes and details may be located along the right-hand side of the sheet or on separate sheets as appropriate.

- c) Profile views will not be included with the 30 percent design submittal.
- d) Restoration and temporary erosion and sediment control (TESTC) requirements will be shown on the watermain plan sheets and not as separate drawings.
- 2) The Special Provisions will be based on the City of Tukwila's standards and the 2021 Washington State Department of Transportation Standard Specifications for Road, Bridge and Municipal Construction.
- 3) Water main pipe will be ductile iron (DI) pipe, except water main pipe may be HDPE pipe, as required, within the undeveloped portion of the private or City-owned parcel at the east end of South 152nd St.
- 4) Construction restoration will consist of hot mixed asphalt (HMA) patches within the traveled right of way and in-kind restoration of surface features outside the traveled right of way and a half-width overlay of the street. A full width overlay will be included in areas where watermain improvements impact more than half of the traveled right of way.
- 5) Consultant will make reasonable efforts to provide an accurate OPCC with each submittal. However, the actual costs bid by contractors is beyond Consultant's control and may vary significantly from Consultant's OPCCs, especially given the economic uncertainties triggered by the COVID-19 virus.
- 6) AACE estimating methods and classifications are not required.
- 7) The City shall respond with review comments on each submittal as follows:
 - a) Within two weeks for the 30% Submittal.
 - b) Within three weeks for the 60% Submittal.
 - c) Within two weeks for the 90% Submittal.
 - d) Within two weeks for the 100% Submittal.
- 8) The City will provide written and consolidated review comments to Consultant at least three days prior to any meetings to discuss the review comments.
- 9) The 30% and 90% review comment meetings will occur within three (3) weeks of City's receipt of the submittals and the 60% review comments meeting will occur within four (4) weeks. All City review comments shall be available for discussion at the Meetings.
- 10) Design drawings will be developed for conventional open trench method of construction for water mains and hydrant laterals. Design for auger bore, horizontal directional drilling or other trenchless construction method will be additional effort and will require additional time and fee and a contract amendment.
- 11) The pressure zone for the replacement 12-inch DI water main on S 152nd Street, between S 57th St. and the 8-inch DI water main within the Sunwood Condo will be changed from pressure zone 360 to pressure zone 400. Per City direction, no individual pressure reducing valves will be installed on water services for the properties served off the new water main.
- 12) Existing utilities being replaced by parallel utilities will be abandoned in place and will not be removed during construction except as required to make connections or crossings.
- 13) Existing sidewalk curb ramps meet existing Americans with Disabilities Act (ADA) and/or Public Right of Way Accessibility Guidelines (PROWAG) requirements and, therefore, the scope of work does not include design for replacement of sidewalk curb ramps.
- 14) Existing street pavement, the underlying pavement base aggregate, and the subgrade are structurally sound and do not require removal and replacement in preparation for pavement grind and overlay.
- 15) No water system improvements will cross concrete driveway approaches and ADA and/or PROWAG requirements and, therefore, the scope of work does not include design for replacement of concrete driveway approaches to meet ADA and/or PROWAG requirements within a pedestrian access route.
- 16) Conformed documents will not be required as part of the design phase services.
- 17) Utility locates are, in part, based on information developed by utility purveyors and others and may not be complete or accurate. Potholing to verify utility locations and depths during design has not been funded and is not included in Consultant's work scope. The Consultant shall not be responsible if utilities are later discovered during construction that were not identified or located by the design phase utility locates.
- 18) All improvements will be made within public rights of way or within existing easements with the exception of work on the Sunwood Condo and the Ladera-Heatherwood Apartments (parcel # 1157200380) properties.

- 19) The design will not identify temporary staging areas for construction as that is an activity best left to the Contractor.
- 20) The City will be responsible for obtaining the rights of entry needed to facilitate the design services.
- 21) No meetings will be conducted to discuss City-review comments for the 100% design submittal.
- 22) The City will handle all aspects of the bid opening.

Meetings:

- 1) One (1) meeting up to two hours in length will be held virtually with City staff to review City-comments on the 30% design submittal.
- 2) One (1) meeting up to two hours in length will be held virtually with City staff to review City-comments on the 60% design submittal.
- 3) One (1) meeting up to two hours in length will be held virtually with City staff to review City-comments on the 90% design submittal.
- 4) One (1) pre-bid meeting up to two hours in length will be held virtually with City staff and prospective bidders.
- 5) One (1) bid opening meeting up to one hour in length will be held virtually with City staff and bidders.

Task 500: Public Outreach Services – This task will be used to assist the City with its public outreach efforts. The outreach efforts will focus on informing water customers of the project and presenting the design concepts and receiving public feedback.

BHC

City Responsibilities:

- 1) Provide names and mailing addresses for letters/notices to be mailed to customers served by the City of Tukwila water utility.
- 2) Provide input on stakeholder information such as names, phone number, email addresses, types of communication requirements or preferences, etc.
- 3) Review and approve correspondence mailed to members of the public.
- 4) Provide a main point of contact at the City to receive feedback and questions from the community.
- 5) Provide electronic copy of City letterhead to be used on all correspondence to the public.

Work Tasks:

- 1) Prepare general notification letters to affected water customers and prepare exhibits for City review and acceptance. Consultant will mail correspondence on City letterhead.
- 2) Prepare specific written correspondence and exhibits for City review and acceptance and Consultant mailing.

Deliverables:

- 1) One (1) electronic copy (PDF and/or Microsoft Word) for draft and final written correspondence and exhibits.

Assumptions:

- 1) Condominium Boards of Directors and apartment building owners/managers will receive and disseminate the information to condominium unit owners and renters, respectively; therefore, only one letter and associated exhibit, suitable for distribution, will be mailed and/or e-mails to each Condominium Association Board of Directors and apartment owner.
- 2) A notification letter will be sent to all affected water billing customers of the proposed increase in pressure resulting from the change of pressure zones.
- 3) All communications will be performed in the English language.

Meetings:

- 1) No meetings are planned for this task.

Task 550: Property Owner Outreach Services – This task will be used to assist the City's efforts to communicate with owners of properties upon which the City will seek to replace or extend water system improvements and to obtain rights of entry for the Consultant team.

BHC

City Responsibilities:

- 1) Make initial contact with property owners to describe project, to establish communication channels and to obtain points-of-contact information.
- 2) Furnish Consultant with property owner information such as names, phone number, mail and email addresses, types of communication requirements, etc. for points of contact.
- 3) Participate in on-site or virtual meetings with property owners.
- 4) Assist Consultant efforts to obtain rights of entry to perform the various Design phase tasks.

Work Tasks:

- 1) Prepare draft and final letters and exhibits to assist City communication and meetings with property owners.
- 2) Mail written correspondence.
- 3) Organize and lead on-site and virtual meetings with property owners.
- 4) Develop meeting agenda and exhibits.
- 5) Prepare draft and final meeting notes.
- 6) Participate in up to four (4) total on-site and/or virtual meetings.

Deliverables:

- 1) One (1) electronic copy (Adobe PDF format) of the agenda for each meeting.
- 2) Meeting presentation materials, electronic for virtual meetings and hardcopy for on-site meetings.
- 3) One (1) electronic copy of draft and final meeting notes for each meeting.
- 4) One (1) electronic copy (PDF and/or Microsoft Word) for each draft and final written correspondence.

Assumptions:

- 1) The City will participate in the on-site and virtual meetings with property owners.
- 2) For each meeting, Consultant will prepare an agenda and supporting exhibits and will develop draft and final meeting notes.
- 3) "Meeting notes" are summaries of key discussion points and are less detailed and less comprehensive than "meeting minutes."
- 4) Correspondence for the purpose of obtaining rights of entry for the Consultant's team members will be limited to three (3) letters per property.

Meetings:

- 1) Up to four (4) virtual or on-site meetings, each up to two hours in length with property owners/representatives (excluding travel time, meeting prep, and post-meeting notes) to discuss requirements for design and construction of proposed improvements across private property and to discuss easement requirements.

Task 600: Permitting Services – This task will be used to apply for the permits needed to facilitate construction of the proposed improvements and to perform associated environmental assessments.

BHC, APS, SC

City Responsibilities:

- 1) Pay permit fees, if any.

Work Tasks:

- 1) SWPPP: Prepare a stormwater pollution prevention plan (SWPPP) for the proposed improvements and include in the Contract Documents as an appendix.
- 2) City of Tukwila Right of Way and Grading Permits: Prepare the permit applications and perform online submittals to the City.
- 3) Tree Removal Permit: If applicable, prepare the permit application and perform online submittal to the City.

Deliverables:

- 1) One electronic copy (Adobe PDF) format of the draft and final SWPPP.
- 2) One electronic copy (Adobe PDF) of permit applications that are not submitted online.

Assumptions:

- 1) A permit pre-application meeting is not required.
- 2) There are no critical areas or critical area buffers within the work site.
- 3) The Tree Removal permit is a contingent task and, if required, budget for development of the Tree Removal permit application will be made from the Management Reserve Fund.
- 4) A DOE Construction Stormwater General Permit is not required.
- 5) The Contract Documents will require the contractor to modify the SWPPP as needed to address the Contractor's means and methods.
- 6) Permit applications will be submitted electronically online.
- 7) Only one (1) resubmittal of each permit application will be required.

Meetings:

- 1) No meetings are planned for this task.

Task 700: Geotechnical Services – This task will be used to perform geotechnical investigation services in support of the project.

LAI

City Responsibilities:

- 1) Provide copies of previous geotechnical studies, if any, for City-owned parcel #1157200387.

Work Tasks:

- 1) Review readily available and relevant information at the project site. This review will include online geotechnical databases, geologic maps, and LAI's library.
- 2) Conduct a site reconnaissance of the project areas. This reconnaissance will focus on key project features and will be used to evaluating geotechnical challenges along the proposed improvements and to assist in preparing the Subsurface Exploration Plan (SEP).

- a) LAI will plan and coordinate a geotechnical exploration program for the project. The explorations will include up to five (5) geotechnical borings at the project site in support of identifying subgrade soil and groundwater conditions that may affect the proposed improvements. Planning will include identification of the location of the geotechnical borings, development of traffic control plans (where required) and coordination of required equipment, flaggers, and utility clearance.
- b) LAI will prepare a SEP for the proposed exploration program. The draft SEP will be submitted to the City and the design team for review. One round of comments will be incorporated and a Final SEP will be submitted for approval. The SEP 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 SEP will also be used for utility locating clearances and for permitting that may be necessary to access the exploration locations.
- 3) Conduct Field Explorations: LAI will conduct up to five (5) machine-drilled geotechnical borings to assess the subsurface soil conditions. The borings will extend to depths of 10-15 feet below ground surface (bgs) to determine the underlying soils characteristics. We anticipate that these explorations will take up to two (2) days to complete.
 - a) The borings will be observed and logged by an engineer or geologist. Soil or rock samples will be obtained from the explorations per the SEP. Traffic control for borings that are located within public rights of way will include a single lane closure for low speed. We anticipate that one of the proposed borings will be located at the relocation of the check valve replacement and the other two will be located within private property.
 - b) LAI will install a 2-inch diameter groundwater monitoring piezometer within the proposed boring at the check valve vault to monitor and assess the groundwater fluctuation. Data logging transducers will be installed in the monitoring piezometers to record groundwater levels. The collected water level information will be used in the geotechnical analyses to develop recommendations for dewatering and construction impacts, as appropriate. The monitoring wells will be installed outside the travel lanes, so traffic control will not be required for these site visits.
 - c) Each boring conducted through the pavement will be patched with quick drying concrete upon completion of the boring. Each boring completed on vegetation will be raked over with native material.
 - d) LAI will prepare summary boring logs and perform laboratory testing to evaluate relevant physical properties of the site soils. Laboratory testing would include moisture content, hydrometers, grain-size distribution, Atterberg Limits, and one-dimensional consolidation if necessary.
- 4) Geotechnical Design Services
 - a) Based on the borings and the laboratory test results of selected samples, LAI will estimate soil/rock parameters needed to evaluate the effects the subsurface conditions will have on the proposed improvements.
 - b) LAI will interpret the subsurface conditions and develop subsurface profiles and cross-sections at each crossing, as needed. These cross-sections will show near surface soil conditions and will be provided in the geotechnical report.
 - c) Based on the soils encountered along the alignment, LAI 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.
 - d) LAI will work with the design team to develop conceptual options for mitigating the anticipated settlement of soils at the project site.
 - e) LAI will evaluate the subgrade soil conditions and groundwater conditions to determine the recommendations associated with the excavation of utility trenches for the proposed improvements. These recommendations will include design of trench wall shoring and anticipated dewatering rates, if applicable. A detailed groundwater model type dewatering assessment is excluded.

- f) LAI will prepare a draft geotechnical engineering report for the project. This report will contain the results of the geotechnical engineering investigation, including description of surface and subsurface conditions; a site plan showing exploration locations and other pertinent features; summary boring logs; and laboratory test results. The report will provide geotechnical recommendations for each of the proposed improvements.
- g) LAI will finalize the geotechnical report to address review comments from design team and the City.
- h) LAI will attend up to two (2) 1-hour project team meetings to discuss project specifics with representatives of the design team and the City.
- i) LAI will conduct a plan review at the 60 and 90 percent milestones to ensure that the geotechnical aspects of the project have been properly incorporated into the project plans.

Deliverables:

- 1) One electronic copy (Adobe PDF format) of the draft and final Geotechnical Report.

Assumptions:

- 1) The proposed construction work will not extend into a critical area or critical area buffer.
- 2) The property owners at Sunwood Condo property and the Ladera-Heatherwood Apartments property will allow geotechnical investigation, including soil borings, within their properties.
- 3) Obtaining rights-of-entry will be needed for, and will be sufficient for, performing geotechnical field investigation within the Sunwood Condo property and the Ladera-Heatherwood Apartments property, whether in or adjacent to existing or proposed easement areas and the City will assist the Consultant to obtain the right of entry.
- 4) Drilling will be accomplished during normal daylight workdays and hours, with at least a minimum 6 hours available per day for on-street work.
- 5) The geotechnical explorations proposed herein are not designated to assess site environmental conditions. However, visual or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and ground water (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 Consultant.
- 6) All non-contaminated drilling spoils and related debris will be drummed on site and transported off site for disposal by the drilling subcontractor. Extra payment for removal and disposal of contaminated drilling spoils, if any, will be made from Management Reserve Funds and/or contract amendment.
- 7) LAI will be responsible for all post drilling clean up.
- 8) Any standpipe monitoring wells installed as part of this investigation will be maintained throughout design. Monitoring wells will be abandoned by the Consultant's drilling Contractor, in accordance with Ecology requirements at no cost to Consultant.
- 9) No Phase 1 or Phase 2 Environmental Site Assessment will be completed by Consultant.
- 10) All geotechnical borings conducted through the pavement will be patched with quick setting cement. Saw cutting of the pavement or hot mix asphalt patches will not be completed.
- 11) No cement concrete pavement is present below the surface asphalt, and therefore coring will not be required prior to drilling the proposed borings.
- 12) SEP boring locations will be field located using handheld GPS and measurement from existing known features. The borehole locations will not be surveyed by Consultant.
- 13) Utility locates, via the One-Call Utility Locate Center, will be comprehensive and accurate enough to allow reliable and safe location of borings. Vacuum extraction of borings is not included.
- 14) 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.

- 15) Pavement analysis/design is not part of this scope. All pavement repairs will match existing pavement conditions.
- 16) Infiltration analysis/recommendations are not anticipated. No PIT tests or EPA falling head (percolation) tests will be completed as part of this scope of work.
- 17) Following finalization of the geotechnical report, all soil samples will be disposed. Long-term storage of soil samples by the Consultant is not included.
- 18) Geotechnical assessment and design for trenchless construction and for earthquake resistant ductile iron pipe (ERDIP) is not included.

Meetings:

- 1) Up to two (2) virtual meetings with project team and City.

Task 750: Arborist Services – This task will be used to perform arborist services in support of the project.

SC

City Responsibilities:

- 1) Obtain rights-of-entry for Arborist to perform field visits on private properties.

Work Tasks:

- 1) Arborist to perform field investigation to assess potential impacts to mature trees for work in close proximity of mature trees within public rights-of-way or easements.
- 2) Provide written report of findings and recommendations for mitigating potential construction impacts to mature trees.
- 3) Participate in up to two (2) total meetings (2-hours each, including travel) with affected property owners.

Deliverables:

- 1) One electronic copy (Adobe PDF format) of the draft and final Arborist Report.
- 2) Meeting notes for meetings with property owners.

Assumptions:

- 1) Obtaining rights-of-entry will be needed for, and will be sufficient for, performing arborist field investigation within the Sunwood Condo property and the Ladera-Heatherwood Apartments property, whether in or adjacent to existing or proposed easement areas.
- 2) Property owners are willing to grant rights-of-entry to Consultant to perform field investigation.

Meetings:

- 1) One (1) virtual meeting, up to one-hour, with City to discuss findings and issues.
- 2) Up to two (2) meetings, up to 2-hours each, on-site with property owners and/or others.

Task 800: Easement Acquisition Assistance– This task will be used to obtain temporary construction easements and permanent easements for water main construction across the Sunwood Condo property and up to two other properties as required.

BHC, KPG, ABS

City Responsibilities:

- 1) Make initial contact with property owners and assist Consultant efforts to obtain rights-of-entry for utility locates, site survey, design and property appraisal.
- 2) Provide contact information for property owners/property managers to the Consultant.
- 3) Provide easement conditions and forms suitable for recording with the King County Assessor.
- 4) Provide copies of Title Reports or reimburse Consultant for purchase of title reports.
- 5) Provide legal interpretation of conditions for existing and proposed water and utility easements.
- 6) Execute and submit required documents to King County for easement recording and pay recording fees.

Work Tasks:

- 1) Identify easement areas required for construction, operation, access, and maintenance of watermain improvements.
- 2) Provide appraisal services for City-acquisition of up to three (3) easement areas.
- 3) Develop visual aides (drawings and maps) showing location, configuration and nature of proposed water system improvement and associated construction impacts.
- 4) Develop draft and final written correspondence with property owners.
- 5) Participate at meetings with property owners and City staff and develop meeting notes.
- 6) Develop the following easement exhibits for each water easement, up to three (3), suitable for recording with King County Assessor:
 - a) Easement Legal Description
 - b) Easement Map

Deliverables:

- 1) One electronic copy (Adobe PDF) of each set of easement exhibits.
- 2) One electronic copy (Adobe PDF) of each appraisal.

Assumptions:

- 1) One new water easement at the Sunwood Condo property is known to be required.
- 2) Up to two other easements may be required.
- 3) Budget for the work tasks associated with the existing Sunwood Condo property water easement will be paid under the base contract budget. Budget for the work tasks associated with acquiring other water easements, if any, is contingent and will be pre-authorized by the City and funded from the Management Reserve Fund.
- 4) Development of up to three letters may be required.
- 5) Participation in up to 2 meetings with property owners may be required.

Meetings:

- 1) Up to one (1) one-hour virtual meeting with City for each proposed easement.
- 2) Up to two (2) meetings (virtual and/or physically on site), each up to two hours, with property owners for each proposed easement (total of up to 6 meetings).

Task 900: Engineering Services During Construction – This task will be used to support the City during project construction.

BHC

City Responsibilities:

- 1) Perform required construction management, administration, and observation.

- 2) Schedule and host pre-construction meeting.
- 3) Review and comment on Consultant's draft agenda for pre-construction meeting.
- 4) Communicate with City inspector and contractor to determine agenda items for weekly construction meeting.
- 5) Written requests to Consultant to review submittals including an electronic pdf copy of the submittals to be reviewed.
- 6) Written requests to Consultant to develop written responses to information requested by the contractor.
- 7) Schedule and lead weekly construction meetings.
- 6) Perform weekly review and assessment of Contractor's as-built drawing markups, including perform field measurements and develop required notes and sketches/drawings. Develop redlined drawings that reflect the modifications to the design drawings that were made during construction and furnish supplemental information and/or clarifications as requested by the Consultant. Furnish redline markups to Consultant for development of construction record drawings.
- 7) Review Consultant's drafted drawing submittals for completeness. Written review comments on the draft construction record drawings (CRDs).
- 8) Provide all construction inspection and management services.

Work Tasks:

- 1) Prepare pre-construction meeting agenda and lead pre-construction meeting. Prepare and distribute meeting notes to attendees.
- 2) Review up to five (5) sets of Contractor submittals (three original set plus up to two resubmittal sets) as requested by the City.
- 3) Respond to up to five (5) written requests for information (RFI).
- 4) Lead up to thirteen (13) weekly construction meetings. Consultant will prepare brief agenda (with City input) to be sent out to attendees via email.
- 5) Perform up to three (3) construction site visits, each up to four hours (includes travel time), to address construction questions or to observe construction activities.
- 6) Prepare draft and final CRDs of the as-constructed improvements.

Deliverables:

- 1) Electronic copy (pdf) of meeting agenda and meeting notes.
- 2) Electronic copy (pdf) of written review comments on submittals received from the City.
- 3) Written response to each RFI received from the City.
- 4) Written field reports after each site visit.
- 5) Draft and final CRDs to the City consisting of AutoCAD and PDF files.

Assumptions:

- 1) In response to contract document requirements, the construction contractor will submit required material submittals in no more than 3 sets – material submittals will not be submitted individually or in a series of partial submittal sets exceeding three. Resubmittals will also be submitted as no more than two sets and not individually or in a series of partial submittal sets exceeding two.
- 2) The City will address most RFIs and only request input from the Consultant as needed.
- 3) Up to two site visits during construction, each lasting approximately four (4) hours, including travel time, is included to address potential construction concerns that cannot be resolved via the RFI process.
- 4) Weekly construction coordination meetings with the contractor will be virtual meetings. Construction meeting notes will be brief summaries of decisions or key issues.

- 5) Consultant will not be required to prepare a Construction Completion Report. If required, the report will be prepared by the City.
- 6) The City will provide “redlined” drawings that reflect the changes to the design that were made during construction. The Consultant will prepare draft and final versions of the CRDs based on its interpretation of the City-furnished redline markups and City-provided review comments.
- 7) Consultant does not have independent knowledge of the as-built condition and is solely reliant on the information provided to Consultant by the City and/or its agents and the Consultant assumes no responsibility or liability for the accuracy of the CRDs.
- 8) Consultant will not make field visits to clarify, verify, or complete as-built information supplied by City inspection personnel.
- 9) No additional drawing sheets will be created for the CRDs.
- 10) Submittals of record drawings will only require one revision cycle between the City and Consultant prior to completion.
- 11) Record drawings will not be developed for drawing sheets consisting of City standard details.
- 12) Unless survey coordinates or dimensions from surveyed objects are furnished to the Consultant, record drawings will show approximate locations of constructed utilities and will not reflect actual locations.
- 13) Budget for construction site-visits by LAI to observe work within “areas of potential geologic instability” will be authorized by the City from the Management Reserve Fund.
- 14) Budget for construction site-visits by SC to observe work within tree protection areas will be authorized by the City from the Management Reserve Fund.

Meetings:

- 1) One (1) preconstruction meeting, virtual or at City offices.
- 2) Up to 13 weekly virtual construction coordination meetings.

Task 999 – Management Reserve Fund – This budget is reserved as a contingency fund for potential additional services that may occur during the work and will be used to facilitate additional work, including contingent items of work, without the need for a contract amendment. Based on discussions with the City, the fund budget has been set at \$47,000.00. Potential activities include:

City

- 1) Developing and submitting a Tree Removal Permit application.
- 2) Preparing additional easement exhibits (exceeding one per Task 800).
- 3) Assisting City acquisition of additional temporary construction and/or permanent water easements (exceeding one on the Sunwood Condo property per Task 800).
- 4) Performing additional quantity of design, permitting and public outreach services (exceeding quantities and scope described in tasks 400, 500 and 600).
- 5) Performing additional quantity of construction phase support services exceeding quantities and scope described in Task 900.
- 6) Performing construction site-visits by SC to observe work within tree protection areas or as otherwise requested by the City.

City Responsibilities:

- 1) Provide written authorization for performance of additional services.
- 2) Authorize use of the Management Reserve funds for additional services.

Work Tasks:

- 1) Work tasks as negotiated between City and Consultant and as further authorized by the City.

- 2) Document the scope and budget changes in the Change Management Log.
- 3) Completion of additional design services as authorized by the City. This will include the development of scope and budget proposals for the additional design services as requested by the City.

Deliverables:

- 1) As defined in the associated task descriptions and/or as described in the additional design services scope/budget.

Assumptions:

- 1) The budgets shown in Exhibit B for the Management Reserve Fund tasks are preliminary and intended only to provide justification for the size of the Management Reserve Fund. A scope and fee request will be developed and submitted to the City for work to be funded from the Management Reserve Fund. The City will approve the additional work scope and pre-authorize a budget transfer from the Management Reserve Fund to the associated Task budget. The Management Reserve Fund will be debited, and the Task credited in equal amounts and the total authorized contract amount will not change for additional work scope funded through the Management Reserve Fund.
- 2) Scope and fee requests funded from the Management Reserve Fund will be considered a change to the contract scope and budget and not a contract amendment. Changes to the contract scope and budget will be issued in writing by the City and documented in the Change Management Log.
- 3) The budget within the Management Reserve Fund may not be adequate to cover additional scope of work. If not adequate to cover the additional scope of work, a contract amendment will be issued to increase the total contract amount.

Meetings:

- 1) Meetings will be as described in the associated task descriptions and/or as described in the additional design services scope/budget.

Services not Included

The following services are not a part of this agreement. If the City chooses to add one or more of the following services to this Scope of Design Services, then a contract change or a contract amendment that addresses the additional required compensation as well as an appropriate extension of time will be necessary. These excluded services include, but are not limited to the following:

- 1) Permit investigations and applications not specifically identified in the scope.
- 2) Payment of permit fees.
- 3) Coordination with the City of Tukwila's Fire Marshall regarding review and approval of proposed improvements.
- 4) Hydraulic network analysis of the existing and/or proposed water system. The City shall be responsible for completing this analysis.
- 5) Design for trenchless construction methods, including auger bore and horizontal directional drilling.
- 6) Development of drawings and specifications for construction of earthquake resistant ductile iron pipe (ERDIP).
- 7) Pavement analysis and design.
- 8) Underground utility potholing to verify location and depth of existing utilities.
- 9) Distributing bid/contract document sets to prospective bidders, receiving bids, preparing the bid tabulation, reviewing apparent low bidder references, and preparing recommendation for contract award.
- 10) Procuring title reports, except for the title reports for which the City reimburses the Consultant.
- 11) Boundary surveys.

- 12) Field staking easement boundaries.
- 13) Development of design drawings for replacement of sidewalks, curb ramps, and driveway approaches except as described and budgeted in task 400.
- 14) Construction engineering services, except as described in Task 900.
- 15) Construction observation and construction administration.
- 16) Soil testing or soil compaction testing during construction.
- 17) Construction surveying and staking.

Budget

The Work performed by Consultant and its sub consultants will be invoiced to the City on a time and materials (T&M) basis based on the rates sheets attached to Exhibit B. The Consultant will not exceed the approved project budget without the written approval of the City. The Consultant may reallocate budget between tasks, except for contingent tasks. The Consultant will not utilize contingent budget without written pre-authorization from the City.

The Project not-to-exceed (NTE) budget is \$312,833.00 and is attached as Exhibit B. The City agrees to allow the Consultant and its sub-consultants to adjust rates charged to the City on an annual basis in January of each year, including in January 2022.

Project Design Phase Schedule

The project design phase schedule (Baseline Schedule) milestones are shown below and are based on a notice to proceed (NTP) date of March 3, 2022. Receipt of NTP or any significant changes to the project after March 3, 2022 may result in a delay in the bid advertisement date.

Design Phase Project Milestones

Notice to Proceed	March 3, 2022
Obtain Rights of Entry	April 7, 2022
Survey Base Drawing	May 12, 2022
30% Design Submittal	July 18, 2022
60% Design Submittal	August 19, 2022
90% Design Submittal	November 25, 2022
Obtain Approved Permits	January 13, 2023
Obtain Recorded Easements	October 6, 2022
100% Design Submittal	January 24, 2023
Final Design Submittal	February 15, 2023
Bid Advertisement	February 16, 2023
Bid Opening	March 2, 2023

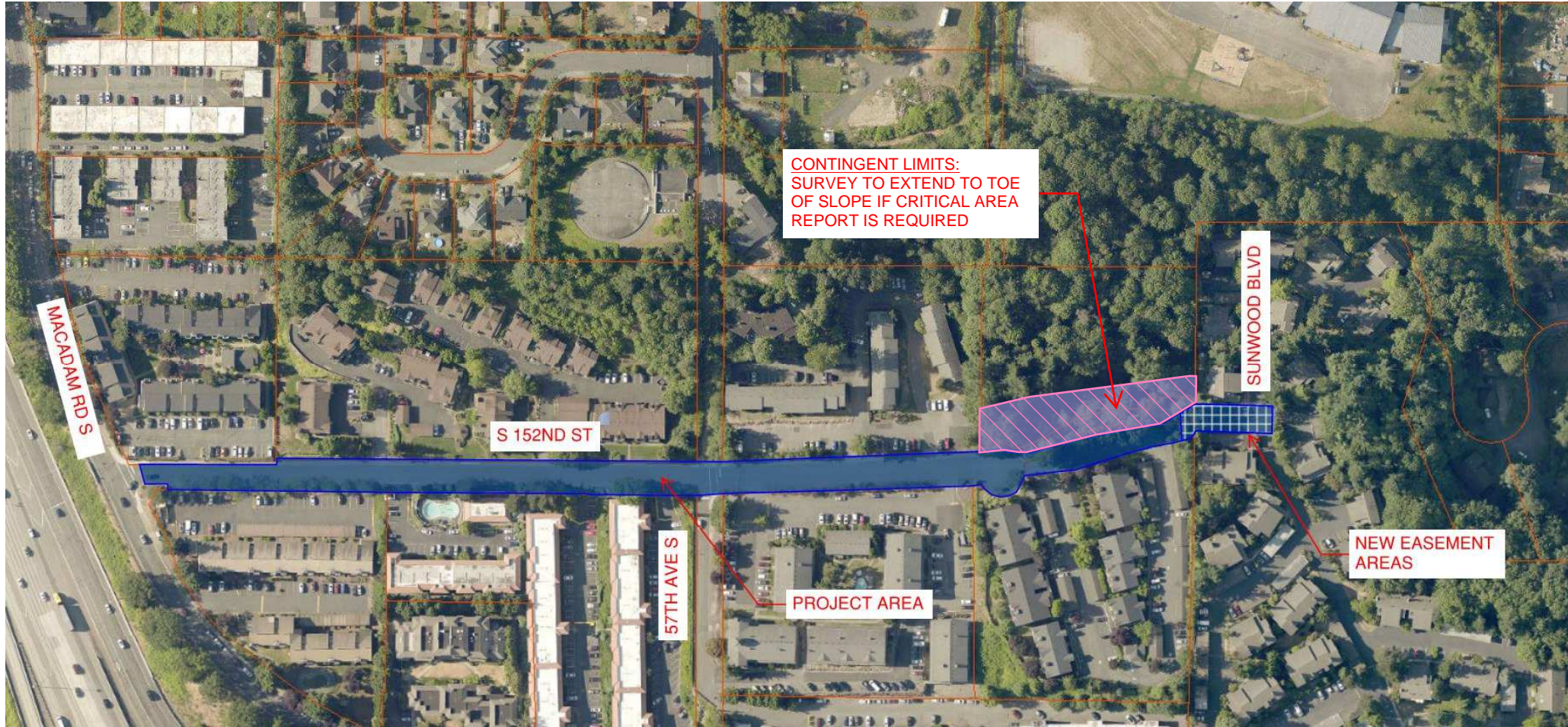
Rights of entry (ROEs) are needed on two private parcels, and maybe a third, to access the private parcels to perform utility locates and topographic survey. The project's critical path assumes ROE's can be obtained by April 7, 2022 and any delay in obtaining the ROEs past April 7, 2022, may delay the bid advertisement date by a corresponding length of time. While the project schedule includes a reasonable time allotment for the regulatory processes and easement acquisition based on BHC's historical experience in obtaining those permits, the actual time required to obtain the permits and easements includes efforts by others that are not within the Consultant's control. Therefore, delays in the schedule beyond the time frames included in the project schedule may adversely impact the bid advertisement date and as such may require the bid advertisement date to be extended as necessary.

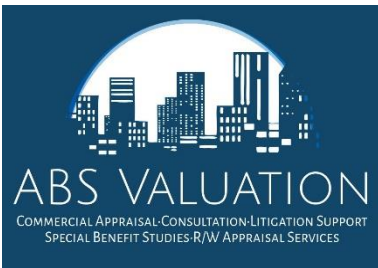
Attachments

- Exhibit A-1: Watermain Improvements Project Area Map
- Exhibit B: Consultant Project Budget

- Exhibit B1 ABS Valuation subconsultant budget
- Exhibit B2.1 Applied Professional Services, Inc subconsultant budget
- Exhibit B2.2 Applied Professional Services, Inc 2022 Rate Sheet
- Exhibit B3 KPG subconsultant budget
- Exhibit B4 Landau Associates, Inc. subconsultant budget
- Exhibit B5 Shoffner Consulting subconsultant budget

Exhibit A-1
Water Main Improvements Area Map





Corporate Office

419 Berkeley Avenue
 Suite A
 Fircrest, WA 98466
 253-274-0099 phone
 425-252-1210 fax

Smith Tower
 506 2nd Avenue
 Suite 3200
 Seattle, WA 98104
 206-209-3016 phone
 425-252-1210 fax

2927 Colby Avenue
 Suite 100
 Everett, WA 98201
 425-258-2611 phone
 425-252-1210 fax

absvaluation.com

December 15, 2021

BHC Consultants, LLC
 Madison McCrosky, P.E., Project Engineer
 1601 Fifth Avenue Suite 500
 Seattle, WA 98101

Re: Complete an appraisal before and after acquisition of utility easement rights located at 15100 Sunwood Boulevard for Tukwila S 152nd St Water Main Replacement & Extension Project, Tukwila, WA 98188. ABS Bid No. 45885.

Dear Ms. McCrosky:

We are in receipt of your request to complete an appraisal for the above referenced project. The purpose of the appraisal is to estimate fee simple market value before and after acquisition of utility easement rights. Scope of the assignment includes assemblage of pertinent market data and investigation of the environmental, economic, governmental and social forces influencing the subject property.

The appraisal report will be developed, and the report prepared in conformity with and subject to requirements of the Washington State Department of Transportation (WSDOT), Uniform Standards of Professional Appraisal Practice of the Appraisal Foundation (USPAP), 2020-2021 Edition and the Code of Professional Ethics of the Appraisal Institute. This proposal does not include time or cost estimates for studies of hazardous materials and/or other conditions unless they are specifically itemized.

Estimated fee to complete the assignment is \$5,200. The fee is based on an estimated 30 hours at \$175 per hour and includes all expenses. Based on current workload, estimated completion time for the assignment is approximately seven to eight weeks after receiving a notice to proceed, right of way plans and any other necessary materials. Thank you for the opportunity to present this proposal. If you have any questions, please feel free to call.

Respectfully submitted,

ABS Valuation

Jim E. Dodge, Senior Associate Appraiser
 WA State Certified – General Appraiser No. 1100557



Applied Professional Services, Inc.

43530 SE North Bend Way
North Bend, WA 98045

“Solutions that exceed expectations”

Date	Project Address/Job Number:	Services Performed For:
12/6/2021	S 152 nd ST Macadam Rd S – Sunwood Blvd	BHC Consultants
	Tukwila, WA	Tim Tobin
		Tim.Tobin@bhccconsultants.com 206.940.7885

Scope of Work

- A. APS, Inc. will employ all industry and best practices to designate and mark the known conductible and/or non-conductible utilities within the project boundaries.
- B. APS, Inc. will sweep the area, after the known utilities have been marked, to attempt to identify any unknown or abandoned utilities.
- C. The project boundaries are defined by civil drawings or maps provided by the Client.

Cost Estimate

LABOR DESCRIPTION	HOURS	RATE	AMOUNT
CONDUCTIBLE LOCATES	40	\$100.00	\$4,000.00
GPR	6	\$175.00	\$1,050.00
			Total
			\$5,050.00



Applied Professional Services, Inc.

2022 RATE SHEET

AIR-VACUUM UTILITY POTHOLING RATE PER-HOUR

Standard Rate (portal-to-portal)	\$315.00
Reference Map (RM) Potholing™ (portal-to-portal)	\$350.00
Night / Weekend Rate (portal-to-portal)	\$355.00
Prevailing Wage Standard Rate (portal-to-portal)	\$410.00
Prevailing Wage Overtime Rate (portal-to-portal)	\$480.00

- A (4) Hour Minimum Charge Applies

CONDUCTIBLE UTILITY LOCATING RATE PER-HOUR

Washington Locating Rate	\$100.00
Reference Map (RM) Locating™	\$120.00 (WA) \$110.00 (OR)
Washington PVC Waterline Locating	\$135.00
Oregon Locating Rate	\$90.00
Night / Weekend rate OR/WA	\$135.00

- A (1) Hour Minimum Charge Applies

STORM & SEWER INSPECTION & LOCATING – LATERAL LAUNCH RATE PER-HOUR

Standard Rate	\$220.00
Reference Map (RM) non-conductible locates™	\$240.00
Night / Weekend Rate	\$270.00
Confined Space Entry Rate (3 person crew)	\$320.00
Confined Space Entry Night / Weekend Rate	\$380.00

- A (1) Hour Minimum Charge Applies

Exhibit B2.2

GROUND PENETRATING RADAR (GPR) **RATE PER-HOUR**

Washington Standard Rate	\$175.00
Reference Map (RM) GPR™	\$195.00 (WA) \$180.00 (OR)
Oregon Standard Rate	\$160.00
Night / Weekend Rate	\$195.00

- A (1) Hour Minimum Charge Applies

CONCRETE & ASPHALT CORING (2" to 16" Cores) **RATE PER HOUR**

Standard Rate (portal-to-Portal)	\$180.00
Night / Weekend Rate (portal-to-Portal)	\$205.00

PROJECT MANAGEMENT **RATE PER-HOUR**

Project Coordination	\$100.00
Traffic control plans with TCS Stamp	\$125.00/per sheet)

MISCELLANEOUS PROJECT EXPENSES **RATE PER-HOUR**

Flagging & Traffic Control	\$Cost+10%
Police Flagging	\$Cost+10%
Permitting & Bonding	\$Cost+10%
Video Inspection Report and USB thumb drive	\$20.00 / Copy

- Normal business hours are from 5:00am-6:00pm Monday thru Friday. Hours outside of normal business hours will be charged at the specified Night / Weekend rate.
- Plastic Water locating includes PVC/Polyethylene water lines with no tracer wire. The tolerance zone for accuracy is approximately 1-2ft either side of our marks.

Exhibit B3

**Project: BHC Consultants
 City of Tukwila
 S 152nd ST WATERMAIN REPLACEMENT & EXTENSION PROJECT
 Survey and Base Mapping
 December 2021**

	Labor Hour Estimate					Total Fee
	Survey Manager \$ 246.00	Project Surveyor \$ 155.00	Survey Technician \$ 128.00	Survey Crew II \$ 238.00	Survey Crew I \$ 186.00	Fee
Task Description						
300.1 Survey Control	1	1	4	8		\$ 2,817.00
300.2 Field Mapping	1				44	\$ 8,430.00
300.3 Utility Surveying Services		1		8	8	\$ 3,547.00
300.4 Data Reduction and Base Drawing Preparation	1		60			\$ 7,926.00
300.5 Right of Way Determination	1	16				\$ 2,726.00
300.6 Field Review and Finalize Base Drawing	1		12			\$ 1,782.00
300.7 Calculate Existing Easements		8				\$ 1,240.00
300.8 Develop Text for Right of Entry Notices	1					\$ 246.00
800.5 Legal Description and Exhibit Map Preparation (1)		3	3			\$ 849.00
Expenses (mileage)						\$ 300.00
Task Total	6	29	79	16	52	\$ 29,863.00
300.X Contingent Survey of Critical Area			5	10		\$ 3,020.00
800.X Legal Description and Exhibit Map Preparation (up to 2 add'l)	1	6	6			\$ 1,944.00
Task Total	1	6	11	10	0	\$ 4,964.00

Total Estimated Fee: \$ 34,827.00

KPG

Exhibit B4
Landau Associates, Inc.
Subconsultant Budget

Scope Items	Principal	Senior	Staff	CADD	Project Coordinator	Totals	Total Labor Costs
Task 700 Geotechnical Services							
Project Management		8			8	16	\$2,720
Utility Locates, SEP, Traffic Control Plan	1	4	12			17	\$2,885
Field Exploration and Site Recon		4	20			24	\$3,760
Groundwater Monitoring		4	12			16	\$2,600
Geotechnical Analysis and Draft Report	4	16	24	6	6	56	\$9,620
Final Report	2	4		2	2	10	\$1,950
Meetings		2				2	\$430
60 and 90 Percent Plan Review	2	4				6	\$1,430
Construction Support		4	12			16	\$2,600
Total Task 700	9	50	80	8	16	163	\$27,995
Rate by Position	\$285.00	\$215.00	\$145.00	\$135.00	\$125.00		
Total - Labor Cost	\$2,565	\$10,750	\$11,600	\$1,080	\$2,000	\$27,995	
DIRECT COSTS							
Private Locate						\$380	
Holocene Drilling						\$9,300	
Traffic Control Signage						\$400	
Laboratory Testing						\$1,200	
Field Equipment/Transducer Rental/Mileage						\$1,100	
Total - Direct Costs						\$12,380	
Total						\$40,375	

Scope Items	Principal	Senior	Staff	CADD	Project Coordinator	Totals	Total Labor Costs
Task 650 Critical Areas Report							
Prepare Critical Areas Report	2	4	16	4	4	30	\$4,790
Total Task 650	2	4	16	4	4	30	\$4,790
Rate by Position	\$285.00	\$215.00	\$145.00	\$135.00	\$125.00		
Total - Labor Cost	\$570	\$860	\$2,320	\$540	\$500	\$4,790	
DIRECT COSTS							
Total - Direct Costs						\$0	
Total						\$4,790	

Project Total (Tasks 700 and 650)						\$45,165	
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December 14, 2021

Madison McCroskey
BHC Consultants
1601 5th Ave. Suite 500
Seattle, WA
98101

RE: Arborist Study and Report - Tukwila S. 152nd Water Main Replacement

Madison:

This proposal is provided to serve as the consulting arborist for the development project and to provide documents with information to assist in the development process as required to acquire permits from the City of Tukwila.

TASK A. SCOPE

- Conduct a site visit to gather information on the trees on the properties and those just off-site.

TASK B. DELIVERABLES

- Prepare required documents to be included in submittal. These documents include a map showing the numbers assigned to the trees, spreadsheet providing information specific to each tree and a report summarizing the findings, an impact assessment and the specified protection measures for any retained trees and replacement for removed trees. One deliverable combining all three properties. BHC will review and comment on the report. Any revisions will be added to the scope.

TASK C. PROJECT ADMINISTRATION

- This contract assumes up to 2.0 hours of project administration time coordinating with other project personnel, including meetings, for completion of the project plans and deliverables.

TASK D. MEETINGS

- Three meetings including two on site two include travel time and one virtual meeting with the City of Tukwila.

TASK E. CONSTRUCTION MONITORING

- Construction Monitoring, if necessary, will be billed at an hourly rate of \$175.00 and will include travel time from my office to the site (2 hours total for each visit).

Project Expenses

Project expenses include costs for travel, mileage, faxes, reprographics, courier services and other supplies.

AGREEMENT COMPENSATION

The proposed fees for performance of Professional Services detailed in this Agreement, based on time needed to conduct each task are as follows:

- I. Task A, B, C and D: 28 hours (Not to include construction monitoring)**
- II. Task A, B, C and D: \$4,900.00 (Not to include construction monitoring)**